FARLEY NUCLEAR PLANT

1990 EMERGENCY EXERCISE

SCENARIO

-CONFIDENTIAL-

Alabama Power

2.0 EQUIPMENT AND SYSTEM STATUS

2.1 Unit 1

2.1.1 A shutdown is planned for 0030, October 26, due to the RCS activity increase (sample at 0500 indicated 1.1 µCi/gm DEI)

2.1.2 Quarterly surveillance is in progress on 1A CTMT spray pump. Estimated completion time is 0800.

2.1.3 1B CCW pump had excessive seal leakage, has been tagged out to repair seal. Estimted repair time is 18 hrs.

2.1.4 "A" Train is the on-service train.

2.1.5 CTMT Cooling Fans 1A and 1B are OOC due to high vibrations. Will be worked during the planned shutdown.

2.1.6 Minor Grid Voltage Oscillations have been experienced over the past two weeks, due to problems in the New England area.

2.1.7 TDAFP drip leg LCV-3608 has a body to bonnet leak, scheduled to be worked at 1200.

2.1.8 Fire suppression system 1A-27 is tagged out to reset clapper (CCW Hx room). Estimated repair time 1 hour.

2.2 Unit 2

2.2.1 2B charging pump is running on "A" train.

2.2.2 Waste Gas Compressor 2A out of service, estimated repair time: 1 day.

2.2.3 #3 Gas Decay Tank is planned for release at 1000 today.

2.2.4 2A RHR pump is out of service to be vented, estimated completion time: 2 hours.

SEQUENCE OF EVENTS

TIME	CONDITION/EVENT	EXPECTED RESPONSE
0800	Gross Failed Fuel Detector alarms at > 1 x 10^5 cpm (≈ 1% clad damage).	Control Room operators should implement AOP-32.0 and AOP-33.0 and recognize that further degradation in fuel integrity has occurred
0800+	DELETED.	
0805		PIEC arrives at EOC. EOC is activated.
0900	• CTMT Pressure 4 psig and trending up • Steam line break in CTMT followed by a steam generator tube rupture on 1A steam generator • Reactor trip and safety injection automatically actuate	• Control room personnel enter EEP-0 • EOF personnel arrive at EOF and spokesperson arrives at the NMC.

CONTROL ROOM CONTROLLER CARD

TIME	EVENT
0600	Initial Plant Status

- Control room players review:
  1. Initial plant conditions
  2. Equipment and system status
  3. Maintenance items

- MCB Annunciators in Alarm

A-21	CCW Hx 1A SW or CCW Flow Lo
C-61	RHR Pump 1A or 1B CCW Flow Lo
E-04	Charging Pump 1A, 1B, or 1C CCW Flow Lo
F-03	Source Range Loss of Detector Voltage
F-35	Bank D Full Rod Withdrawal Auto Rod Stop
W-21	Diesel Gen 1-2A Out of Service or on Local Control
W-35	Battery Charger 1C Fault
Z-35	Battery Charger 2C Fault

- RMS Alarms (Note 3)

NOTES:
1. Provide operators with a copy of the MCB annunicator panels for reference
2. Provide operators with a copy of TSLBs for reference
3. R-4 and R-6 are in alarm

CONTROL ROOM CONTROLLER CARD

TIME	EVENT
0802	• Annunciator F-65 Gross Failed Fuel Detector System Trouble Alarms (NOTE 1) • DELETED.
0846	Annunciator F-14 and F-15 Power Range Upper/Lower Detector Hi Flux Deviation or Auto Defeat Alarm (NOTE 3)
0855±	Annunciator K-12 or K-11 SGFP Turbine 1A or 1B Misc. Alarms Alarm (NOTE 4)
0857	Annunciator D-43 LTDN Orifice Isolation Valve Relief Line Temperature Hi Alarms (NOTE 5)

NOTES:

1. As operator scans GFFD panel, provide a reading of 6×10^5 cps - slowly trending up
2. DELETED.
3. Power reduction to below 50% RTP
4. Provide annunciator associated with SGFP as it is secured during rampdown
5. Alarm due to increase in CTMT temperature

CONTROL ROOM CONTROLLER CARD

TIME	EVENT
0900	Safety Injection Horn Sounds

- MCB annunicators in alarm per attached annunicator panel drawings

NOTE: Annunciator G-51 is "First-Out"

- RMS Alarm Sounds (NOTE 1)
- TSLB-1 Bistables Lit

  1-2

  1-3

  1-4

- TSLB-2 Bistables Lit

9-1	10-1	12-1	13-1	14-1
9-2	10-2	12-2	13-2	14-2
9-3	10-3	12-3	13-3	14-3
		12-4		14-4

- TSLB 3 Bistables Lit

3-1	7-1
3-2	7-2
	7-3

- TSLB 4 Bistables Lit

1-1	2-1	3-1	5-1	6-1
1-2	2-2	3-2	5-2	6-2
			5-3	6-3

NOTES:

1. As operator scans RMS panel, indicate R-2, R-7, R-11, R-12 still in alarm AND R-15, R-19, R23A & B and R-27A & B are now alarming
2. DG 1B, 1C, & 2C show normal auto start indications, sequencer indications occur per design

TIME	UNITS	615	630	645	700	715	730	745	800	815	830	815
RE-2	R/HR	6.55E-02	6.82E-02	6.90E-02	7.27E-02	7.50E-02	8.50E-02	1.00E+00	3.50E+00	1.00E+01	1.00E+01	1.00E+01
RE-4	R/HR	1.39E-02	1.31E-02	1.42E-02	1.38E-02	1.40E-02	1.30E-02	1.38E-02	6.00E-01	1.12E+00	2.30E+00	3.50E+00
RE-6	R/HR	1.60E-02	1.54E-02	1.51E-02	1.62E-02	1.65E-02	1.54E-02	1.60E-02	2.50E-01	5.24E-01	8.33E-01	2.10E+00
RE-7	R/HR	2.00E-02	2.00E-02	2.10E-02	2.30E-02	2.30E-02	6.50E-02	1.25E+00	5.25E+00	1.00E+01	1.00E+01	1.00E+01
RE-10	CPM	1.51E+02	1.68E+02	1.64E+02	1.55E+02	1.48E+02	1.56E+02	1.52E+02	1.56E+02	1.43E+02	1.54E+02	1.65E+02
RE-11	CPM	3.00E+03	2.70E+03	3.10E+03	3.18E+03	3.05E+03	2.00E+04	5.20E+05	8.80E+05	1.00E+06	1.00E+06	1.00E+06
RE-12	CPM	1.66E+02	1.45E+02	1.73E+02	1.60E+02	1.80E+02	3.50E+04	8.60E+05	1.00E+06	1.00E+06	1.00E+06	1.00E+06
RE-14	CPM	1.80E+03	1.75E+03	1.60E+03	1.73E+03	1.70E+03	1.00E+05	2.20E+03	1.85E+03	1.80E+03	1.75E+03	1.85E+03
RE-19	CPM	7.50E+01	8.50E+01	7.30E+01	7.10E+01	6.70E+01	7.30E+01	8.50E+01	7.10E+01	6.30E+01	6.40E+01	8.30E+01
RE-21	CPM	2.90E+02	3.00E+02	3.12E+02	2.75E+02	3.20E+02	8.00E+02	4.10E+02	3.70E+02	3.20E+02	3.75E+02	3.17E+02
RE-22	CPM	5.50E+01	4.40E+01	4.90E+01	4.10E+01	5.60E+01	1.50E+02	9.00E+01	5.20E+01	4.80E+01	4.50E+01	5.30E+01
RE-23A	CPM	7.20E+01	6.80E+01	7.40E+01	6.90E+01	7.00E+01	7.30E+01	6.50E+01	7.50E+01	7.30E+01	7.10E+01	6.70E+01
RE-23B	CPM	9.80E+01	9.90E+01	1.02E+02	1.06E+02	1.04E+02	9.70E+01	9.40E+01	1.03E+02	1.01E+02	9.80E+01	9.20E+01
RE-24A	CPM	2.21E+02	3.24E+02	2.34E+02	2.87E+02	2.80E+02	1.00E+06	9.50E+05	6.50E+04	9.40E+03	4.50E+02	2.20E+02
RE-24B	CPM	2.45E+02	2.98E+02	3.20E+02	3.00E+02	2.67E+02	1.00E+06	9.10E+05	6.90E+04	9.70E+03	3.99E+02	2.10E+02
RE-27A	R/HR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E+00	1.50E+01	2.70E+01	3.80E+01
RE-27B	R/HR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E+00	1.70E+01	3.10E+01	3.70E+01

TIME	UNITS	900	915	930	945	1000	1015	1030	1045	1100	1115	1130
RE-2	R/HR	1.00E+01	1.00E+01	1.00E+01	1.00E+01	1.00E+01	1.00E+01	1.00E+01	1.00E+01	1.00E+01	1.00E+01	1.00E+01
RE-4	R/HR	2.50E-02	1.50E-02	1.00E-02	9.00E-03	8.00E-03	6.90E-03	5.80E-03	2.90E-03	1.90E-03	1.30E-03	1.39E-03
RE-6	R/HR	3.20E+00	2.92E+00	2.13E+00	2.07E+00	1.92E+00	1.83E+00	1.66E+00	1.50E+00	1.45E+00	1.40E+00	1.36E+00
RE-7	R/HR	1.00E+01	1.00E+01	1.00E+01	1.00E+01	1.00E+01	1.00E+01	1.00E+01	1.00E+01	1.00E+01	1.00E+01	1.00E+01
RE-10	CPM	1.62E+02	1.41E+02	1.53E+02	1.48E+02	1.60E+02	1.65E+02	4.50E+03	6.20E+05	1.00E+06	1.00E+06	1.00E+06
RE-11	CPM	1.00E+06	1.77E+05	3.13E+04	5.54E+03	9.81E+02	6.19E+02	5.42E+02	4.83E+02	5.00E+02	4.78E+02	4.86E+02
RE-12	CPM	1.00E+06	6.31E+05	3.98E+05	2.50E+05	1.59E+05	1.00E+05	6.31E+04	3.98E+04	2.51E+04	1.59E+04	1.10E+04
RE-14	CPM	1.81E+03	1.82E+03	1.84E+03	1.80E+03	1.85E+03	1.82E+03	2.00E+04	3.50E+05	1.00E+06	1.00E+06	1.00E+06
RE-19	CPM	1.00E+06	9.90E+05	8.88E+05	7.31E+05	5.98E+05	4.73E+05	3.81E+05	3.33E+05	2.82E+05	2.40E+05	2.01E+05
RE-21	CPM	3.98E+02	3.64E+02	3.21E+02	3.82E+02	3.73E+02	3.45E+02	1.20E+03	2.30E+03	7.00E+03	7.50E+03	7.30E+03
RE-22	CPM	5.10E+01	4.10E+01	6.10E+01	4.90E+01	5.20E+01	5.50E+01	4.50E+02	6.76E+02	8.50E+02	1.12E+03	1.50E+03
RE-23A	CPM	7.00E+02	1.00E+06	1.00E+06	1.00E+06	1.00E+06	1.00E+06	1.00E+06	9.90E+05	8.88E+05	7.31E+05	5.98E+05
RE-23B	CPM	1.10E+03	1.80E+03	1.50E+03	1.30E+03	1.10E+03	9.32E+02	8.11E+02	6.73E+02	5.75E+02	4.84E+02	4.10E+02
RE-24A	CPM	1.50E+02	1.64E+02	1.74E+02	1.64E+02	1.64E+02	1.61E+02	1.53E+02	1.64E+02	1.71E+02	1.64E+02	1.75E+02
RE-24B	CPM	1.90E+02	1.76E+02	1.58E+02	1.67E+02	1.76E+02	1.64E+02	1.48E+02	1.67E+02	1.75E+02	1.57E+02	1.56E+02
RE-27A	R/HR	5.50E+01	4.00E+01	3.70E+01	4.10E+01	4.30E+01	4.40E+01	4.30E+01	4.24E+01	4.19E+01	3.50E+01	3.39E+01
RE-27B	R/HR	5.00E+01	3.90E+01	3.60E+01	4.00E+01	4.30E+01	4.30E+01	4.20E+01	4.14E+01	4.09E+01	3.40E+01	3.38E+01

CONTROL ROOM AREA

ALL READINGS IN R/HR

TIME	RE-1	RE-2	RE-3	RE-4	RE-5	RE-6	RE-7	RE-8
615	BKGRD	6.55E-02	BKGRD	1.39E-02	BKGRD	1.60E-02	2.00E-02	BKGRD
630	BKGRD	6.82E-02	BKGRD	1.31E-02	BKGRD	1.54E-02	2.80E-02	BKGRD
645	BKGRD	6.90E-02	BKGRD	1.42E-02	BKGRD	1.51E-02	2.10E-02	BKGRD
700	BKGRD	7.27E-02	BKGRD	1.38E-02	BKGRD	1.62E-02	2.30E-02	BKGRD
715	BKGRD	7.50E-02	BKGRD	1.40E-02	BKGRD	1.65E-02	2.30E-02	BKGRD
730	BKGRD	8.50E-02	BKGRD	1.30E-02	BKGRD	1.54E-02	6.50E-02	BKGRD
745	BKGRD	1.00E+00	BKGRD	1.38E-02	BKGRD	1.60E-02	1.25E+00	BKGRD
800	BKGRD	3.50E+00	BKGRD	6.00E-01	BKGRD	2.50E-01	5.25E+00	BKGRD
815	BKGRD	1.00E+01	BKGRD	1.12E+00	BKGRD	5.24E-01	1.00E+01	BKGRD
830	BKGRD	1.00E+01	BKGRD	2.30E+00	BKGRD	8.33E-01	1.00E+01	BKGRD
845	BKGRD	1.00E+01	BKGRD	3.50E+00	BKGRD	2.10E+00	1.00E+01	BKGRD
900	BKGRD	1.00E+01	BKGRD	2.50E-02	BKGRD	3.20E+00	1.00E+01	BKGRD
915	BKGRD	1.00E+01	BKGRD	1.50E-02	BKGRD	2.92E+00	1.00E+01	BKGRD
930	BKGRD	1.00E+01	BKGRD	1.00E-02	BKGRD	2.13E+00	1.00E+01	BKGRD
945	BKGRD	1.00E+01	BKGRD	9.00E-03	BKGRD	2.07E+00	1.00E+01	BKGRD
1000	BKGRD	1.00E+01	BKGRD	8.00E-03	BKGRD	1.92E+00	1.00E+01	BKGRD
1015	BKGRD	1.00E+01	BKGRD	6.90E-03	BKGRD	1.83E+00	1.00E+01	BKGRD
1030	BKGRD	1.00E+01	BKGRD	5.80E-03	BKGRD	1.66E+00	1.00E+01	BKGRD
1045	BKGRD	1.00E+01	BKGRD	2.90E-03	BKGRD	1.50E+00	1.00E+01	BKGRD
1100	BKGRD	1.00E+01	BKGRD	1.90E-03	BKGRD	1.45E+00	1.00E+01	BKGRD
1115	BKGRD	1.00E+01	BKGRD	1.30E-03	BKGRD	1.40E+00	1.00E+01	BKGRD
1130	BKGRD	1.00E+01	BKGRD	1.39E-03	BKGRD	1.36E+00	1.00E+01	BKGRD
1145	BKGRD	1.00E+01	BKGRD	1.31E-03	BKGRD	1.31E+00	1.00E+01	BKGRD
1200	BKGRD	1.00E+01	BKGRD	1.42E-03	BKGRD	1.29E+00	1.00E+01	BKGRD
1215	BKGRD	1.00E+01	BKGRD	1.38E-03	BKGRD	1.24E+00	1.00E+01	BKGRD
1230	BKGRD	1.00E+01	BKGRD	1.40E-03	BKGRD	1.17E+00	1.00E+01	BKGRD
1245	BKGRD	1.00E+01	BKGRD	1.30E-03	BKGRD	1.11E+00	1.00E+01	BKGRD
1300	BKGRD	1.00E+01	BKGRD	1.38E-03	BKGRD	1.06E+00	1.00E+01	BKGRD
1315	BKGRD	1.00E+01	BKGRD	1.39E-03	BKGRD	9.12E-01	1.00E+01	BKGRD
1330	BKGRD	1.00E+01	BKGRD	1.31E-03	BKGRD	7.50E-01	1.00E+01	BKGRD
1345	BKGRD	1.00E+01	BKGRD	1.42E-03	BKGRD	6.40E-01	1.00E+01	BKGRD
1400	BKGRD	1.00E+01	BKGRD	1.38E-03	BKGRD	5.10E-01	1.00E+01	BKGRD
1415	BKGRD	1.00E+01	BKGRD	1.40E-03	BKGRD	4.80E-01	1.00E+01	BKGRD
1430	BKGRD	1.00E+01	BKGRD	1.30E-03	BKGRD	4.20E-01	1.00E+01	BKGRD
1445	BKGRD	1.00E+01	BKGRD	1.38E-03	BKGRD	3.80E-01	1.00E+01	BKGRD

RCS OR RELATED PIPING DOSERATES PAGE 1 OF 3
NOT IN THE PENETRATION ROOMS

(THESE DOSERATES APPLY TO ALL ROOMS WITH SUCH PIPING)
(EXCEPT THE PENETRATION ROOMS.)
(O.W. = C.W. ASSUMING NO PIPING LEAKS)

TIME	POSITION	READINGS	
615	CONTACT	0.500	R/hr
	3'	0.028	R/hr
	6'	0.014	R/hr
630	CONTACT	0.500	R/hr
	3'	0.028	R/hr
	6'	0.014	R/hr
645	CONTACT	0.500	R/hr
	3'	0.028	R/hr
	6'	0.014	R/hr
700	CONTACT	0.500	R/hr
	3'	0.028	R/hr
	6'	0.014	R/hr
715	CONTACT	0.500	R/hr
	3'	0.028	R/hr
	6'	0.014	R/hr
730	CONTACT	0.500	R/hr
	3'	0.028	R/hr
	6'	0.014	R/hr
745	CONTACT	0.500	R/hr
	3'	0.028	R/hr
	6'	0.014	R/hr
800	CONTACT	0.7	R/hr
	3'	0.039	R/hr
	6'	0.019	R/hr
815	CONTACT	1.7	R/hr
	3'	0.092	R/hr
	6'	0.046	R/hr
830	CONTACT	25.0	R/hr
	3'	1.389	R/hr
	6'	0.694	R/hr
845	CONTACT	29.7	R/hr
	3'	1.652	R/hr
	6'	0.826	R/hr
900	CONTACT	35.4	R/hr
	3'	1.964	R/hr
	6'	0.982	R/hr

121' PENETRATION ROOM DOSE RATES (R/hr)

(BEFORE 10:30 DOSERATES ARE FOR RHR PIPING)
(FOR TIMES AFTER 10:15, DOSERATES ARE FOR)
(THE CTMT LEAK AREA)

TIME	CONTACT O.W.	CONTACT C.W.	3FT O.W.	3FT C.W.	>6FT O.W.	>6FT C.W.
615	0.5	0.5	0.5	0.5	0.5	0.5
630	0.5	0.5	0.5	0.5	0.5	0.5
645	0.5	0.5	0.5	0.5	0.5	0.5
700	0.5	0.5	0.5	0.5	0.5	0.5
715	0.5	0.5	0.5	0.5	0.5	0.5
730	0.5	0.5	0.5	0.5	0.5	0.5
745	0.5	0.5	0.5	0.5	0.5	0.5
800	0.7	0.7	0.0	0.0	0.0	0.0
815	1.7	1.7	0.1	0.1	0.0	0.0
830	25.0	25.0	1.4	1.4	0.7	0.7
845	29.7	29.7	1.7	1.7	0.8	0.8
900	35.4	35.4	2.0	2.0	1.0	1.0
915	50.0	50.0	2.8	2.8	1.4	1.4
930	46.7	46.7	2.6	2.6	1.3	1.3
945	43.5	43.5	2.4	2.4	1.2	1.2
1000	40.6	40.6	2.3	2.3	1.1	1.1
1015	37.9	37.9	2.1	2.1	1.1	1.1
1030	412.5	37.5	187.0	17.0	88.0	8.0
1045	384.9	35.0	216.0	19.6	124.4	11.3
1100	359.1	32.6	249.6	22.7	176.0	16.0
1115	330.4	30.0	297.3	27.0	280.8	25.5
1130	308.3	28.0	277.4	25.2	262.0	23.8
1145	287.6	26.1	258.9	23.5	244.5	22.2
1200	268.4	24.4	241.5	22.0	228.1	20.7
1215	250.4	22.8	225.4	20.5	212.8	19.3
1230	233.6	21.2	210.3	19.1	198.6	18.1
1245	218.0	19.8	196.2	17.8	185.3	16.8
1300	203.4	18.5	183.1	16.6	172.9	15.7
1315	189.8	17.3	170.8	15.5	161.3	14.7
1330	177.1	16.1	159.4	14.5	150.5	13.7
1345	165.2	15.0	165.2	15.0	165.2	15.0
1400	154.2	14.0	154.2	14.0	154.2	14.0
1415	143.8	13.1	143.8	13.1	143.8	13.1
1430	134.2	12.2	134.2	12.2	134.2	12.2
1445	125.2	11.4	125.2	11.4	125.2	11.4

100' PENETRATION ROOM DOSE RATES (R/hr)

(BEFORE 10:30 DOSERATES ARE FOR RHR PIPING)
(FOR TIMES AFTER 10:15, DOSERATES ARE FOR)
(THE CTMT LEAK AREA)

TIME	CONTACT O.W.	CONTACT C.W.	3FT O.W.	3FT C.W.	>6FT O.W.	>6FT C.W.
615	0.5	0.5	0.5	0.5	0.5	0.5
630	0.5	0.5	0.5	0.5	0.5	0.5
645	0.5	0.5	0.5	0.5	0.5	0.5
700	0.5	0.5	0.5	0.5	0.5	0.5
715	0.5	0.5	0.5	0.5	0.5	0.5
730	0.5	0.5	0.5	0.5	0.5	0.5
745	0.5	0.5	0.5	0.5	0.5	0.5
800	0.7	0.7	0.0	0.0	0.0	0.0
815	1.7	1.7	0.1	0.1	0.0	0.0
830	25.0	25.0	1.4	1.4	0.7	0.7
845	29.7	29.7	1.7	1.7	0.8	0.8
900	35.4	35.4	2.0	2.0	1.0	1.0
915	50.0	50.0	2.8	2.8	1.4	1.4
930	46.7	46.7	2.6	2.6	1.3	1.3
945	43.5	43.5	2.4	2.4	1.2	1.2
1000	40.6	40.6	2.3	2.3	1.1	1.1
1015	37.9	37.9	2.1	2.1	1.1	1.1
1030	72.0	37.5	72.0	17.0	72.0	8.0
1045	101.8	35.0	101.8	19.6	101.8	11.3
1100	144.0	32.6	144.0	22.7	144.0	16.0
1115	280.8	30.0	280.8	27.0	280.8	25.5
1130	262.0	28.0	262.0	25.2	262.0	23.8
1145	244.5	26.1	244.5	23.5	244.5	22.2
1200	228.1	24.4	228.1	22.0	228.1	20.7
1215	212.8	22.8	212.8	20.5	212.8	19.3
1230	198.6	21.2	198.6	19.1	198.6	18.1
1245	185.3	19.8	185.3	17.8	185.3	16.8
1300	172.9	18.5	172.9	16.6	172.9	15.7
1315	161.3	17.3	161.3	15.5	161.3	14.7
1330	150.5	16.1	150.5	14.5	150.5	13.7
1345	143.8	13.1	143.8	13.1	143.8	13.1
1400	134.2	12.2	134.2	12.2	134.2	12.2
1415	125.2	11.4	125.2	11.4	125.2	11.4
1430	116.8	10.6	116.8	10.6	116.8	10.6
1445	109.0	9.9	109.0	9.9	109.0	9.9

CTMT HATCH DOSERATES
WHERE AIRLOCK COMES THRU WALL

TIME	READINGS
615	0.070 R/hr
630	0.070 R/hr
645	0.070 R/hr
700	0.070 R/hr
715	0.070 R/hr
730	0.070 R/hr
745	0.070 R/hr
800	0.600 R/hr
815	0.643 R/hr
830	0.689 R/hr
845	**0.739 R/hr**
900	1.400 R/hr
915	1.306 R/hr
930	1.219 R/hr
945	1.137 R/hr
1000	1.061 R/hr
1015	0.990 R/hr
1030	0.924 R/hr
1045	0.862 R/hr
1100	0.804 R/hr
1115	0.750 R/hr
1130	0.700 R/hr
1145	0.653 R/hr
1200	0.609 R/hr
1215	0.569 R/hr
1230	0.531 R/hr
1245	0.495 R/hr
1300	0.462 R/hr
1315	0.431 R/hr
1330	0.402 R/hr
1345	0.375 R/hr
1400	0.350 R/hr
1415	0.327 R/hr
1430	0.305 R/hr
1445	0.284 R/hr

RCS SAMPLE DOSERATES (R/hr)

(0500-0800)	C.W.	O.W.
CONTACT	1.000	13.000
1'	0.028	.361
3'	0.003	0.400
6'	0.001	0.010

(1% FF)	C.W.	O.W.
CONTACT	23.000	237.000
1'	0.639	6.583
3'	0.071	0.731
6'	0.018	0.183

(5% FF)	C.W.	O.W.
CONTACT	56.000	630.000
1'	1.556	17.500
3'	0.173	1.944
6'	0.043	0.486

Drill controllers can be reached at the following numbers:

	PAX	PAGER
Lee Williams, TSC	6014	6106
Randy Wiggins, TSC	6014	6113
David Tedin, TSC	6014	6191
Bob Vanderbye, Control Room	2303	6110
Francis Jessup, EOF	5168	6118

To access pager, dial 6866 on the PAX phone system.

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- - C O N F I D E N T I A L - -

SUBJECT: October 24, 1990 Emergency Exercise

TO : Exercise Monitors

Reference:

- Agencies and Personnel Notified of Exercise....Attachment 1
- Player Information Letter.....Attachment 2
- Visitor Information.....Attachment 3
- INPO Observation Sheets.....Attachment 4
- Exercise Critique Forms.....Attachment 5
- Activation Drill.....Attachment 6
- Scenario Package.....Attachment 7

This year's exercise will be a full participation exercise by APCo, the State of Alabama (AEMA and ARCD), the State of Georgia (GEMA and GA. Dept. of National Resources), Houston County and Early County, and the NRC Region II. These organizations will participate at a level necessary to simulate all aspects of a real emergency.

The exercise this year will be preceded by an activation drill (Attachment 6) scheduled for October 23, 1990. This drill will include the activation and mobilization of corporate on-call personnel to the plant and News Media Center (NMC), and the assembly of the EOF and NMC. This drill will terminate when corporate on-call personnel arrive at the EOF and NMC, and when the facilities are assembled. The State of Alabama will have personnel arrive at the NMC to assemble their equipment on October 23.

The exercise on October 24 will begin at 6:30 A.M. (see Attachment 7 for event summary). The EOF and some NMC corporate players will be pre-staged in the Training Center. Due to the pre-staging, some special arrangements must be made at the start of the October 24 exercise:

1. The RM, NMC Spokesman, and the respective monitors should be in Room 103 of the Training Center at 6:30 A.M. The RM will participate as needed from this location until time for simulated travel. The ED should page the RM for initial contact, and the RM should page the EC for initial contact. When time for simulated travel, the RM and NMC Spokesman should be directed to Room 231 in the Training Center where they will meet their crew and provide a briefing.

2. On the 24th, all initial corporate activities except activation and notification should be performed (these activities will have been tested the day before). Prior to simulated travel, the RM should coordinate all activities as necessary from Room 103. When he leaves for the helicopter (goes upstairs), he should have the EC in charge of the EOC as if he were leaving from Birmingham. Limited communication will be allowed between the EC and RM during the travel time (ext. 6114 in Room 231).

3. After the RM provides a crew briefing in Room 231, the personnel who flew in the plane will be located in a separate room from those who flew in the helicopter.

4. The RM Monitor may have to prompt the RM to fully activate all facilities at the ALERT level. This is an optional action by procedure, but is required to keep the scenario on track.

Players will be instructed to check with monitors prior to placing calls to private contractors or agencies. Attachment 1 is a list of agencies and firms that have been notified of our exercise; calls may be made to those listed. Any call to a private group not listed should be simulated only. Actions should be executed (as opposed to simulated) to the maximum extent possible consistent with plant operation and safety.

Checklists of procedurally required emergency actions are provided starting on page 250 of Attachment 7. Player execution of those actions should be rated as S (Satisfactory), U (Unsatisfactory), N/O (Not Observed) or N/A (Not Applicable). In Attachment 4, INPO "Observation Sheets" are included to provide guidance for possible areas of improvement. Please review these sheets for applicability to your area. Comment as appropriate per attached Exercise Critique Forms. In Attachment 5, Emergency Exercise Critique Forms are provided for recording major events, problems and observations. Composite Drill Monitor Comment Sheets are provided for summarizing the observations and conclusions. Please complete these summary sheets and be prepared to turn them in during the exercise critique immediately following the Exercise. Your summary sheets should contain any comments from the players you monitored. Please collect any comments they may have.

The player information letter is included in Attachment 2. Please review this letter and make note of the "Player, Monitor and Observer Conduct" section. A visitor information section is included in Attachment 3. Please ensure that any visitors in your area are aware of this information.

A large quantity of plant parameter data has been assembled in Attachment 7 to provide scenario detail. Radiation Monitor readings are to be posted on the W RMS panel and updated every 15 minutes. Plant parameter data should be provided when personnel (in a location where the data could be obtained from plant instruments) request specific data or when providing the data is necessary to kick off a given phase of the exercise. Do not ad lib data not provided in the package unless you are positive that the value you create is consistent with the simulated plant status. If unsure, consult with a Lead Controller or tell the player that the data is not available. If data is not available, related data may be volunteered to the player. If data appears questionable, contact a Lead Controller. If a player questions the validity of data, either consult a Lead Controller if you agree with the

player, or inform the player that the data is correct. Data should not be explained to the player unless necessary to keep the scenario on track and on schedule -- give the players a chance to figure out the implications of the data on their own. The monitor responsible for the repair party should have a calculator and be familiar with the dose rate calculation method in the package.

There will be a Lead Controller located in the EOF, NMC, and the TSC/Control Room. Should you have any questions contact one of these controllers.

Please have all forms applicable to your monitoring assignment completed and ready to turn in during the monitor debriefing scheduled immediately following the exercise in the training center. Also, please collect any paperwork generated by your group and place it in company envelope and label the outside according to your assignment and bring it to the debriefing.

Please make extra copies of the following items and provide them to a lead controller (these items are generally requested by the NRC immediately following an Exercise):

1. Copies of all official bound logs kept in Control Room, TSC and EOF during Exercise

2. Copies of all initial and follow-up messages provided to states.

3. Copies of all procedural documentation generated for reentry teams.

4. Copies of all news releases.

A critique will be held at 9:00 A.M. on October 25 in the Training Center Auditorium.

Corporate Staff Monitors

B. L. Moore	EOF - RM
L. C. Troutt	EOC - EC, ALA
L. L. Bailey	EOF - ASD
R. W. Stewart	EOF - ELSD
S. T. Burns	EOF - DAD
W. J. Jennings	EOF - DAD Assistant and Staff
C. Brown	EOF - PI
P. J. Case	GO - PI
A. B. Sproles	EOC - PI
M. A. Treadwell, III	EOF Set-up (October 23)
K. L. Wilson	NMC Set-up (October 23)
S. C. Ewald	Counties
W. H. Ollinger	Counties

Plant Staff Monitors

J. L. Deavers	TSC - ED/OPS Manager/RX Engineer
W. R. Bayne	TSC - Tech Manager/Environmental/ Licensing Engineer
N. M. Maddox	TSC - HP/Maintenance Manager
R. W. Taylor	Control Room
C. I. McLean	Control Room (Shift Supv.)
D. A. Hostetter	Health Physics
R. A. Livingston	Chm/Counting Room
R. M. Kurlya	RMT #1
O. M. Graves	RMT #2
J. A. Gordon	RMT #3
L. J. Maier	Maintenance Shop OSC
C. M. Reddick	Maintenance Shop OSC
C. W. King	Service Building Auditorium
W. T. Cooley	Security
D. E. Morrow	Re-Entry Team-Mech Maint
S. L. Taylor	Re-Entry Team-Elec Maint
D. B. Parks	Re-Entry Team-I&C
P. M. Haynes	Re-Entry Team-Chm/Pass
D. E. Vancil	Re-Entry Team-Operations
R. L. Patterson	Re-Entry Team-Operations
D. P. Tedin	Roving Monitor
L. S. Williams	Roving Monitor

Lead Controllers

F. M. Jessup, III	Roving
R. J. Vanderbye	Control Room
J. W. Beckham	PI
M. A. Treadwell	EOF
R. B. Wiggins	TSC

Observers

L. M. Stinson	TSC/EOF/Control Room/NMC
R. D. Hill	TSC/EOF/Control Room/NMC
D. D. Hall	Houston County EOC
J. E. Garlington	TSC/EOF/Control Room/NMC

PERSONNEL AND AGENCIES NOTIFIED OF EXERCISE

Mr. J. M. Farley
Mr. E. B. Harris
Mr. R. P. McDonald
Mr. W. G. Hairston, III
Mr. C. D. McCrary
Mr. L. B. Long

American Nuclear Insurers
INPO
Wiregrass District Office
Corporate Security
Westinghouse Nuclear Energy Systems
Bechtel Corporation
SCS Risk Management
Southern Company Services Nuclear Plant Support-Farley
SCS Automotive (fleet cars)
APCo Automotive (fleet cars)
Plant Services
SCS Technical Services
Environmental Affairs (APCo)
Support Services (Corp. Hdqtrs. Switchboard)
Legal Department (APCo)
SONOPCo Project Purchasing
Medical Support
Safety and Health (SONOPCO)
Safety and Health (APCo)
Center for Applied Isotope Studies
Shades Cahaba Service Department (mobile communications monitoring)
Clanton District (mobile communications monitoring)
Southern Division (mobile communications monitoring)
Southeast Division
Construction
Construction (FAP)
Corporate Accounting
Corporate Headquarters Building Services
Power Generation Services
Tax and Insurance
National Weather Service - Dothan
National Weather Service - Montgomery
National Weather Service Forecast Office - Birmingham
Nuclear Mutual Limited

Intracompany
Correspondence

Attachment 2

Alabama Power
E-3A

Subject October 24, 1990
Emergency Exercise

Date October 18, 1990

To Exercise Players

From B. D. McKinney
At Nuclear Engineering & Licensing

The October 24 Emergency Exercise will be full participation for Alabama Power Company, the State of Alabama, the State of Georgia, Houston County, Early County, and the NRC Region II. State and local government agencies will be evaluated by the Federal Emergency Management Agency this year. APCo will be evaluated by a team of NRC personnel and NRC contractor personnel. NRC players will be evaluated by NRC monitors. APCo employees wearing MONITOR badges will control the exercise, evaluate player performance and conduct a critique at 9:30 A.M. October 25.

The exercise will be preceded by an activation drill on October 23. This drill will include the activation and mobilization of corporate on-call personnel to the plant and News Media Center and will include the assembly of the EOF and News Media Center.

The scenario has been made as realistic as possible, however, there are limits on how precisely accident conditions can be modeled and the amount of detail that can be reasonably prepared. Also, some conditions regarding weather, plant status, etc. were assumed and may not match the conditions actually existing on the day of the exercise. Finally, since this is a simulated event, some actions must be simulated rather than executed and measures must be taken to avoid jeopardizing plant safety or leading people to believe an actual emergency exists.

It should be noted that the Emergency Communications Recorder will be recording offsite communications during the Exercise and for a short time during EOF assembly.

The information below is provided to orient you to the initial plant conditions that will exist at the start of the exercise (limited to information you would be aware of at the start of an actual event), inform you of the level of scenario detail you can expect, and provide guidance on how you should conduct yourself during the exercise.

1.0 INITIAL PLANT CONDITIONS

1.1 Unit 1 is at 100% power equilibrium conditions, middle core life, cycle #11, 760 ppm boron.

1.2 Unit 2 is in MODE 6, Rx vessel head removed, refueling is in progress.

1.3 Unit 1 LCOs in effect:

- 1-2A DG inoperable, out of service to investigate slow start, T.S. 3.8.1.1b entered 0400 October 24

- RCS activity is > 1.0 microCurie per gram DEI, T.S. 3.4.9.a entered at 0320 October 24

- CTMT Cooling Fans 1A and 1B are OOC, T.S. 3.6.2.3a entered 1800 October 22

1.4 Unit 2 LCO's in effect:

- Various snubbers and breached fire barriers

1.5 - Meteorological Conditions:

- Partly cloudy with highs in the low 60s and winds from the NW at 3 mph.

2.0 EQUIPMENT AND SYSTEM STATUS

2.1 Unit 1

2.1.1 A shutdown is planned for 0030, October 26, due to the RCS activity increase (sample at 0500 indicated ~~30~~ 1.0 µCi/gm DEI)

2.1.2 Quarterly surveillance is in progress on 1A CTMT spray pump. Estimated completion time is 0800.

2.1.3 1B CCW pump had excessive seal leakage, has been tagged out to repair seal. Estimated repair time is 18 hrs.

2.1.4 "A" Train is the on-service train.

2.1.5 CTMT Cooling Fans 1A and 1B are OOC due to high vibrations. Will be worked during the planned shutdown.

2.1.6 Minor Grid Voltage Oscillations have been experienced over the past two weeks, due to problems in the New England area.

2.1.7 TDAFP drip leg LCV-3608 has a body-to-bonnet leak, scheduled to be worked at 1200.

2.1.8 Fire suppression system 1A-27 is tagged out to reset clapper (CCW Hx room). Estimated repair time 1 hour.

2.2 Unit 2

2.2.1 2B charging pump is running on "A" train.

2.2.2 Waste Gas Compressor 2A out of service, estimated repair time: 1 day.

2.2.3 #3 Gas Decay Tank is planned for release at 1000 today.

2.2.4 2A RHR pump is out of service to be vented, estimated completion time: 2 hours.

3.0 MAINTENANCE ITEMS

3.1 1-2A DG is out of service to investigate slow start. The Day tank is drained to remove and inspect the foot-valve, fuel filters have been changed.

3.2 CTMT Cooling Fans 1A and 1B are OOC due to excessive vibration. New fan motors are being prepared for installation following the planned shutdown.

3.3 1B CCW pump is tagged out. Pump seal replacement is in progress.

3.4 Fire suppression system 1A-27 (CCW Hx Room) clapper is tagged out and being reset.

3.5 Unit 1 TDAFP drip leg LCV-3608 body-to-bonnet steam leak is scheduled to be worked at 1200.

3.6 2A Waste Gas Compressor is being replaced. Old compressor has been removed and the replacement compressor not yet installed.

4.0 EXERCISE PERSONNEL

4.1 Corporate

	Player
Recovery Manager	B. D. McKinney
NMC Spokesman	J. D. Woodard
Emergency Coordinator	D. E. Mansfield
Admin. Support Director (ASD)	J. G. Sims
Eng. and Lic. Support Director (ELSD)	D. H. Jones
Dose Assessment Director	J. W. McGowan
Activation and Logistics Asst.	D. R. Culver
Dose Assessment Director Assistant	D. E. McCoy
ENN Communicator	W. A. Gates
ASD Assistant	R. W. Clouse
RM Assistant	J. E. Fridrichsen
ELSD Assistant	S. D. Mask
Public Information Site Coor.(PISC)	F. N. Wade
PI Emergency Staff Office Coor.	L. K. Brannon
NMC Coordinator	G. T. Lassiter
PI EOF Coordinator	M. J. Casey
Media Coordinator	J. C. Conway
PI EOC Coordinator	J. N Henry

4.2 Plant

CREW DISTRIBUTION	DRILL CREW
Emergency Director	D. N. Morey
ED Assistant/ State Liaison	R. M. Coleman
Operations Manager	B. W. VanLandingham

Technical Manager	R. G. Berryhill
Health Physics Manager	B. P. Patton
Maintenance Manager	T. W. Cherry
Mech Support	J. T. Hancock
I & C Support	J. T. Harrison
Elect. Support	B. J. Bell
GPTS Support	K. E. Kendrick
Environmental Supervisor	K. H. Nguyen
Reactor Engineer	W. S. MacDonald
Chemistry Supervisor	R. T. Wood
Systems Engineer	S. J. Casey
Computer Support	D. L. Teat
Licensing Engineer	W. S. Duke
Quality Control	W. G. Ware
Houston Co. EOC Liaison	W. H. Lee
Early Co. EOC Liaison	T. E. Horne

5.0 SCENARIO DETAIL

Every effort has been made to calculate values of relevant plant parameters consistent with the accident scenario. Indications such as annunciators and alarms will be announced to control room personnel. Control room personnel may be told specific instrument readings when those readings initiate an event and personnel would detect the reading during routine observations. Process radiation monitor readings and met tower recorder readings will be posted on the W RMS panel and will be updated every 15 minutes. When other instrument readings, sample analysis results, etc. are desired, a player in the area where the readings/results would normally be available (e.g., the control room, counting room, etc.) should ask an exercise monitor for the value.

It is not possible to list in the scenario package all readings of all instruments, and monitors will be instructed not to make up and provide values that may not be consistent with the scenario. Therefore, you may be told that a reading is not relevant, you may be told that the reading would be relevant but is not available, or the monitor may be able to obtain a value by consulting with another controller. Please be cooperative if this should occur.

To ensure that the prepared instrument readings remain consistent with plant status, some plant events normally controlled by the operating staff may be forced by the exercise monitors. When told by a monitor that a specific event must happen or has happened (for example, reactor shutdown) your actions should proceed on that basis. You should tell a monitor of any action you intend to take which would affect plant parameters (for example, closing or opening valves, starting or securing pumps and motors, etc.). If the monitor informs you that you can't take the stated action, it is because the action would cause plant status to not match scenario data.

If you detect an apparent inconsistency in the data provided during the exercise, call it to the monitor's attention. If it appears to be a scenario error or is inadvertently misleading, he will let you know that. If it is not an error, he will state only that the data appears correct. He will not help you interpret the data or plant conditions unless that is necessary due to a scenario deficiency or is necessary to keep the exercise on track.

There are no actual equipment or instrument failures planned in the scenario. If a piece of equipment that you are using fails, then you should try to get it repaired or take alternative actions.

6.0 PLAYER, MONITOR AND OBSERVER CONDUCT

In order for the exercise to be a valid demonstration of FNP's emergency preparedness, to allow valid improvement items to be found, and to ensure plant safety, players are requested to observe the following guidelines:

6.1 DO NOT take any action which might jeopardize plant operation or safety.

6.2 To the maximum extent possible, consistent with safe plant operation, perform your job as if the scenario event was real. This includes any appropriate radiological protection dress outs and respiratory protection requirements that may be necessary.

6.3 When an action cannot be taken due to actual plant conditions, explain to the monitor what action you would take if the emergency were real.

6.4 To aid monitors and NRC evaluators in assessing activities, talk about what you are doing as you do it. However, this should be done only if it does not interfere with you doing this activity and does not interfere with other players by causing excess noise or distraction.

6.5 Monitors are not allowed to assist or prompt players unless necessary to keep the exercise on track. Please limit questions to monitors to requests for instrument readings, data, etc. that would be available in an actual event.

6.6 Observers should be treated as if they aren't there. If monitors or observers get in the way of your exercise activities, request that a monitor correct the situation. Monitors will minimize any interference to the maximum extent possible.

6.7 When placing phone calls, using the ENN, making plant announcements on plant page, or making radio transmissions, begin each conversation with "this is a test exercise message" or "this is a drill."

6.8 In the event of an actual emergency, the Emergency Director will terminate the exercise. Any communications associated with an actual emergency should begin with "This is NOT a drill."

B. D. McKinney, Jr.

BDM/FMJ:emb-E-3A(3)

INSTRUCTIONS AND RULES FOR VISITORS

1. The event times and scenario are confidential and should be kept confidential during the exercise. Do not discuss them with the players.

2. Visitors should not participate in the exercise nor interfere in the actions taken by the exercise players, controllers, and evaluators.

3. Identification badges are to be worn on the upper front of the torso to be clearly visible. Badges should be returned at the end of the exercise or critique. Identify yourself to the exercise controllers.

4. If you have questions, contact the controller of the location you are visiting.

VISITOR SAFETY RESPONSIBILITIES

1. Follow safe work practices and take an active part in the work of protecting your fellow workers and the plant.

2. Cooperation is necessary to protect yourself and others.

3. Follow safety rules, take no unnecessary chances, use all safeguards and safety equipment provided, and make safety a part of your responsibility.

4. In case of accidents or injury, report promptly to the lead controller and get first aid or medical help without delay.

5. Please report any hazardous condition to the lead controller.

6. Cooperate in every respect with the plant safety program so the operations may be carried on in a way that ensures safety.

7. Know your exact duties in case of fire or an actual emergency.

8. Safety takes precedence over all other requirements.

INPO Observation Sheets

I. COMMUNICATION

1. Were all required and specified communications circuits available and operational? If not, identify specific problems.

2. Were personnel familiar with the communications circuits available and the intended use of each?

3. Were the communication circuits used as intended or were they misused? If misused, what specific problems did you note?

4. Were communications adequate to ensure that the flow of information was timely, efficient, and effective?

5. Were there sufficient communicators and communications assistants to manage all of the circuits? If not, what specific shortfalls did you note?

6. Were communications personnel able to pass and receive information effectively and transmit that information to and from appropriate personnel? If not, identify specific problems areas.

7. Were communicators familiar with their assignments? Did they know communications practices?

8. Did the communications personnel maintain accurate logs? Was sufficient detail reflected in the logs (journals) to provide a valid record of the event?

9. Were the logs used effectively by personnel to review past events and to understand the nature and trending of the event in progress.

10. In general, was the communication system with all emergency response facilities and field elements adequate?

11. Were communications between teams and appropriate emergency facilities clear and understood?

II. NOTIFICATION

1. Were notification messages (i.e., emergency class notifications) logged in accurately and disseminated quickly to appropriate personnel.

2. Were notification messages verified according to procedures?

3. Were messages and information sent out accurately and in accordance with appropriate forms (i.e., notification message forms, follow-up message forms, etc.)?

4. Did messages contain "THIS IS AN EXERCISE MESSAGE" or some similar statement?

5. Were appropriate organizations (i.e., federal, state, local, or private) with response requirements notified according to procedure?

6. In general, did personnel know whom to notify and when to notify them?

III. PROCEDURES

1. Were personnel generally familiar with the relevant procedures and did they follow them?

2. Did any situations require personnel to vary from established procedures? If so, be specific.

3. Did procedures give adequate guidance or were they confusing? Explain.

4. Was the person in charge assisted by someone familiar with procedures?

5. Was adequate and timely guidance provided by senior management?

6. In your judgment, was the general flow of information appropriate, and was consultation concerning the assessment of information and action to be taken continuous and effective?

IV. MATERIALS AND EQUIPMENT

1. Were all the materials and equipment required for this activity available?

2. Was all the equipment functional?

3. If a specific amount and type of equipment (i.e., off-site radiation monitoring team kits) was required, was an inventory list available to facilitate a check of the equipment?

4. Did personnel check to ensure that all equipment was available and functional early in the activation process?

5. Were provisions made to accommodate missing or inoperative equipment?

6. Was there any situation during which the lack of equipment, inoperative equipment, or inability to operate equipment left personnel unable to perform assigned tasks properly?

7. In your opinion, were the equipment and material available appropriate and adequate for the tasks assigned?

8. Did all personnel use or simulate using equipment as required (i.e., survey meter, dosimetry, anti-c's, respirators)?

V. RADIATION EXPOSURE CONTROL

1. Were all personnel entering radiation areas provided with TLDs, dosimeters, KI, and communications equipment, as appropriate?

2. Were all emergency response personnel briefed on the accident status and recommended stay times prior to a mission? Were they provided with updates during the mission?

3. Were all emergency response personnel briefed effectively, as applicable, to prevent overexposure.

4. Were emergency response personnel doses recorded properly, and were appropriate actions taken in the event of contamination (i.e., decontamination or restrictions on any further movement into controlled areas or both)?

5. Were records regarding contamination levels before and after contamination kept for emergency response personnel?

6. Were contaminated wastes in general (clothes, towels) stored properly for later disposal?

7. Did emergency response personnel know limits and restrictions on receiving emergency exposure doses?

IV. GENERAL OBSERVATIONS AND COMMENTS

1. Were personnel generally aware of the overall situation and the roles they were playing in the assessment and mitigation of the accident?

2. Was the person in charge clearly identifiable, and was proper leadership shown?

3. Was there an adequate exchange of information?

4. Did personnel involved understand the changing situation, and were they able to contribute to the overall mitigation and accident assessment?

5. Was there any confusion or lack of understanding on the part of the participating personnel concerning the role each was to play in the overall emergency response?

6. Were teams and/or participating personnel familiar with their responsibilities and able to perform their duties adequately?

VII. EOF

1. Was the EOF activated in a timely manner and in accordance with proper procedures?

2. Was the EOF organization and initiation of activities efficient and well-organized?

3. Were the EOF status boards and log books updated frequently?

4. Was definite and effective leadership shown in the EOF?

5. Were EOF personnel familiar with their responsibilities, and did they carry out their duties effectively?

6. Were the radiological trends of the accident established?

7. Did personnel work well together to provide data and perform all dose assessment calculations?

8. Was there a good turnover of information as personnel arrived at the EOF?

EXERCISE CRITIQUE FORM

Name _____

Position monitored _____

Date _____

TIME	EVENT	COMMENT

EXERCISE CRITIQUE FORM

Name _____

Position monitored _____

Date _____

TIME	EVENT	COMMENT

Name _____

Position monitored _____

Date _____

Summary form

PROCEDURAL ITEMS

Name _____

Position monitored _____

Date _____

Summary form

PROCEDURAL ITEMS

Name _____

Position monitored _____

Date _____

Summary form

EQUIPMENT ITEMS

Name _____

Position monitored _____

Date _____

Summary form

EQUIPMENT ITEMS

Name _____

Position monitored _____

Date _____

Summary form

PERSONNEL ITEMS

Name _____

Position monitored _____

Date _____

Summary form

PERSONNEL ITEMS

Name _____

Position monitored _____

Date _____

Summary form

TRAINING ITEMS

Name _____

Position monitored _____

Date _____

Summary form

TRAINING ITEMS

Name _____

Position monitored _____

Date _____

Summary form

OTHER ITEMS

Name _____

Position monitored _____

Date _____

Summary form

OTHER ITEMS

ATTACHMENT 6

OCTOBER 23, 1990

PRE-EXERCISE ACTIVATION

DRILL

SUBJECT: October 23, 1990 Pre-Exercise Activation Drill

TO : Activation Drill Monitors

The October 23, 1990 Pre-Exercise Activation Drill will begin at 11:00 A.M. Tuesday. In order to ensure that there is no confusion on what is to be tested, the following outline should help you to keep the drill on the right track:

A. To Be Performed:

1. CCD and NGD activation - to include all activities in contacting NGD and CCD personnel.

2. Transportation to the plant - should there be a problem with the helicopter and plane, then corporate security should be contacted for transportation.

3. Contact with Corporate Security to arrange security at NMC.

4. Notification steps in EIP-111.

5. Plant EOF staffing activities (for Tech Manager, contact lead controller at FNP).

B. NOT to be tested on October 23:

1. Do not contact enroute RM.

2. Do not perform any turn-over to EOF personnel upon their arrival at EOF - this activity will be tested October 24.

3. Do not contact upper management as part of this drill.

4. Do not contact the TSC - however, the lead controller at FNP will act as all plant positions.

5. Do not have any communications over ENN.

Should you have any questions regarding what to simulate or what not to perform, contact the lead controller at the plant. The lead controller will play the role of any plant position that a player may need to contact.

1990 PRE-EXERCISE ACTIVATION DRILL OBJECTIVES

October 23, 1990

I. Participating Organizations

APCo Nuclear Generation Department
APCo Corporate Communications Department
APCo Security Department
APCo Southeast Division

II. Purpose

To demonstrate APCo corporate activation and transportation capabilities and demonstrate the ability to assemble the NMC and begin assembly of the EOF while prestaging EOF personnel for participation in the October 24, 1990 Emergency Exercise.

III. Objectives

A. On-site Objectives

Demonstrate EOF assembly in accordance with Emergency Implementing Procedures. Two hours of EOF assembly will be performed on the 23rd and two hours will be performed on the 24th.

B. Off-site (Corporate) Objectives

1. Demonstrate that the NGD and CCD Emergency Organizations can be activated in accordance with GO-EIP-111 and GO-EIP-118.

2. Demonstrate the ability to transport Corporate Emergency Organization personnel to the NMC and EOF in a timely manner.

IV. General Drill Scenario

The simulated accident condition will be a Site Area Emergency (see attached).

V. Drill Limits

The drill will begin no earlier than 11:00 a.m. CST and no later than 2:30 p.m. CST.

T = 11:00 A.M.

APPROXIMATE TIME (EST)	IMPOSED CONDITION OR EVENT	EXPECTED RESPONSE
T + 0:0	Recovery Manager (RM) receives notification from plant of the declaration of a Site Area Emergency due to a large break LOCA.	Emergency Coordinator (EC) to implement GO-EIP-111 "Nuclear Generation Department Corporate Activation and Notification Procedures."
T + 0:07		EC arranges transportation to plant via helicopter and airplane.
T + 0:08	On-call Public Information Emergency Coordinator (PIEC) is contacted by EC and is requested to activate Corporate Communication Department (CCD) Emergency Organization.	PIEC implements GO-EIP-118 "CCD Corporate Activtion and Notification Procedures."
T + 0:10	Public Information Emergency Staff Office Coordinator is contacted by PIEC and is requested to implement Appendix 4 of GO-EIP-118.	GO-EIP-118 is implemented. News Media Center (NMC) assembly is initiated.
T + 0:15		Plant personnel implement EIP-27 "Activation of the Emergency Operations Facility."

APPROXIMATE TIME (EST)	IMPOSED CONDITION OR EVENT	EXPECTED RESPONSE
T + 0:25		EOC fully staffed. EC advises RM of flight plans and personnel for each mode of transport.
T + 1:00		Partial EOF staff departs for FNP via helicopter.
T + 1:15		Remainder of EOF staff and CCD staff depart for FNP via plane.
T + 2:15		Helicopter arrives at FNP and plane arrives at Dothan Airport.
T + 2:30		EOF staff arrives at the EOF.
T + 2:45		Spokesperson arrives at News Media Center (NMC).

1990 EMERGENCY EXERCISE

SCENARIO

APPROVED:

R. D. Hill — Date: 8/31/90

J. E. Garlington — Date: 9-4-90

APPROVED: PUBLIC INFORMATION SCENARIO

S. E. Bradley — Date: 8-29-90

October 24, 1990 Farley Nuclear Plant
Emergency Exercise Package

-- C O N F I D E N T I A L --

The contents of this document are to be released only on a need-to-know basis prior to October 24, 1990.

OBJECTIVES

1990 FARLEY NUCLEAR PLANT EMERGENCY EXERCISE OBJECTIVES
October 24, 1990

I. Participating Organizations

Full Participation: Alabama Power Company, State of Alabama, Houston County, State of Georgia, Early County, and Nuclear Regulatory Commission.

II. Purpose

A. To meet the requirements of 10CFR50, Appendix E, 44CFR350.9 and NUREG-0654/FEMA-REP-1, Rev. 1.

B. To conduct a full-scale exercise that will include the mobilization of Alabama Power Company, state and local personnel and resources adequate to verify the capability of participating organizations to respond to an accident scenario requiring response.

III. Alabama Power Company Objectives

A. On-site

1. Demonstrate that control room staff can assess the event, classify the event, take corrective measures to control the event and activate emergency response procedures.

2. Demonstrate that plant staff can activate and staff the Technical Support Center (TSC) and perform accident response activities including:

a. Dose Assessment
b. Off-site notification and protective action recommendations
c. Reclassification of emergency status
d. Personnel Accountability for all personnel on-site
e. Radiation Monitoring Team (RMT) Dispatch and Control
f. Site access control and admittance of essential personnel
g. Dispatch and control of re-entry teams

3. Demonstrate the capability to turn over EOF functions to the EOF staff when the EOF is activated and staffed.

4. Demonstrate the capability to augment EOF staff with non-essential plant personnel.

5. Demonstrate the adequacy of the plant's communication system including: Communication links to Corporate Emergency Operations Center (EOC); News Media Center (NMC); interplant communications; and communication links to state and local authorities.

6. Demonstrate the capability to perform radiological monitoring.

B. Off-Site

1. Demonstrate that corporate staff can be activated in a timely fashion and dispatched to FNP.*

2. Demonstrate that Corporate Headquarters Emergency Operations Center (EOC) staff can provide initial support for:

   a. EOF activation*
   b. Logistics
   c. Support organization notification
   d. Briefing of company management
   e. News release preparation

3. Demonstrate that EOF staff can:

   a. Assume the dose assessment function and the RMT direction and control function from the TSC staff.
   b. Assume the logistics, manpower and engineering function from the EOC.
   c. Prepare and coordinate news releases and activate* the NMC.

4. Demonstrate that the Public Information Organization can respond to media and public inquiries, establish a rumor control center, and issue and coordinate news releases.

IV. State and Local Objectives

- See Attachment 1 (Any state or local objective that cannot be demonstrated due to conditions inconsistent with the scenario will be demonstrated in a separate drill.)

V. Off-site Ingestion Pathway State Objectives

- See Attachment 1: Ingestion pathway activities will be exercised immediately following the plume exposure exercise and will utilize a separate scenario. The availability of Federal resources will be simulated. APCo will not be a participant in the ingestion pathway exercise activity.

VI. Joint Objectives (Alabama Power Company, State of Alabama, State of Georgia, Houston County and Early County)

1. Demonstrate that all parties can coordinate news releases and conduct a joint news conference.

2. Demonstrate that adequate technical information can be exchanged among involved agencies.

VII. Exercise Limits

The plume exposure exercise will begin prior to 8 A.M. CST and conclude by 2:30 P.M. CST. The ingestion pathway exercise will begin immediately following the plume exposure exercise and will conclude by 5:00 P.M.

*To be tested in a separate drill the day before the exercise. This will allow pre-staging of these activities on the day of the exercise.

ATTACHMENT 1

STATE AND LOCAL OBJECTIVES

	State of AL.	Houston County	State of GA.	Early County
1. Demonstrate the ability to monitor, understand and use emergency classification levels (ECL) through the appropriate implementation of emergency functions and activities corresponding to ECLs as required by the scenario. The four ECLs are: Notification of Unusual Event, Alert, Site Area Emergency and General Emergency.	X	X	X	X
2. Demonstrate the ability to fully alert, mobilize and activate personnel for both facility and field-based emergency functions.	X	X	X	X
3. Demonstrate the ability to direct, coordinate, and control emergency activities.	X	X	X	X
4. Demonstrate the ability to communicate with all appropriate locations, organizations and field personnel.	X	X	X	X
5. Demonstrate the adequacy of facilities, equipment, displays and other materials to support emergency operations.	X	X	X	X
6. Demonstrate the ability to continuously monitor and control emergency worker exposure.	X	X	X	X
7. Demonstrate the appropriate equipment and and procedures for determining field radiation measurements.	X	X	X	X
8. Demonstrate the appropriate equipment and procedures for the measurement of airborne radioiodine concentrations as low as 10^{-7} microcurie per cc in the presence of noble gases.	X		X	
9. Demonstrate the ability to obtain samples of particulate activity in the airborne plume and promptly perform laboratory analyses.	X			

	State of AL.	Houston County	State of GA.	Early County
10. Demonstrate the ability, within the plume exposure pathway, to project dosage to the public via plume exposure, based on plant and field data.	X		X	
11. Demonstrate the ability to make appropriate protective action decisions, based on projected or actual dosage, EPA PAGs, availability of adequate shelter, evacuation time estimates and other relevant factors.	X		X	
12. Demonstrate the ability to initially alert the public within the 10-mile EPZ and begin dissemination of an instructional message within 15 minutes of a decision by appropriate state and/or local official(s).	X	X	X	
13. Demonstrate the ability to coordinate the formulation and dissemination of accurate information and instructions to the public in a timely fashion after the initial alert and notification has occurred.	X	X	X	X
14. Demonstrate the ability to brief the media in an accurate, coordinated and timely manner.	X	X	X	
15. Demonstrate the ability to establish and operate rumor control in a coordinated and timely fashion.	X		X	
16. Demonstrate the ability to make the decision to recommend the use of KI to emergency workers based on predetermined criteria, as well as to distribute and administer it once the decision is made, if necessitated by radioiodine releases.	X		X	
17. Demonstrate the ability to make the decision to recommend the use of KI for the general public, based on predetermined criteria, as well as to distribute and administer it once the decision is made, if necessitated by radioiodine releases.				
18. Demonstrate the ability and resources necessary to implement appropriate protective actions for the impacted permanent and transient plume EPZ population (including transit-dependent persons, special needs populations, and handicapped persons).	X	X		X

	State of AL.	Houston County	State of GA.	Early County
19. Demonstrate the ability and resources necessary to implement appropriate protective actions for school children within the plume EPZ.		X	N/A	N/A
20. Demonstrate the organizational ability and resources necessary to control evacuation traffic flow and to control access to evacuated and sheltered areas.		X		X
21. Demonstrate the adequacy of procedures, facilities, equipment and personnel for the registration, radiological monitoring and decontamination of evacuees.		X		X
22. Demonstrate the adequacy of facilities, equipment and personnel for congregate care of evacuees.		X		X
23. Demonstrate the adequacy of vehicles, equipment, procedures and personnel for transporting contaminated, injured or exposed individuals. (Tc be performed in an independent drill)	X	X		
24. Demonstrate the adequacy of medical facilities, equipment, procedures and personnel for handling contaminated, injured or exposed individuals. (To be performed in an independent drill)	X	X		
25. Demonstrate the adequacy of facilities, equipment, supplies, procedures and personnel for decontamination of emergency workers, equipment and vehicles and for waste disposal.				
26. Demonstrate the ability to identify the need for and call upon federal and other outside support agencies' assistance.	X		X	
27. Demonstrate the appropriate use of equipment and procedures for collection and transport of samples of vegetation, food crops, milk, meat, poultry, water and animal feeds (indigenous to the area and stored).				

	State of AL.	Houston County	State of GA.	Early County
28. Demonstrate the appropriate lab operations and procedures for measuring and analyzing samples of vegetation, food crops, milk, meat, poultry, water and animal feeds (indigenous to the area and stored).	X			
29. Demonstrate the ability to project dosage to the public for ingestion pathway exposure and determine appropriate protective measures based on field data, FDA PAGs and other relevant factors.	X		X	
30. Demonstrate the ability to implement both preventive and emergency protective actions for ingestion pathway hazards.	X		X	
31. Demonstrate the ability to estimate total population exposure.				
32. Demonstrate the ability to determine appropriate measures for controlled reentry and recovery based on estimated total population exposure, available EPA PAGs and other relevant factors.				
33. Demonstrate the ability to implement appropriate measures for controlled reentry and recovery.				
34. Demonstrate the ability to maintain staffing on a continuous 24-hour basis by an actual shift change.				
35. Demonstrate the ability to coordinate the evacuation of onsite personnel.				
36. Demonstrate the ability to carry out emergency response functions (i.e., activate EOCs, mobilize staff that report to the EOCs, establish communications linkages and complete telephone call down) during an unannounced off-hours drill or exercise.				

SCENARIO SUMMARY

1.0 INITIAL PLANT CONDITIONS

1.1 Unit 1 is at 100% power, equilibrium conditions, middle of core life, Cycle #11, 760 ppm boron.

1.2 Unit 2 is in MODE 6, Rx vessel head removed, refueling is in progress

1.3 Unit 1 LCO's in effect:

- 1-2A DG inoperable, out of service to investigate slow start, T.S. 3.8.1.1.b entered 0400 October 24
- RCS activity is > 1.0 microCurie per gram DEI, T.S. 3.4.9.a entered at 0320 October 24
- CTMT Cooling Fans 1A and 1B are OOC, T.S. 3.6.2.3.a entered 1800 October 22

1.4 Unit 2 LCO's in effect:

- Various snubbers and breached fire barriers

1.5 Meteorological Conditions:

- Wind speed: 3.8 mph @ 150 ft. 3.0 mph @ 35 ft.
- Wind direction from: 318° @ 150 ft. 315° @ 35 ft.
- ΔT: -.75°F/165 ft.

2.0 EQUIPMENT AND SYSTEM STATUS

2.1 Unit 1

2.1.1 A shutdown is planned for 0030, October 26, due to the RCS activity increase (sample at 0500 indicated 1.1 µCi/gm DEI)

2.1.2 Quarterly surveillance is in progress on 1A CTMT spray pump. Estimated completion time is 0800.

2.1.3 1B CCW pump had excessive seal leakage, has been tagged out to repair seal. Estimted repair time is 18 hrs.

2.1.4 "A" Train is the on-service train.

2.1.5 CTMT Cooling Fans 1A and 1B are OOC due to high vibrations. Will be worked during the planned shutdown.

2.1.6 Minor Grid Voltage Oscillations have been experienced over the past two weeks, due to problems in the New England area.

2.1.7 TDAFP drip leg LCV-3608 has a body to bonnet leak, scheduled to be worked at 1200.

2.1.8 Fire suppression system 1A-27 is tagged out to reset clapper (CCW Hx room). Estimated repair time 1 hour.

2.2 Unit 2

2.2.1 2B charging pump is running on "A" train.

2.2.2 Waste Gas Compressor 2A out of service, estimated repair time: 1 day.

2.2.3 #3 Gas Decay Tank is planned for release at 1000 today.

2.2.4 2A RHR pump is out of service to be vented, estimated completion time: 2 hours.

3.0 MAINTENANCE ITEMS

3.1 1-2A DG is out of service to investigate slow start. The Day tank is drained to remove and inspect the foot-valve, fuel filters have been changed.

3.2 CTMT Cooling Fans 1A and 1B are OOC due to excessive vibration. New fan motors are being prepared for installation following the planned shutdown.

3.3 1B CCW pump is tagged out. Pump seal replacement is in progress.

3.4 Fire suppression system 1A-27 (CCW Hx Room) clapper is tagged out and being reset.

3.5 Unit 1 TDAFP drip leg LCV-3608 body-to-bonnet steam leak is scheduled to be worked at 1200.

3.6 2A Waste Gas Compressor is being replaced. Old compressor has been removed and the replacement compressor not yet installed.

4.0 NARRATIVE SUMMARY

The scenario will begin at 0630 central time with a pressurizer code safety valve (V8010A) lifting. As a result of the code safety valve lifting and subsequent failure to fully reseat, RCS identified leakage of 15 GPM will result. Based on the failure of a pressurizer code safety valve to close, a NOUE may be declared and a controlled ramp down in power to minimum load will be initiated per AOP-1.0. At 0700, the 1A CTMT spray pump breaker will trip on overload due to a short in the motor windings. Attempts to drain or cooldown the PRT will not be possible due to failure of the PRT drain valve (HV-8031).

At 0730, RCS leakage from the failed pressurizer code safety valve (V8010A) will increase to 60 GPM and cause the PRT rupture disk to blow. Based on RCS leakage in excess of 50 GPM, an ALERT will be declared. Plant ramp down in power to minimum load will continue. At 0800, a Gross Failed Fuel Detector Alarm will occur to provide the operators an indication of further degradation in fuel assembly integrity (approximately 1% clad damage).

At 0900, the 1A steam generator will develop a tube rupture and a steam line break inside containment. RCS activity will increase to reflect approximately 5% clad damage. ECCS actuation occurs at 4 psig in containment; however, 1C CTMT Fan Cooler breaker trips and the PRT nitrogen supply line isolation (HV-8047) fails to close during Phase A isolation. All automatic safety systems actuate as CTMT pressure rises, containment pressure peaks at approximately 30 psig. Based on a loss of coolant and high containment pressure, a SITE AREA EMERGENCY may be declared (due to multiple failures, controller intervention will be allowed to assure a SITE AREA EMERGENCY is declared to meet exercise objectives).

At 0920, the 1B CTMT spray pump breaker will trip due to a relay failure. Following a re-entry for emergency repairs, the 1B CTMT spray pump may be returned to service (around 1330). Due to the pump failure, containment pressure will remain elevated.

At 1030, the PRT nitrogen supply line isolation (HV-8033) in the 121' piping penetration room fails due to the diaphragm blowing. This will result in a containment leak of 400 CFM through the PRT nitrogen supply line and subsequent radioactive release to the environment. A GENERAL EMERGENCY will be declared based on loss of all three fission product barriers. At 1330, the release from containment may be isolated by an emergency repair party.

The TSC will be fully staffed and radiation monitoring teams will be dispatched to perform environmental monitoring. The plant will cooldown during safety injection, and proceed to cold shutdown with RHR in a normal cooldown lineup.

The EOF will be activated and will continue the efforts to track the plume and provide environmental monitoring and dose assessment. The EOF staff will be further challenged with licensing, public information, engineering and logistics support activities.

The News Media Center will be activated and staffed by representatives from APCo, the State of Alabama, Houston County, the State of Georgia and Early County. Media and public interest will be simulated and news releases will be prepared and released.

The exercise will terminate once the radiation monitoring teams have tracked the plume, the EOF has been staffed and is performing EOF activities, and the News Media Center staff has conducted a press conference. Termination will be coordinated with the State of Alabama and the State of Georgia if occurring prior to 3:00 P.M. Central.

SEQUENCE OF EVENTS

TIME	CONDITION/EVENT	EXPECTED RESPONSE
0620		Control room personnel briefed and on station
0630	PZR Code Safety Valve 8010A opens and fails to reseat resulting in 15 gpm leak to the PRT	• Control room personnel should implement AOP-1.0
0630+		Control room personnel should perform the following: • Based on RCS identified leakage, commence power reduction required by AOP-1.0 using UOP-3.1 • Contact OPS Manager and ED • Consider classifying a NOUE per EIP-17 step 3.2.5 and make notifications required by EIP-26 (ED discretion) • IF NOUE NOT declared, notifications made per EIP-26 step 6.1.1 and SOP-0.0 step 10 • Evaluate the following Technical Specifications: 1. T.S. 3.2.5.b - DNB 2. T.S. 3.4.3 - PZR Code Safety Valves 3. T.S. 3.4.7.2.d - RCS identified leakage

SEQUENCE OF EVENTS

TIME	CONDITION/EVENT	EXPECTED RESPONSE
0640+	PRT Drain valve HV-8031 fails to open when aitemped	• When operators attempt to cooldown the PRT per SOP-1.2 they will be unsuccessful. PRT should be returned to normal lineup
0700	1A CTMT Spray Pump Trips on breaker overload (Short in motor windings, repair time 4 days)	• Control Room personnel dispatch SO/SFO to check breaker and motor
0700+		• STP-16.1 lineup should be secured and a tagging operations order initiated for 1A CTMT Spray Pump • Control Room personnel should evaluate the following Technical Specifications: 1. T.S. 3.6.2.1 - CTMT Spray Pump 2. T.S. 3.6.2.3c - CTMT Cooling Fans • The Recovery Manager is contacted and advised of current plant status
0730	RCS leak rate increases to approximately 60 gpm. PRT rupture disk blows.	Control Room personnel should perform the following: • Refer to AOP-1.0 • Consider manually isolating letdown • Evaluate CTMT sump level increase (indicates ≈ 1/2 ft per minute, STP-70 shows ≈ 75 gpm leak)

SEQUENCE OF EVENTS

TIME	CONDITION/EVENT	EXPECTED RESPONSE
0730+	R-2, R-7, and R-14 alarm	Control Room personnel should perform the following: • Implement AOP-33.0 • Isolate mini-purge fans and dampers (R-14 clears) • Request Counting Room perform EIP-9 calculation (EIP-9.5/9.4 indicates no emergency classification due to release) • Declare an ALERT based on EIP-12 step 3.2.4 RCS leak > 50 gpm and make notifications required by EIP-26
0735		• Turbine ramp rate increased to 5 MW/min • TSC activated (extent of activation at ED discretion)
0745	CTMT pressure slowly trending up	Recovery Manager is notified of ALERT classification and makes decision to activate the BHM Emergency Organization and the Emergency Operation Facility (prompted if necessary since activation at ALERT is optional)
0745+		Emergency Director/Technical Manager direct EOF setup and activation per EIP-27 (NOTE: EOF set-up and BHM Emergency Organization activation exercised on October 23, 1990)

SEQUENCE OF EVENTS

TIME	CONDITION/EVENT	EXPECTED RESPONSE
0800	Gross Failed Fuel Detector alarms at > 1 x 10^5 cpm (= 1% clad damage). R-6 alarms	Control Room operators should implement AOP-32.0 and AOP-33.0 and recognize that further degradation in fuel integrity has occurred
0800+	R-4 alarms	Control Room personnel should perform the following: • Restrict access to areas around charging pumps and sample room • Contact HP to survey affected areas • Request RCS sample
0805		PIEC arrives at EOC. EOC is activated.
0900	• CTMT Pressure 4 psig and trending up • Steam line break in CTMT followed by a steam generator tube rupture on 1A steam generator • Reactor trip and safety injection automatically actuate	• Control room personnel enter EEP-0 • EOF personnel arrive at EOF and spokesperson arrives at the NMC.

SEQUENCE OF EVENTS

TIME	CONDITION/EVENT	EXPECTED RESPONSE
0900+	• 1C CTMT fan cooler trips (will not restart, only 1D fan cooler operating) • PRT N_2 supply line isolation valve HV-8047 fails to close during Phase A isolation (MLB-2 Lite 19-4) • R-15, R-19, R-23A & B, R-27A & B alarm • Failed fuel fraction increases to 5%	Control Room personnel should recognize the following: • 1C CTMT fan cooler is tripped • HV-8047 failure to close • Adverse parameters apply in Emergency Response Procedures • Secondary Radiation Monitors in alarm condition
0900+		• TSC is fully manned and activated • Emergency Coordinator is contacted and advised of situation
0903	• CTMT pressure reaches 16.2 psig, MSIV's isolated	Control Room personnel verify MSIV's close.
0908	• CTMT pressure reaches 27 psig • Phase B isolation automatically actuates • 1B CTMT spray pump starts and initiates spray	Control Room personnel should perform the following: • Verfiy CTMT Spray Actuation • Verify Phase B Actuation • Trip RCP's

SEQUENCE OF EVENTS

TIME	CONDITION/EVENT	EXPECTED RESPONSE
0908+		Control Room personnel/TSC should: • Exit EEP-0 at step 21.1 or step 24.1 • Enter FRP-2.1 based on Orange Path Criteria • Enter EEP-3 (from EEP-2 step 7.2 or EEP-1 step 3.2 or step 4.1 after exiting FRP-2.1) • Declare a SITE AREA EMERGENCY per EIP-18 (Combination of Step 3.2.1 and 3.2.4) NOTE: Controller intervention is allowed to ensure a SITE AREA EMERGENCY is declared due to multiple failure event • Sound Plant Emergency Alarm (PEA) • Implement evacuation and personnel accountability
0910	NRC Site Team arrives	ED contacted and approves NRC entry to site. NRC site team proceeds to EOF and TSC. (NRC site team will be prestaged in training center classroom).
0910+	RCS pressure 1300 psig and trending down	• Notifications for SITE AREA EMERGENCY initiated per EIP-26 • Charging pump miniflows closed per foldout page

SEQUENCE OF EVENTS

TIME	CONDITION/EVENT	EXPECTED RESPONSE
0912	Source Range NI's energize R-15 alarm clears (offsite dose rates due to release out SJAE's are not detectable)	
0915+	1A SG pressure < 410 psig and trending down	• Enter ECP-3.1 due to PZR Code Safety Leakage or based on ruptured SG pressure (EEP-3 step 5.2 or step 11)
0920	1B CTMT Spray Pump trips due to breaker failure (failed relay, repairs to be complete at 1315)	• Actions initiated to evaluate and repair breaker
0920+		Reentries initiated for the following: • Dispatch RMT's • Investigate 1B CTMT spray pump breaker • RCS Sample
0925+		RCS cooldown to cold shutdown initiated per ECP-3.1
0928+		RCS pressure reduction initiated to refill PZR
0954+		1B RCP started and normal charging established per ECP-3.1

SEQUENCE OF EVENTS

TIME	CONDITION/EVENT	EXPECTED RESPONSE
1000+		• Reentry initiated to isolate accumulators. • Press conference held at NMC
1025+		• TSC staff consulted and decides to place RHR System in cooldown lineup per SOP-7.0 (NOTE: Possible controller intervention to allow RHR to be placed in operation without sampling for boron) • RMT control is turned over to EOF staff
1030	• PRT nitrogen supply line isolation valve (HV-8033) in the 121' piping penetration room blows its diaphragm resulting in 400 CFM CTMT to atmosphere leak • R-10, R-14, R-21, and R-22 alarm	When personnel recognize that CTMT integrity has been lost, the ED/RM declares a GENERAL EMERGENCY
1100		EOF TURNOVER COMPLETE
1100+		• Reentry is planned to investigate the source of CTMT leakage and repair it • Reentry is planned to place low pressure letdown on service for warmup of RHR (ED discretion)

SEQUENCE OF EVENTS

TIME	CONDITION/EVENT	EXPECTED RESPONSE
1115+	RCS cooldown on RHR commenced	When RCP support conditions are lost, then 1B RCP is secured
1300	Plant continues to cooldown	News Media Center continues to provide information to press
1315		• Repairs complete on 1B CTMT spray pump breaker, CTMT spray initiated
1330		Emergency Repair Party completes temporary repair on HV-8033, CTMT to atmosphere leak is stopped
1330+	Secure from drill	

PUBLIC INFORMATION SCENARIO

METHODOLOGY

The development of this scenario took into account the actual experiences of other nuclear utilities and industrial facilities that have experienced emergency events resulting in considerable public interest and concern.

Those events were utilized as a realistic experience base. The other key factors taken into account were APC and the Farley Nuclear Plant's own unique situation and programs. This included analysis of recent issues of public, media, employee and financial interest related to the plant and utility; normal APC media contacts history; Farley public acceptance situation; Farley emergency procedures and APC emergency public information procedures.

Using the information base described above, a realistic scenario of public information repercussions to the corresponding technical scenario was developed which includes the following:

- Public inquiries (quantity, nature, source, recipient)
- Employee inquiries (quantity, nature, source, recipient)
- Political official inquiries (quantity, nature, source, recipient)
- Media inquiries (quantity, nature, source, recipient)
- Financial community inquiries (quantity, nature, source, recipient)
- Questions which spokesperson, technical briefers and News Media Center staff would likely receive
- Media relations situations at the News Media Center requiring staff to make decisions and take actions based on procedures and training.

The time frames provided for these activities are based on the timing and movement of the technical scenario and emergency team responses to scenario events.

APPROXIMATE EXERCISE TIME	EVENT SUMMARY & ANTICIPATED ACTIONS
6:30AM	Unusual Event
7:30AM	Alert declared based on increased RCS leakage.
7:45AM	*The on-call PIEC is notified of need to activate the Corporate Communication Department (CCD) Emergency organization.
7:50AM	*PIEC notifies PISC *PIEC coordinates staff activation.
8:05AM	PI EOC Coordinator begins preparation of initial news release
	Media and employee inquiries to Corporate Communication begin.
	Telephone Responders provide approved information to callers.
8:15AM	Rumor is reported concerning RCS leak.
	Rumor is detected by Corporate Communication and action is taken to correct misinformation.
8:30AM	Reporters arrive at Corporate Headquarters and demand an interview
:00AM	Site Area Emergency declared due loss of RCS and high containment pressure.
	APC Spokesperson, NMC Coordinator and PISC arrive at News Media Center.
9:15AM	A rumor concerning explosion is noted by Media Coordinator and action is taken to correct misinformation.
9:30AM	A reporter demands information about the "meltdown" at Farley.
	Sirens and Tone Alert Radios may be activated. Public inquiries begin.

APPROXIMATE EXERCISE TIME	EVENT SUMMARY & ANTICIPATED ACTIONS
9:45AM	A reporter requests information about the emergency classification.
	News Media Center declared operational.
10:00AM	A news media team arrives at FNP demanding entrance. First press conference held. Spokespersons respond to media questions.
10:30AM	General Emergency declared.
10:45AM	Attempted breach of NMC security access. NMC security provides access control.
11:00AM	EOF fully activated. Rumor is reported from APC employee that two children visiting the plant have been killed.
	Rumor is detected by Corporate Communications and action is taken to correct misinformation.
11:30AM	Second news briefing held. Spokespersons respond to media questions.
11:45AM	Misinformation concerning leak in containment and overexposure of personnel. This is noted by News Media Coordinator who will take action to correct misinformation.
12 Noon	Rumor is reported concerning the fatality due to overexposure of radiation from the containment leak.
12:15PM	Several calls concerning use of KI and evacuation instructions to NMC and Corporate Headquarters.

BOGUS MEDIA

Linda Cox, WRKW, Savannah
Sarah Sims, Boston Globe
Bruno Wait, Washington Post
Susan Smith, NBC Chicago
Kurt Henry, WKMX
Jody Peoples, AP
Tom White, San Diego News
Joe Jordan, WTVY Dothan
Sal Tortelli, CNN
Monty Brinker, UPI
Toby Quale, CNN
Randy Miller, WOOF, Dothan
Pete Mooney, WSFA-TV
The Birmingham News
Cincinnati Bugle
George Wickes, Atlanta Journal
Paul Grossman, Wall Street Street
Lucy Donavan, Wall Street Journal
Paul Harris, Nuclear News
Pamela Peabody, WAGF
Steve Welby, ABC
Herb Grissom, Channel 3, Boston
Knoxville Recorder
WTVK, Little Rock
Connie Kim, Tampa Tribune
Bobby Bishop, Miami Herald
Gregory Miles, WOR, Cincinnati
John Reitz, WXBA
Denny Fitzpatrick, WGN-Chicago
WXYQ-Atlanta
Joan Early, CBS

BOGUS EMPLOYEES

Karen Brown
Linda Evans
Tim Crowe
Harold Wilder
Curtis Blue

OTHER BOGUS CALLS

Andrew Thomas
Gov. Bob Martinez's Assistant
Jim Bundy
Senator Shelby's Office
Gov. Guy Hunt's Office
Dana Hughes, Principal Fin. Group
Linda Webber, Merrill Lynch
Arthur Pope, Lehman-Shearon
Brian Royer, ANS
Al Poles, TVA
Hank Wills, MP&L
Janice Howard, EEI

BOGUS CITIZENS

Carol Sutton
Debra North
Pat Markson
Bertha Samuels
June Gallant

EMERGENCY PUBLIC INFORMATION SCENARIO

EVENT: RCS Leak Rumor

SCENARIO TIME: 8:15 AM

MESSAGE FOR: Corporate Media Coordinator (250-2318 or 250-3575)

CONTROLLER GUIDANCE

- Begin and end message with "THIS IS A DRILL"

CONTROLLER MESSAGE

Local radio station WKMX has reported that a large leak in one of the steam generators has caused the operators at Farley to declare an emergency. It is reported that the leak began two days ago; however, plant personnel have failed to report or contain the leak, and it's possible the accident could be severe.

EMERGENCY PUBLIC INFORMATION SCENARIO

EVENT: Reporters Demand Interview

SCENARIO TIME: 8:30 AM

MESSAGE FOR: Security Guard

CONTROLLER GUIDANCE
- Attempt to breach security to enter EOC. When stopped, deliver message.

- Begin and end message with "THIS IS A DRILL"

CONTROLLER MESSAGE

We demand an interview with someone in public information. We want all the details of what's happening at Plant Farley. We believe you're trying to put a cover on a big story.

EMERGENCY PUBLIC INFORMATION SCENARIO

EVENT: Rumor of Explosion at Plant Farley

SCENARIO TIME: 9:15 AM

MESSAGE FOR: Corporate Media Coordinator (250-2318 or 250-3575)

CONTROLLER GUIDANCE

Begin message with "THIS IS A DRILL"

CONTROLLER MESSAGE

WDHN, Channel 18, Dothan, has reported that an explosion at FNP has left two people dead and four others injured. The accident occurred at approximately 6:30 a.m. Details of what caused the explosion are unknown and are being investigated by APC and the NRC.

EMERGENCY PUBLIC INFORMATION SCENARIO

EVENT: Birmingham News Reporter Demands Information

SCENARIO TIME: 9:30 AM

MESSAGE FOR: Corporate Media Coordinator (250-2313 or 250-3575)

CONTROLLER GUIDANCE

- Begin message with "THIS IS A DRILL"
- Demand information about Farley "meltdown."

CONTROLLER MESSAGE

I demand information about the meltdown at Farley Nuclear Plant. I want the full story!

PUBLIC INFORMATION SCENARIO

EVENT: Rumor Control Trending

SCENARIO TIME: 9:45 AM

MESSAGE FOR: Corporate Media Coordinator (250-2318 or 250-3575)

CONTROLLER GUIDANCE

- This event will be used to evaluate rumor control trending.
- End this message with "THIS IS A DRILL."
- Similar inquiries will come from the following:

  Susan Smith, NBC, Chicago
  Gregory Miles, WOR, Cincinnati
  Herb Grissom, Channel 3, Boston
  Bobby Bishop, Miami Herald

CONTROLLER MESSAGE

I'm Tony Quale, CNN. What event led to classification of a Site Area Emergency? Isn't it true the governor will intervene on behalf of the State of Alabama and begin giving direction on how to get this catastrophe under control? Has he already ordered evacuation of all zones 10 miles out?

EMERGENCY PUBLIC INFORMATION SCENARIO

EVENT: News Media TV crew arrives at FNP entrance demanding entrance.

SCENARIO TIME: 10:00 AM

MESSAGE FOR: FNP Security at Front Gate

CONTROLLER GUIDANCE

- Begin with "THIS IS A DRILL"
- Be persistent in efforts to get access into site.
- End with "THIS IS A DRILL."

CONTROLLER MESSAGE

I'm Joe Jordan, WTVY-TV, Dothan. I'm here to get an interview with someone in charge of the emergency situation. Who is available? Have there been any fatalities? Where's the NRC location? Are the resident and state inspectors available to make a statement? What about local and state government reps? Where are they located? If it's safe, why are you keeping the press out? What is APC trying to keep undercover?

EMERGENCY PUBLIC INFORMATION SCENARIO

EVENT: Media briefings at News Media Center

SCENARIO TIME: 10:00, 11:30 a.m.

MESSAGE FOR: APC Spokesperson

CONTROLLER GUIDANCE

Following are possible questions to be posed by "Mock Media" at the NMC. Other questions may be appropriate based on the actual news release and briefing provided concerning the exercise events.

CONTROLLER MESSAGES

SAMPLE MEDIA QUESTIONS

When was the public notified of the Site Area Emergency at Farley? Shouldn't they have been notified earlier?

Did Alabama Power Company implement evacuation or sheltering of employees?

How many plant employees have been exposed to radiation? How are they examined for radiation exposure?

Is there any radiation being released from the plant at this time?

Based on recent findings during the cleanup at Three Mile Island, the core was cracked. Do you know to what extent your core is cracked? (Use at 11:30 conference)

Who received or will receive potassium iodide for protection from the radiation?

Exactly when did Farley notify the NRC about the accident at Farley? How were they notified?

Won't losing coolant to the steam generator cause the core to melt down like it did at Three Mile Island? How do you know it is not melting?

How much of the core is melted? (Use at 11:30 conference)

How long do you think repairs will take? Has this type of problem happened at another plant?

Will workers have to be sent into high radioactive areas to repair the reactor?

Is the reactor damaged at this time? How long do you estimate repairs will take?

Were there any visitors on the site during the accident? If not, how would you have handled protecting those individuals?

Is there any way of knowing how much radiation is actually being released?

I understand that Alabama Power Company and the State of Alabama sent people to monitor for radiation outside the plant. Is the data compared? If there is some discrepancy, whose data are actually used to determine how much radiation the public is getting? What limits determine the actions to take to protect them from the radiation?

Exactly how and where did the radiation get out of containment? It was my understanding that the walls are so thick and the redundant safety systems prevent such leakage from occurring.

Could you describe what actions the Farley operators took when they realized they had a serious leak in containment?

Is anyone from the NRC present during all of this? If so, what is their role?

How long will the unit remain closed down? Will this cause some problems supplying power to customers?

Will there be an investigation of this accident? Who will head up the investigation team?

During the cleanup from this accident, is it possible that you'll have to release any radioactive water from containment? If so, will citizens be warned ahead of time?

I understand that Alabama Power provides radios to all homes and businesses so they can be notified about a nuclear emergency. We've talked with some of the people around Columbia and Ashford and understand that some of those radios did not work properly.

Do you have any idea if this accident will have an impact on the cost of generating electricity using Plant Farley? What kind of dollar impact would a lengthy outage have on Alabama Power?

Our reporters attempted to interview some citizens at their homes earlier about the Farley emergency. They said they'd been asked not to discuss the situation to anyone with the media. Is there some sort of gag order in place, and shouldn't those individuals be free to speak?

How far from the plant have monitoring teams detected any radiation?

Who will pay for the cleanup from this accident-- your customers or stockholders?

What kind of insurance does FNP have to pay citizens for relocation expenses and damages? How soon can they be paid? Who should they contact?

Do you think a rate increase will be necessary to cover the cost of today's accident?

Is potassium iodide available to the public living near the plant? Where can people get this drug? How soon do they have to take it before radiation has been released?

If workers are being sent to highly radioactive areas to make repairs, what precautions do they take? Has anyone exceeded regulatory exposure limits? What are the current exposure limits for emergency workers?

How many people are still at the plant? Do they all have emergency assignments?

How does Alabama Power monitor for radiation? How is this data used to determine protective actions onsite and offsite? What backup system is used to verify data is accurate?

What is the makeup of the plume? Is there evidence of any noble gases escaping into the atmosphere? What contributes to ground or soil contamination?

How does wind direction affect dose projections?

How will the operator restore the coolant to the reactor?

How far from the plant did monitoring teams detect radiation? What zones were identified as having severe radiation contamination?

Is there a chance of a brownout or even a blackout from the loss of the unit?

I understand that a young woman being evacuated had a serious accident in her personal vehicle and could be confined to a wheelchair for the rest of her life. Is Alabama Power liable in this situation?

What was the reported dose rate at the site boundary shortly after the release of radiation? Are the levels fatal to the plant personnel?

What is the process of handling those individuals of the general public who are contaminated? What about their vehicles?

How long will the reactor remain shut down? Can you estimate the percentage of damage to the reactor core? Is a fine or shutdown of Farley being considered?

How much insurance does Alabama Power carry to compensate the public for their losses?

A few residents I interviewed indicated that the homes about one to two miles from the plant may be highly contaminated and they will never be allowed to return. Please comment.

Will you be covering the reactor with cement like Chernobyl? Are there similarities to the Russian accident?

When will Plant Farley operate again? Will all the fuel in the reactor have to be replaced?

How is the release of radiation to the environment stopped? What are the long range effects to the environment?

If the plume has a considerable amount of radioiodine, shouldn't the public receive potassium iodide? Where do they get it? Are there side effects from use of the drug?

Could you describe what actions the Plant Farley operators took when they realized they were losing coolant to the steam generator?

Isn't it true that Alabama Power uses sirens and radios to notify citizens and schools about a nuclear emergency? What happens if one or both of these systems fail? How are special facilities informed of the emergency situation?

Are there radioprotective drugs available for protection from other radionuclides in the plume?

Will the governor send a task force to evaluate the safe operation of Plant Farley?

Can you estimate the financial burden of the accident? What is the current bond rating?

What was the concentration of noble gases released to the environment? If exposed to noble gases, what effects do noble gases have on the public?

How long is it anticipated the cleanup effort will take? What's the dollar amount?

When was the public notified of a General Emergency at Plant Farley? Why aren't they notified at the Unusual Event classification? Wouldn't that be the best time to administer potassium iodide?

Has Plant Farley recommended any protective actions to food suppliers or processors in the area? What about in Georgia?

Exactly when did Alabama Power notify the State of Alabama about the accident at Plant Farley? How was notification made? What was the state's response?

Is potassium iodide available to the public living within two miles from the plant? Where can they get the drug? How much time do they have to take it after radiation has been released?

A local resident stated he thought he heard the sirens but not the emergency broadcast system message. Is this due to a malfunction in the system?

What public protective actions have been ordered? Who makes these decisions and what are they based on? Why are only a few areas evacuated?

A local resident stated she wasn't aware of the emergency because her emergency radio wasn't plugged in and nor were her neighbors'. Didn't the NRC fine you last year because most people weren't plugging their radios in? Why don't you just put sirens up everywhere?

Based on Three Mile Island data, leukemia and bone cancer cases from the accident will be about four out of every 20 people. Can you comment on that estimation? What could be the estimated increase from this incident?

Why isn't the public given any protective actions during an Alert classification, especially if that's a severe enough classification to activate all your emergency facilities?

Can milk and other food processors located in close proximity to the plant continue operation? What about the local farmers, how are they affected?

When will the evacuated individuals be allowed to return to their residences? How will they be compensated for loss of property value?

How long will it take to get the environment back to normal?

What's the increase in birth defects because of radiation in the atmosphere?

Isn't it true potassium iodide will not hinder the collection of radioiodine in the thyroid if not administered at the onset of the accident? At what point is it determined to distribute potassium iodide? Who makes that decision?

How long are work shifts of the emergency personnel?

When will non-emergency workers be allowed to return to the plant? Are they working normal hours? Are they expected to receive radiation?

Do you think this accident will require a shutdown of Plant Farley?

EMERGENCY PUBLIC INFORMATION SCENARIO

EVENT: Attempt to breach NMC security

SCENARIO TIME: 10:45 AM

MESSAGE FOR: Security or NMC staff

CONTROLLER GUIDANCE

- Begin message with "THIS IS A DRILL"
- Be persistent
- End message with "THIS IS A DRILL"
- Individual doesn't have any identification

CONTROLLER MESSAGE

I'm Sarah Sims with the Boston Globe. I'm here to cover the story and didn't know I needed any special permission for access. Why can't I go inside for the press briefings? You can't keep me out! I demand to speak with someone immediately!

EMERGENCY PUBLIC INFORMATION SCENARIO

EVENT: Rumor Control Trending

SCENARIO TIME: 11:00 AM

MESSAGE FOR: Employee Communication Coordinator (250-2367)

CONTROLLER GUIDANCE

- Begin message with "THIS IS A DRILL"
- At this same time, several inquiries will be made on the same topic
- This event will be used to evaluate rumor control trending
- End message with "THIS IS A DRILL"

CONTROLLER MESSAGE

I am Karen Brown and I work for APC. There is a rumor going around that I've heard from several other employees that there was a school group touring the plant when the accident happened and that several kids were killed. Is this true?

EMERGENCY PUBLIC INFORMATION SCENARIO

EVENT: Containment Leak and Plant Evacuation Misinformation

SCENARIO TIME: 11:45 AM

MESSAGE FOR: NMC Rumor Control (793-4161)

CONTROLLER GUIDANCE

- Begin message with "THIS IS A DRILL"
- End message with "THIS IS A DRILL"

CONTROLLER MESSAGE

CNN has run a special edition on the emergency situation at Farley. It reported an excessive leak from the "so-called" safe containment building which will leave a detrimental effect on the environment and general public. It was also stated that the plant has been evacuated except for a few employees who are trying to control the leak and core meltdown.

EMERGENCY PUBLIC INFORMATION SCENARIO

EVENT: Fatalities due to radiation overexposure rumor

SCENARIO TIME: 12 Noon

MESSAGE FOR: Employee Communications Coordinator (250-2367)

CONTROLLER GUIDANCE

- Begin and end message with "THIS IS A DRILL"

CONTROLLER MESSAGE

An APC employee away on vacation called to verify information she received from a CBS broadcast. It was stated that several personnel received radiation in excess of the regulatory limits while attempting to repair the leak in the containment building. Can you confirm this?

EMERGENCY PUBLIC INFORMATION SCENARIO

EVENT: Rumor Control Trending

SCENARIO TIME: 12:15 PM

MESSAGE FOR: NMC Staff (793-4161)

CONTROLLER GUIDANCE:

- Begin message with "THIS IS A DRILL"
- At this same time, several inquiries will be made on same topic
- This event will be used to evaluate rumor control trending
- End message with "THIS IS A DRILL"

CONTROLLER MESSAGE

Hello, I'm with WTYK, Little Rock. I understand that KI distribution has been made to the state emergency workers and some APC employees. What about evacuees? When and where do they receive the drug?

MEDIA INQUIRIES

	Timeframe	Number of Calls
Calls to Plant: (899-5156)	9:45 - 10:15 AM	4
	10:15 - 11:15 AM	4
	11:15-12:15 AM	6

EXAMPLES OF INQUIRIES

* BEGIN AND END EACH MESSAGE WITH "THIS IS A DRILL"*

THIS IS A DRILL. I'm Kurt Henry, WKMX. I need to verify information I've received about an accident at the plant. Is someone available to give me some answers?

THIS IS A DRILL. This is Randy Miller, WOOF-Dothan. Has there been an evacuation of Farley personnel? What was the reason for this action?

THIS IS A DRILL. This is Pete Mooney, WSFA-TV. We're sending a crew to the site for interviews and pictures. Will they be in danger of radiation exposure? What precautions should they take?

THIS IS A DRILL. Can our camera crew from WDHN-TV get past security onto the plant site? We'd like detailed shots of the site.

THIS IS A DRILL. Has the Emergency Director taken charge of the plant? Can we get a personal interview?

THIS IS A DRILL. Is the nuclear plant still running? How fast can it be shut down?

THIS IS A DRILL. We hear there's a leak at the Farley Plant. How bad is it?

THIS IS A DRILL. How much water is in the Farley reactor to keep the fuel cool? How long would it take to run out of water if there's a severe leak?

EDIA INQUIRIES

	Timeframe	Number of Calls
Calls to Corporate Communication:	9:15 -10:00	40
(250-2318 or 250-3575)	10:00-11:00	50

NOTE: The majority of calls will request information updates. Other sample inquiries are noted below.

EXAMPLES OF INQUIRIES

* BEGIN AND END EACH MESSAGE WITH "THIS IS A DRILL"*

THIS IS A DRILL. Hi, I'm with Channel 36, Atlanta. We heard about an emergency at your nuclear plant. What is the story? Is the plant under control?

THIS IS A DRILL. I am with the Knoxville Recorder. Are there problems at the Farley Plant? Can you give me any details? Has anyone been injured?

THIS IS A DRILL. This is Sal Tortelli of CNN. We are sending a helicopter with a film crew to get footage of the plant site and surrounding areas. Is there a radioactive cloud? How should we avoid exposure?

THIS IS A DRILL. Hello, I am calling from WXYQ-Atlanta radio. We have word about an accident at your nuclear plant in Alabama. Can you give me details?

THIS IS A DRILL. I am Connie Kim of the Tampa Tribune. At this point is there any good idea what caused the disaster at Plant Farley?

THIS IS A DRILL. Hi, this is Denny Fitzpatrick, WGN-Chicago. Has the plant blown up or something? Do you have any communications with them?

Calls to Corporate Communication Office (Cont.)

THIS IS A DRILL. Hello, I am with the Early County News. Are field monitoring teams sent out to measure radiation in local neighborhoods? We would like to send a camera crew out with one of those teams. Where are they expected to do the monitoring and when? We'd like to catch up with a team.

THIS IS A DRILL. Ths is Joan Early of CBS News. I talked to your people about an hour ago and was told the situation at Farley was in an early alert and no real concern was needed. What the devil has happened? We are sending a crew down <u>now.</u> Who at the plant can our people talk with? Our helicopter will land at the plant gate within 30 minutes.

THIS IS A DRILL. Hello, I am covering the nuclear emergency for the Cinncinati Bugle and have a few questions. I hear that the core is melting. Will there be blackouts in the communities around Farley as a result of what is happening at the plant?

THIS IS A DRILL. This is Pamela Peabody, WAGF. I'd like to get information about the following: cause of accident, status of emergency, danger to people at plant/impact of emergency on the utility/general public, does APC plan to keep the second nuclear unit running?

THIS IS A DRILL. Hello, this is Jody Peoples, AP. Do you have an update on the Farley situation? A source of ours at the plant has said that the situation is getting worse and they are escalating the emergency. What's the story?

(To be given after 9:30 AM) THIS IS A DRILL. Hello, I'm Sarah Sims, Boston Globe. I have some questions about the Site Area Emergency at the Alabama nuclear plant. Is the situation getting worse or improving? How many people have been evacuated? How much radiation is out of the plant? Has anyone been killed or contaminated?

THIS IS A DRILL. Hello, I'm Steve Welby, ABC. We have a crew heading out to Farley now. Is the News Media Center operational -- will there be someone there for them to meet?

THIS IS A DRILL. This is Paul Harris, Nuclear News. I need some information on the emergency at the Farley plant. What is being done to protect the public so far? Who is in charge of the emergency? What is his nuclear experience and credentials? Has the NRC arrived on the scene yet?

THIS IS A DRILL. Is Farley similar in design to any other PWR? If not, ask for the plant design and some specific questions.

EDIA INQUIRIES

	Timeframe	Number of Calls
Calls to News Media Center (793-1462)	9:45-11:00 AM	2
	11:15-1:00 PM	1

CONTROLLER GUIDANCE: Calls to NMC begin after phone number has been released to media.

EXAMPLES OF INQUIRIES

BEGIN AND END EACH MESSAGE WITH "THIS IS A DRILL"

THIS IS A DRILL. John Reitz, WXBA. For my article on Farley I'd like to include some background information on APC. What other companies share ownership of Farley? How will they be affected by the accident? Do their employees assist in emergency work?

THIS IS A DRILL. What is the current emergency classification? What actions are implemented offsite to protect the public during this phase?

THIS IS A DRILL. Hi, I'm Monty Brinker, UPI. I'd like to talk with the technical spokesman. (If he is put on the phone, ask...) Do you believe APC is in control of this emergency? What actions are being taken to correct the situation? Have you ever been involved with a nuclear plant emergency before? How large are the doses being received by the emergency teams? Has Farley implemented any protective actions for the public?

PUBLIC INQUIRIES

	Timeframe	Number of Calls
Calls to Plant: (899-6666)	9:00 - 9:15 AM	2
	9:15 - 9:45 AM	4
	9:45 - 10:45 AM	8

EXAMPLES OF INQUIRIES

THIS IS A DRILL. My name is Carol Sutton and I have heard you have an emergency at the plant. Is it anything that could affect me? I live just four miles from Farley.

THIS IS A DRILL. Hello, I have been trying to call the plant to find about my son who works there. His name is Henry Williams. Can you tell me if the personnel are safe at the plant? How can I get in touch with my son?

THIS IS A DRILL. Hello, I live in Columbia and have heard teams are out monitoring for radiation escaping from Farley. What's going on? I'm really concerned!

THIS IS A DRILL. Hello, I'm June Gallant. I'm new to this area and with all I've heard about problems at the nuclear plant this morning, I'm concerned and somewhat confused. Will we be evacuated from our homes? Where do we go and how much time will I have?

THIS IS A DRILL. (act distraught) Hello. My husband has recently started working at the plant and is supposed to be there now. Can you tell me if he is OK? Have there been any injuries?

THIS IS A DRILL. Where do the evacuated employees go? I need to contact my daughter, Mary Boyles, to let her know where we'll be going. We decided to leave before things got too bad here.

THIS IS A DRILL. I thought WOOF would mention more about the accident. I haven't heard anything new from them yet. Have they left because of the accident?

THIS IS A DRILL. I don't have a TV and my radio is out of batteries. My neighbors said I'm supposed to leave immediately. They've already packed and gone. What should I do?

POLITICAL OFFICIAL INQUIRIES

	Timeframe	Number of Calls
Calls to Govt. Affairs:	9:30 AM	1
(250-2600 or 8-283-3481)	10:00 AM	1
	10:40 AM	1

CONTROLLER MESSAGES

TIME: 9:30 AM THIS IS A DRILL. This is Jim Bundy from Congressman Dickinson's office. The Congress- man wants to know what APC is doing at the plant to protect the public.

TIME: 10:00 AM THIS IS A DRILL. Hello, this is Governor Guy Hunt's office. I would like a firsthand account of the emergency at the Farley Plant from the individual in charge.

TIME: 10:30 AM THIS IS A DRILL. I'm Andrew Thomas, assistant to the governor. The governor would like to see how Alabama Power is managing the situation. He is planning on being at the plant site within the hour. Is it safe to be there at this point?

	Timeframe	Number of Calls
Calls to News Media	9:45 AM	1
Center (793-1462)	10:30 AM	1

TIME: 9:15 AM THIS IS A DRILL. Hello. I'm calling from Senator Shelby's office. When are you scheduled to conduct a news conference? We'd like to have a representative on hand for that.

TIME: 10:30 AM THIS IS A DRILL. Hello. I'm the assistant to Gov. Bob Martinez. The governor would like to know if accommodations are available for our public relations representative if we elect to send one to the media center?

PUBLIC INQUIRIES

	Timeframe	Number of Calls
Calls to Corporate Communication:	8:45 - 9:15 AM	4
	9:15 - 10:00 AM	6
	10:00 - 10:45 AM	6

(250-2419)

EXAMPLES OF INQUIRIES

THIS IS A DRILL. I'm an APC customer. Will my rates go up as a result of this accident? If we get another increase, I'll never be able to afford electricity.

THIS IS A DRILL. Hello, this is Bertha Samuels. My sisters live in Columbia and I haven't been able to get through to them. Where have residents in the area been sent? Is there any other way I can contact them?

THIS IS A DRILL. Is the accident getting worse? My name is Debra North. I need to know what's going on so I can get out of here. This is scary!!

THIS IS A DRILL. I'm Pat Markson. My son and his class were going to Farley today for a field trip. They were supposed to leave early this morning but I can't get through to the plant. Are they back? Will they be safe?

EMPLOYEE INQUIRIES

	Timeframe	Number of Calls
Calls to Corporate Communication: (250-2367)	9:15 - 10:15 AM	20
	10:15 - 12:30 PM	15

NOTE: The majority of calls will be simple inquiries on emergency status. Other sample inquiries are noted below.

EXAMPLES OF INQUIRIES

THIS IS A DRILL. Hello, this is Tim Crowe. My sister and I both work at Farley but we are here in Birmingham visiting our folks. Should we stay or return to the area?

THIS IS A DRILL. Hello, this is Harold Wilder. I heard on the radio that the governor has taken over operation of Farley and is going to shut it down. What does that outfit know about running a nuclear plant? Will I lose my job?

THIS IS A DRILL. Hello, I'm Linda Evans. I'm an APC employee and a Red Cross volunteer. Do you need my help at the plant or Reception Centers?

THIS IS A DRILL. I'm at home sick today and I heard about the emergency. If the NRC shuts Farley down, will we still be employed there?

THIS IS A DRILL. This is Curtis Blue. I just heard APC employees were given potassium cyanide to protect them from radiation. What about us who report in on the night shift? When can we get the drug?

EMPLOYEE INQUIRIES

	Timeframe	Number of Calls
Calls to Plant (899-5156)	9:00 - 9:30 AM	2
	9:30 - 10:30 AM	3
	10:30 - 11:30 AM	3

NOTE: The majority of calls will be to inquire about the emergency status. Other sample inquiries are noted below.

EXAMPLES OF INQUIRIES

THIS IS A DRILL. I'm Ray Stone. I work in maintenance. I heard that there's an emergency at the plant but I can't reach my supervisor to find out if I should come in to work. Do I need to report?

THIS IS A DRILL. I'm Michael Anderson. I work in plant engineering group. I understand there is a problem at the plant. I've received emergency training. Should I come in or stay home?

THIS IS A DRILL. I work at the plant but wasn't on shift when the accident occurred. The media reports have been pretty sketchy. Can you give me any more information on what has happened?

THIS IS A DRILL. Hello, I'm Pete Simmons, a Farley employee. I left the plant when the emergency was declared this morning but in my haste I left behind some medication I have to take. Are they allowing people into the area? Could someone bring it to me?

THIS IS A DRILL. (After 10:30 a.m.) Hello, I am Laurie Jones and I work for Alabama Power. I heard on radio station WOOF that a General Site Emergency was declared at Farley. I don't think this is correct. Would you please let someone in authority know what is being said?

NANCIAL COMMUNITY INQUIRIES

	Timeframe	Number of Calls
Calls to Corporate Communication: (250-2497)	9:30 - 10:00 AM	3
	10:00 - 11:00 AM	4
	11:00 - 12:00 Noon	5

EXAMPLES OF INQUIRIES

THIS IS A DRILL. Hello, this is Dana Hughes of the Principal Financial Group. I'd like to get some additional information on the situation at the nuclear plant. How serious is it? Is there any idea how long the plant will be down? What is the cost each day the plant is down? Will insurance take care of damage repair?

THIS IS A DRILL. This is Marcus Cane with the National Association of Regulatory Utility Commissioners. We are very interested in the situation at the Farley plant. Have there been any projections of the financial impact on Alabama Power Company from this accident? Is the situation under control at this time?

THIS IS A DRILL. Hello, I'm Paul Grossman of the Wall Street Journal. We are soon to go out with an article on nuclear utilities in good financial standing. This incident today at Farley could have an important effect on the story. Is there any information on the financial impact of today's events?

THIS IS A DRILL. Hello, I'm Linda Webber with Merrill Lynch. We are getting many calls from our utility investors concerning the emergency at the Plant Farley. Can someone talk with me about how serius the situation really is?

THIS IS A DRILL. This is Arthur Pope, Lehman-Shearon. Is there any indication that the problems at your Farley Plant today will have an impact on Alabama Power Co.'s bond rating? Will rates increase to the customers?

THIS IS A DRILL. Hello, this is Lucy Donavan of the Wall Street Journal. I'd like to arrange to interview the chief executive, Mr. Harris, as soon as the nuclear emergency is under control and he can be spared. Can I arrange this through you?

INDUSTRY INQUIRIES

	Timeframe	Number of Calls
Calls to Corporate Communication: (250-2600 or 8-283-3481)	9:00 - 10:00 AM	6
	10:00 - 12:00 Noon	8

EXAMPLES OF INQUIRIES

THIS IS A DRILL. This is Brian Royer, ANS. Can you give me details on the event at Farley and the plant status now?

THIS IS A DRILL. This is Al Poles, TVA. I'm calling to get information on the problem at Farley. We're getting many inquiries from our media and have no information to provide.

THIS IS A DRILL. I'm Hank Wills of Mississippi Power and Light. What information can you give about the Farley event? Is there anything we can do to help out in the public information area?

THIS IS A DRILL. Hello, I'm Janice Howard, EEI. We are starting to get national media calls about the Farley situation. What is the current status and what can we tell them about efforts to restore the plant to safe conditions?

ERATOR INQUIRIES

	Timeframe	Number of Calls
Calls to Corporate	9:00 - 10:00 AM	1
Headquarters' Operator(250-1000)	10:00 - 12:00 Noon	1

EXAMPLES OF INQUIRIES

THIS IS A DRILL. This is Pat Markson, and I live in Ashford. I couldn't get through to the plant. I understand there has been an accident, and I'm scared to death. Please tell me what to do!

THIS IS A DRILL. This is Debra North. My son works at Farley in the mechanical maintenance section. Has he been released from work because of the accident? Please connect me with someone who can help me find out about Freddy.

PUBLIC INFORMATION INQUIRIES

	Timeframe	Number of Calls
Calls to Public Information Representatives	9:15-10:00	5
	11:00-12:00	5

(8-286-4401, 8-282-3316, 8-284-4908
8-283-3305, 8-285-2530) (Call each number and deliver the same message.)

EXAMPLES OF INQUIRIES

THIS IS A DRILL. This is George Wickes of the Atlanta Journal. I've just heard that there's a meltdown at Farley Nuclear Plant, and I want all the details! Is anyone dead? How did the accident occur? Can I fly directly to the site?

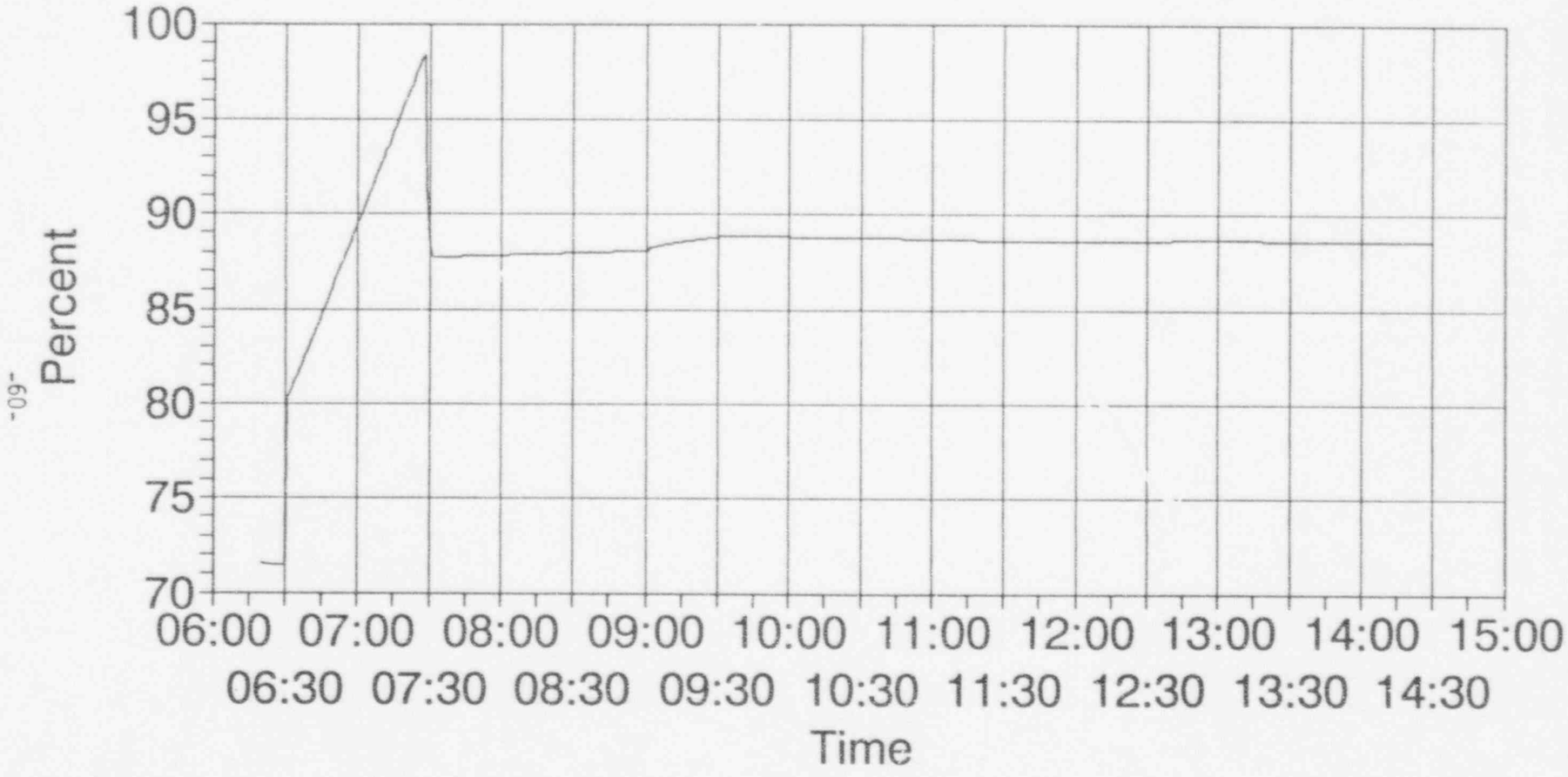
THIS IS A DRILL. This is George Wickes of the Atlanta Journal again. I spoke to someone in your office earlier this morning. I wanted to make pictures of your plant but was restricted from flying over it in the company helicopter. Where can I get a picture of Plant Farley? Also, when is the next news conference?

PLANT PARAMETERS

This section contains graphs for all key operational parameters

J. M. Farley Nuclear Plant

1990 Emergency Drill Data

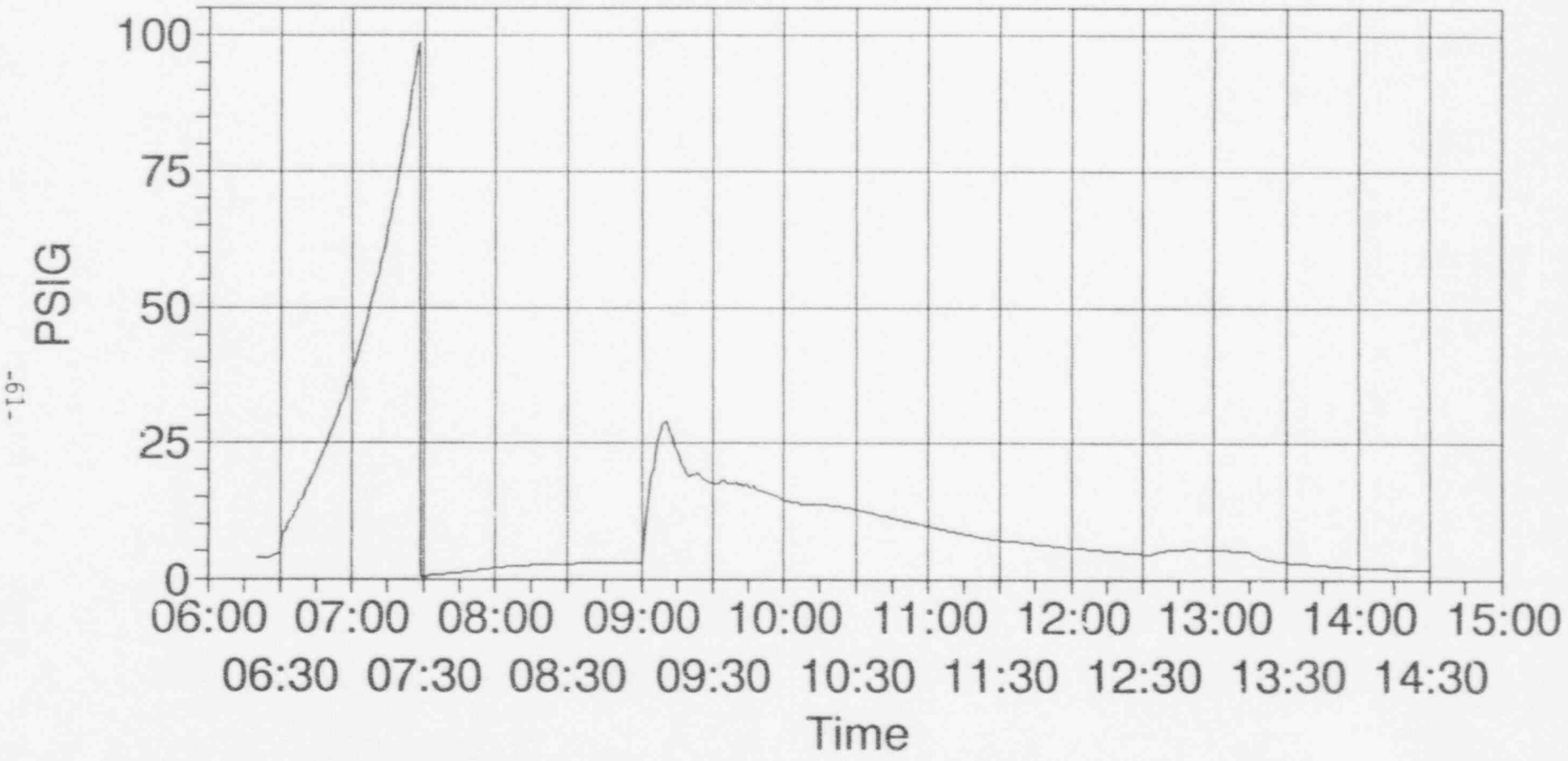


PRT-CNMT.WQ1

FINAL DRAFT

J. M. Farley Nuclear Plant

1990 Emergency Drill Data

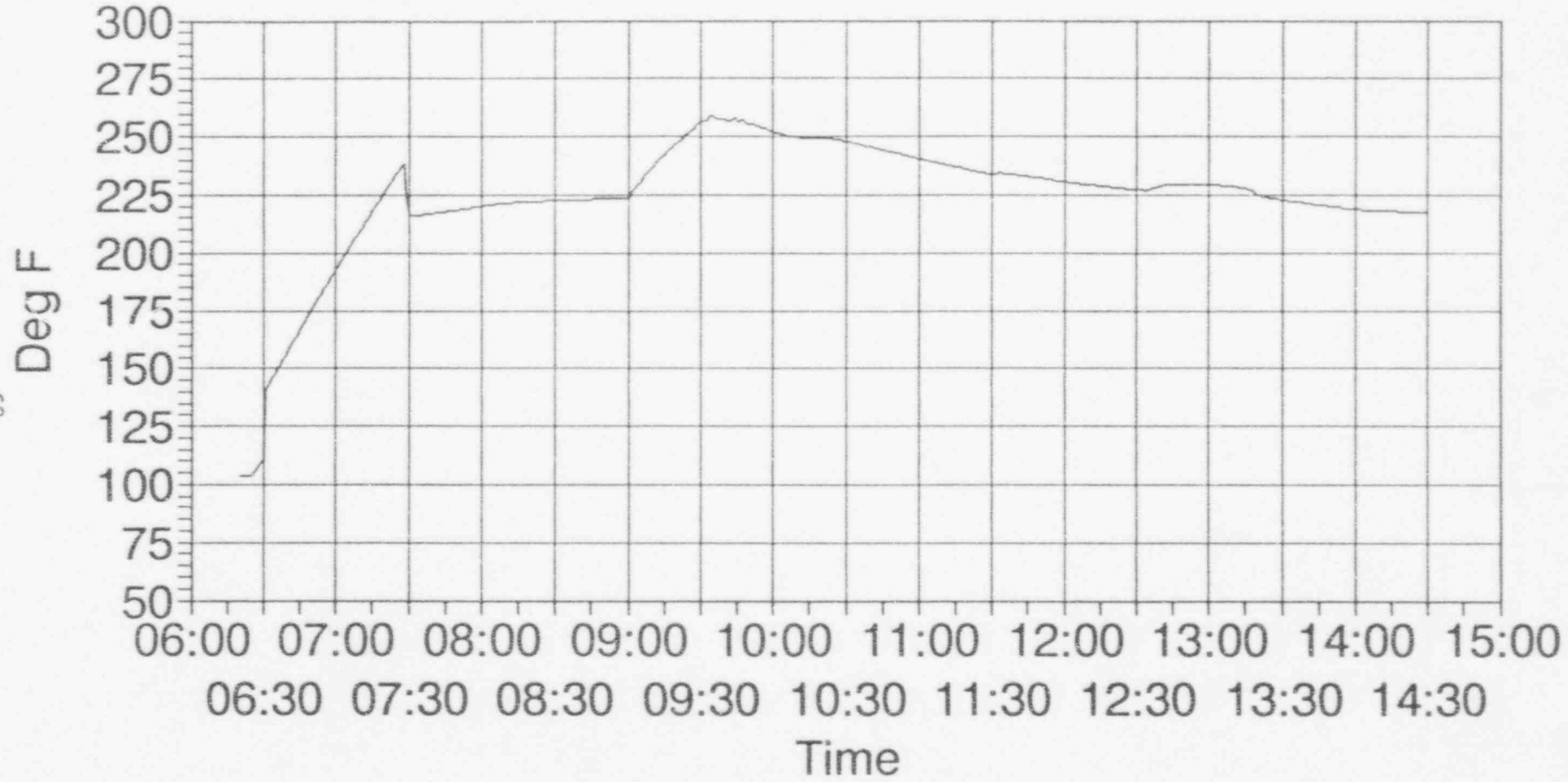


PRT-CNMT.WQ1

FINAL DRAFT

J. M. Farley Nuclear Plant

1990 Emergency Drill Data

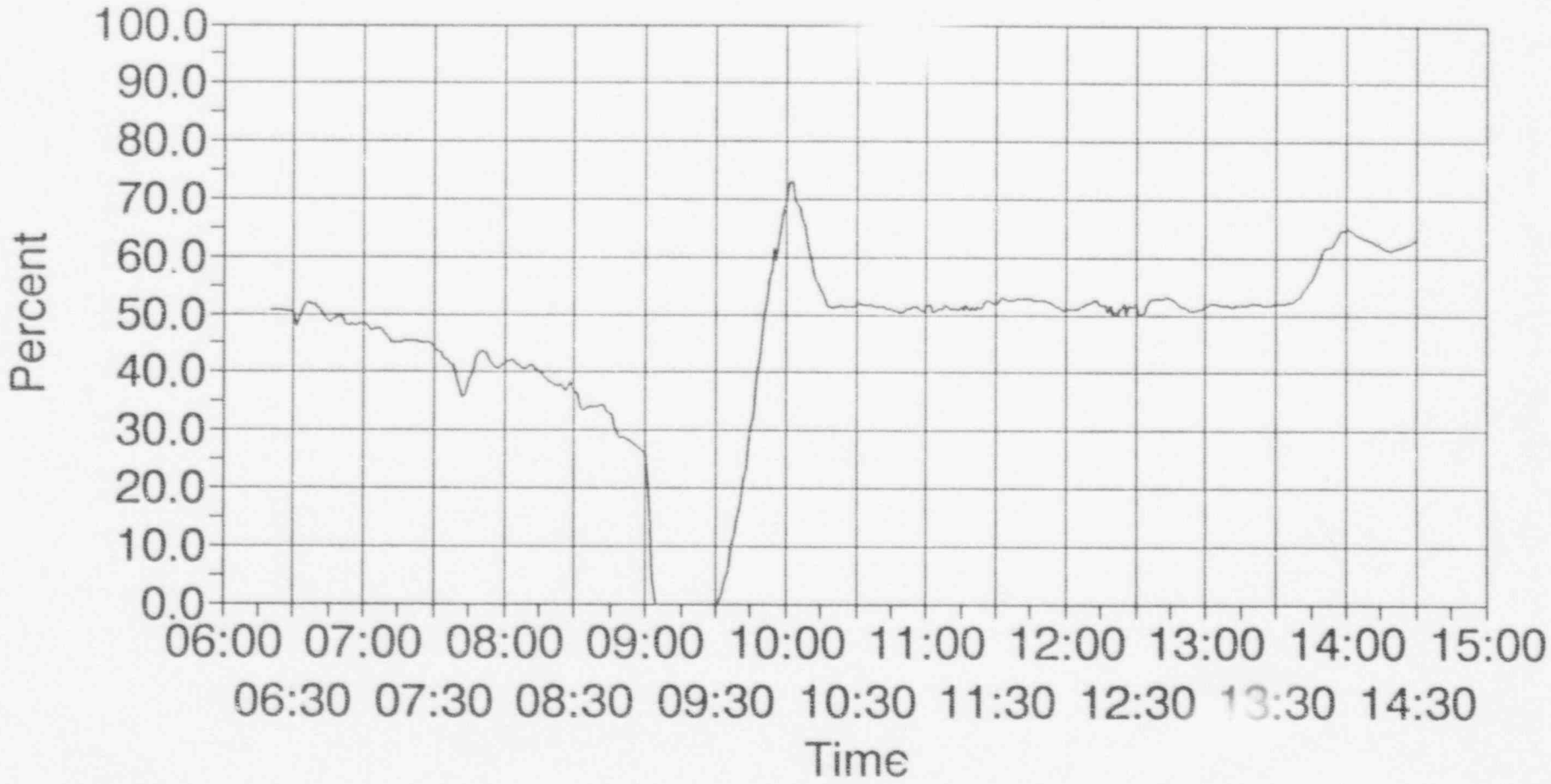


PRT-CNMT.WQ1

FINAL DRAFT

J. M. Farley Nuclear Plant

1990 Emergency Drill Data

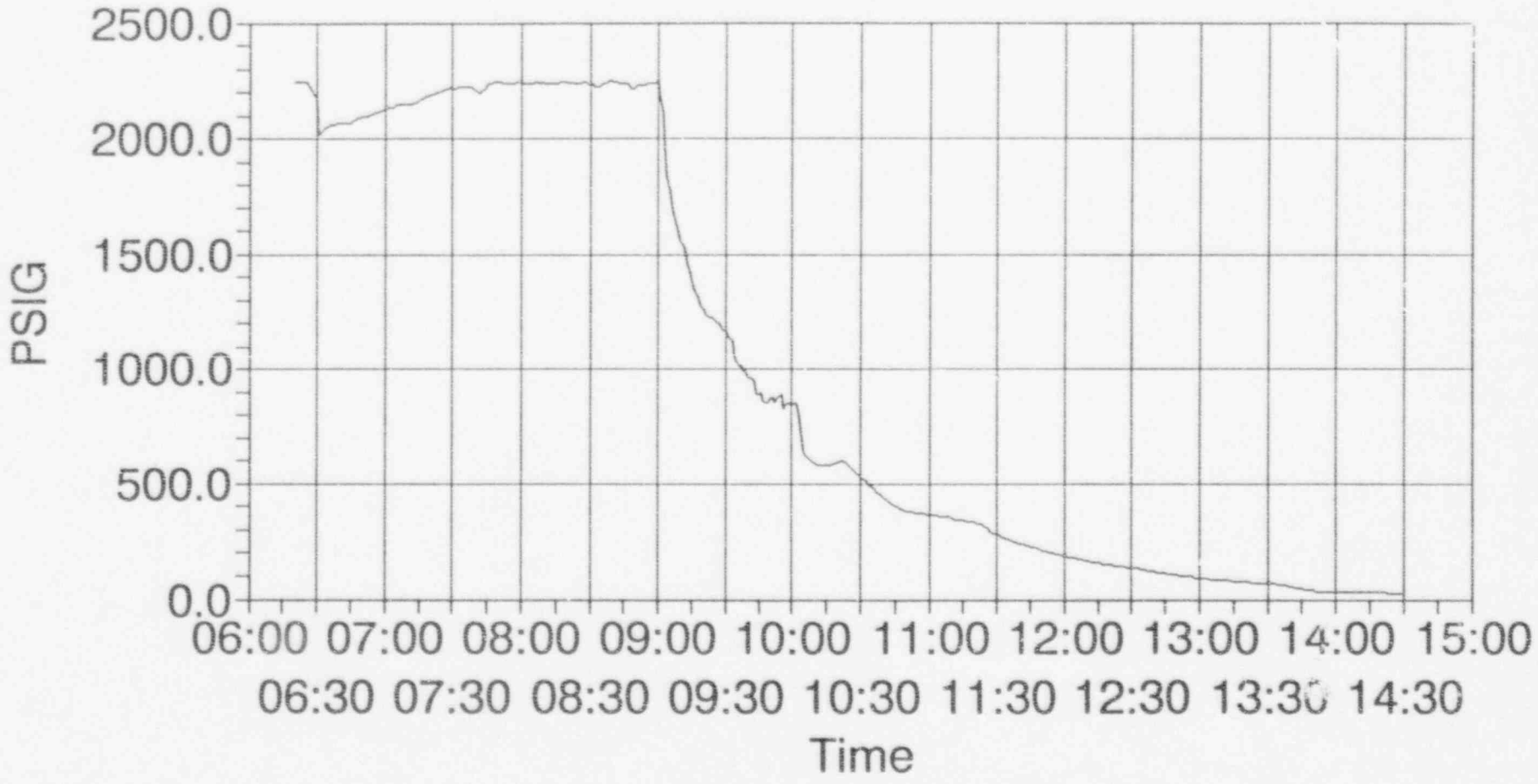


PZR-DAT.WQ1

FINAL DRAFT

J. M. Farley Nuclear Plant

1990 Emergency Drill Data



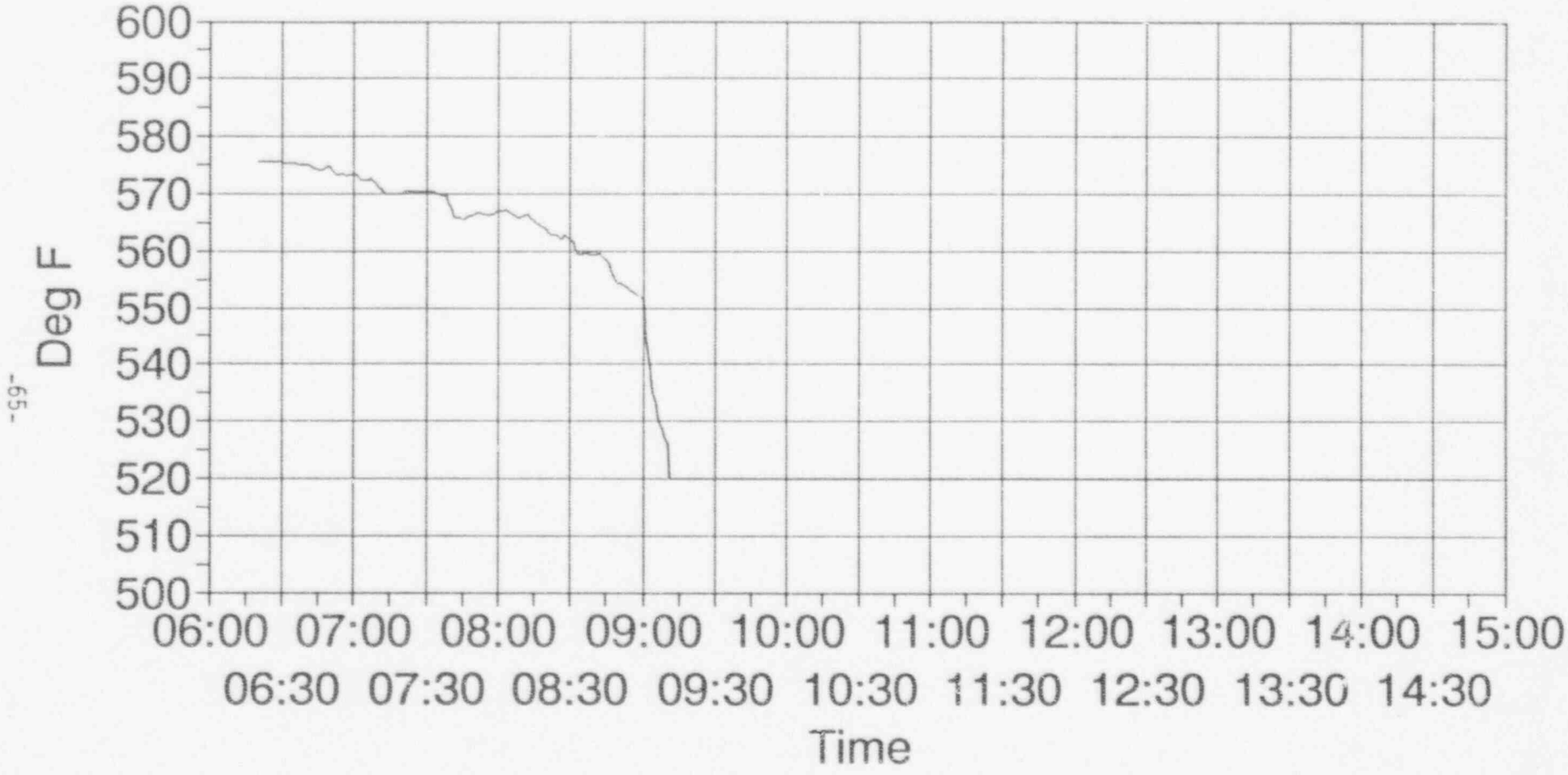
RCS,WR Pressure

RCS-DAT.WQ1

FINAL DRAFT

J. M. Farley Nuclear Plant

1990 Emergency Drill Data



RCS-TEMP.WQ1

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J. M. Farley Nuclear Plant

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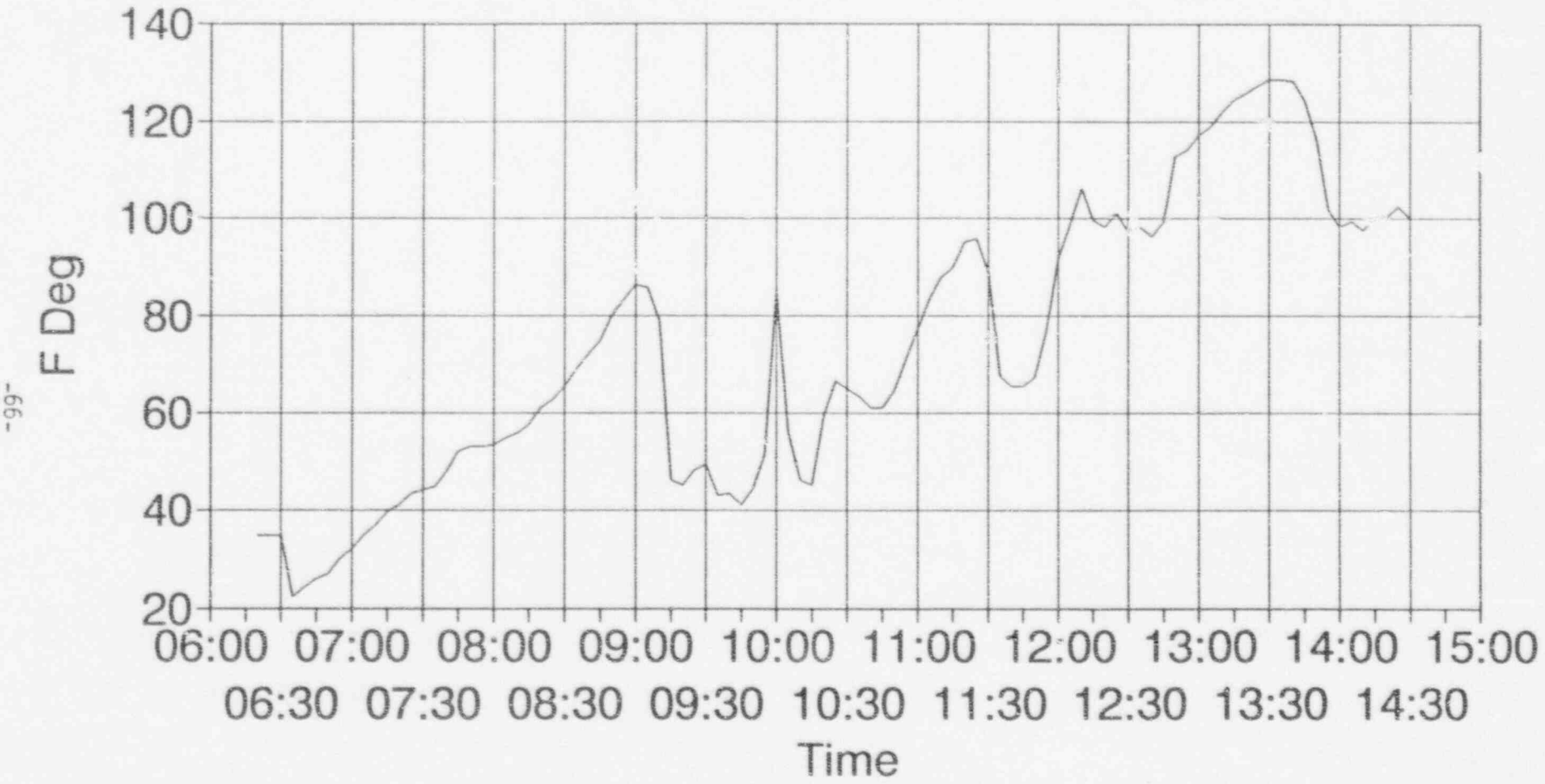
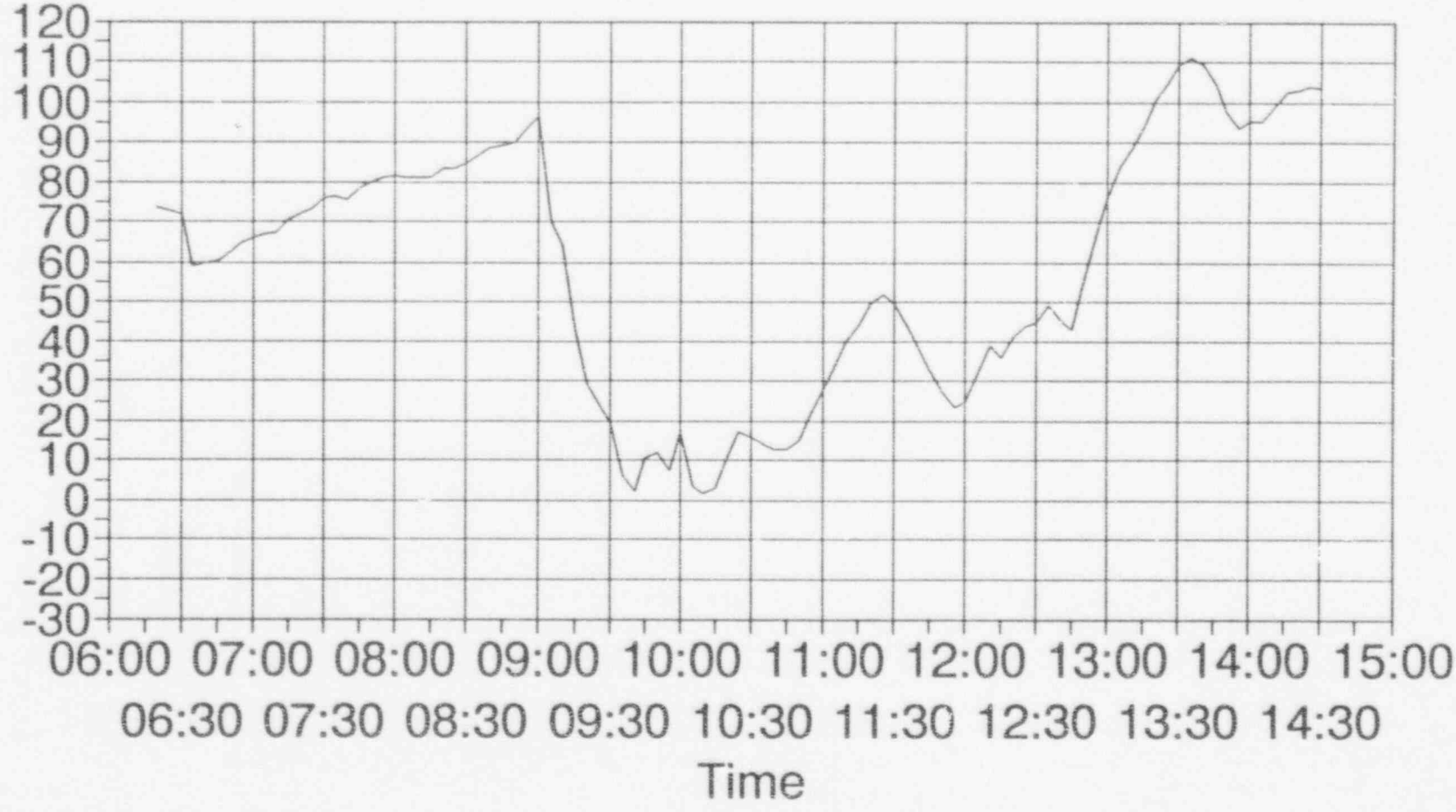


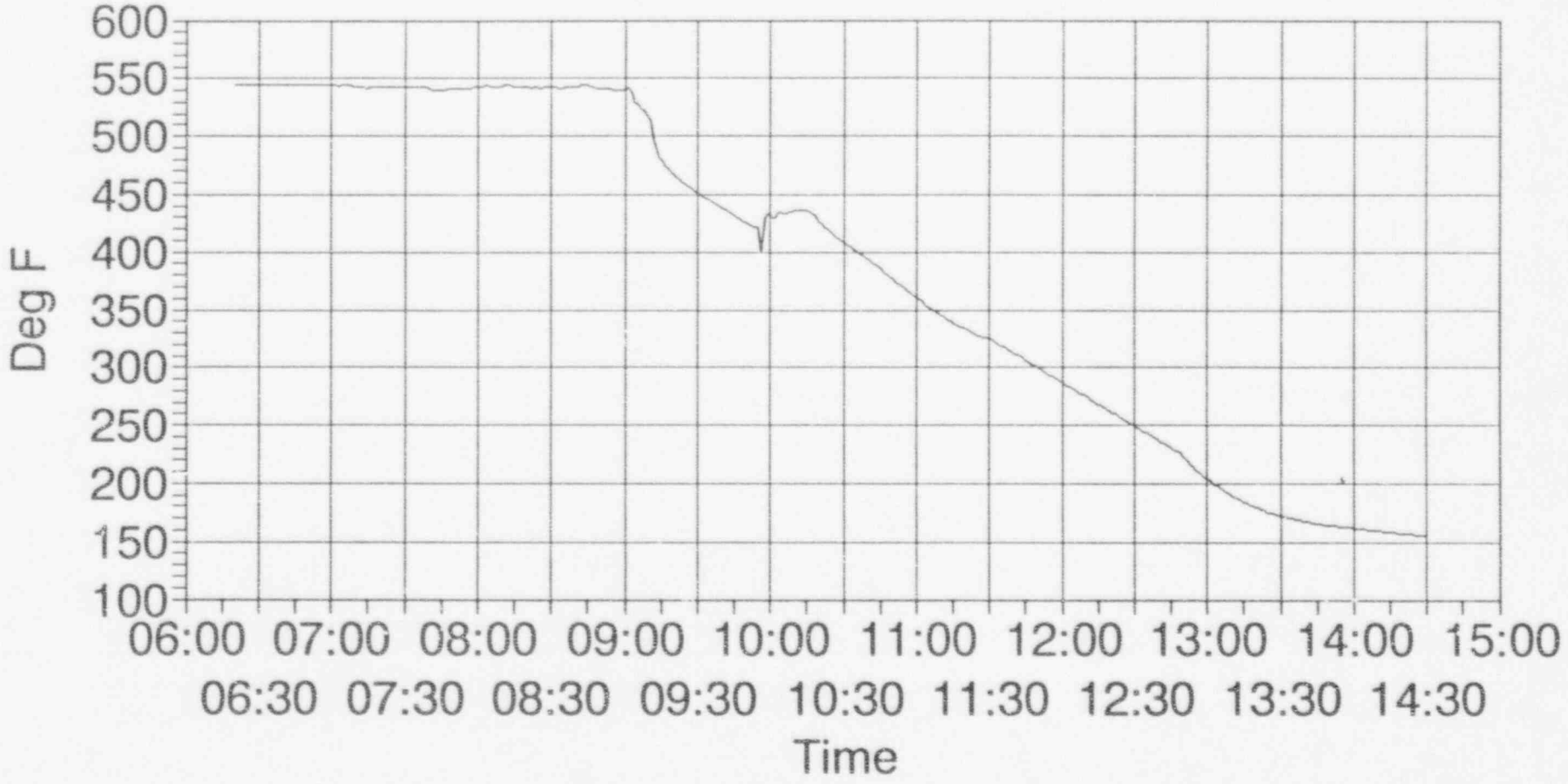
J. M. Farley Nuclear Plant

1990 Emergency Drill Data



J. M. Farley Nuclear Plant

1990 Emergency Drill Data



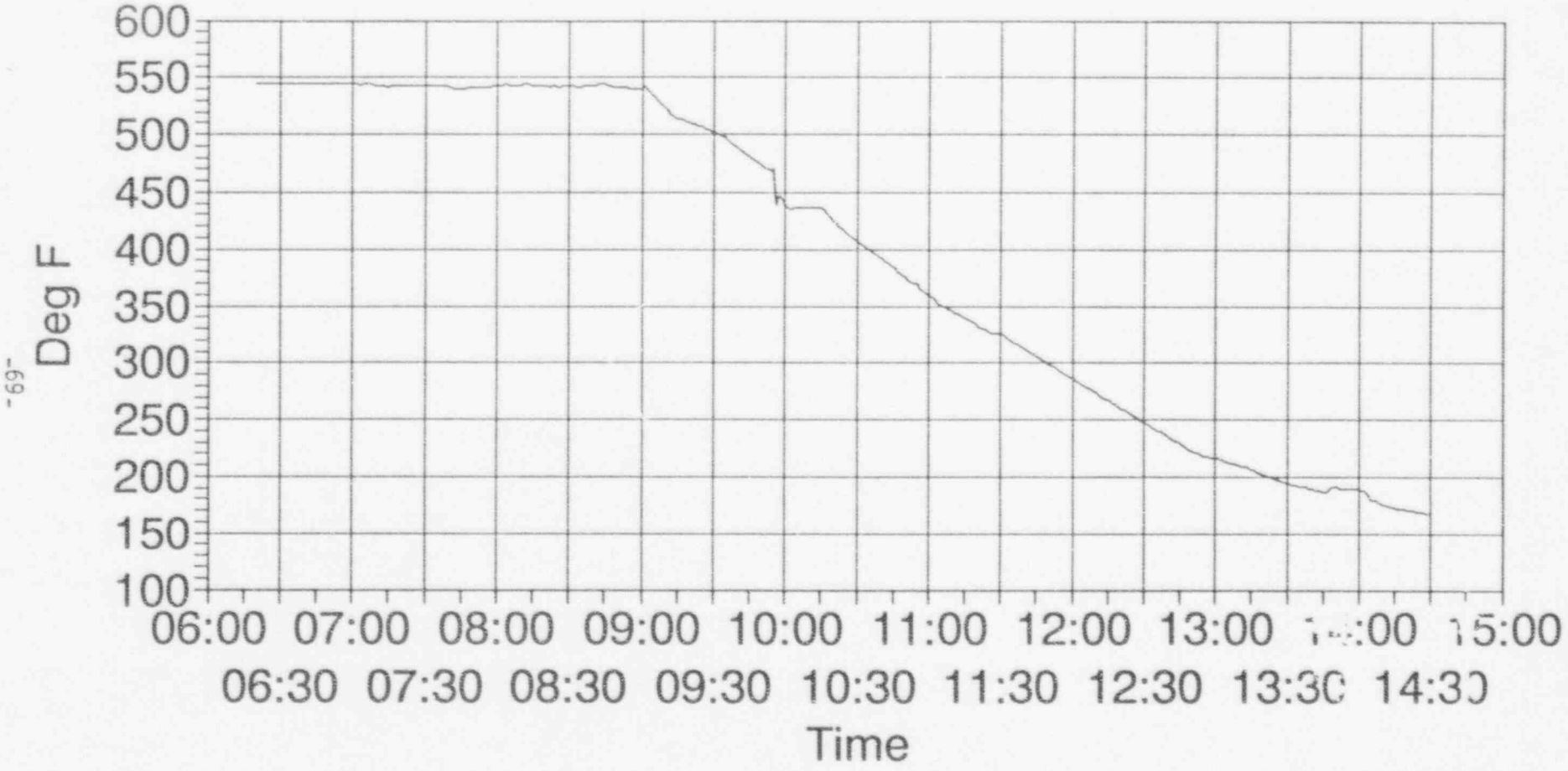
RCS,TC,Loop A

RTD-TEMP.WQ1?

FINAL DRAFT

J. M. Farley Nuclear Plant

1990 Emergency Drill Data

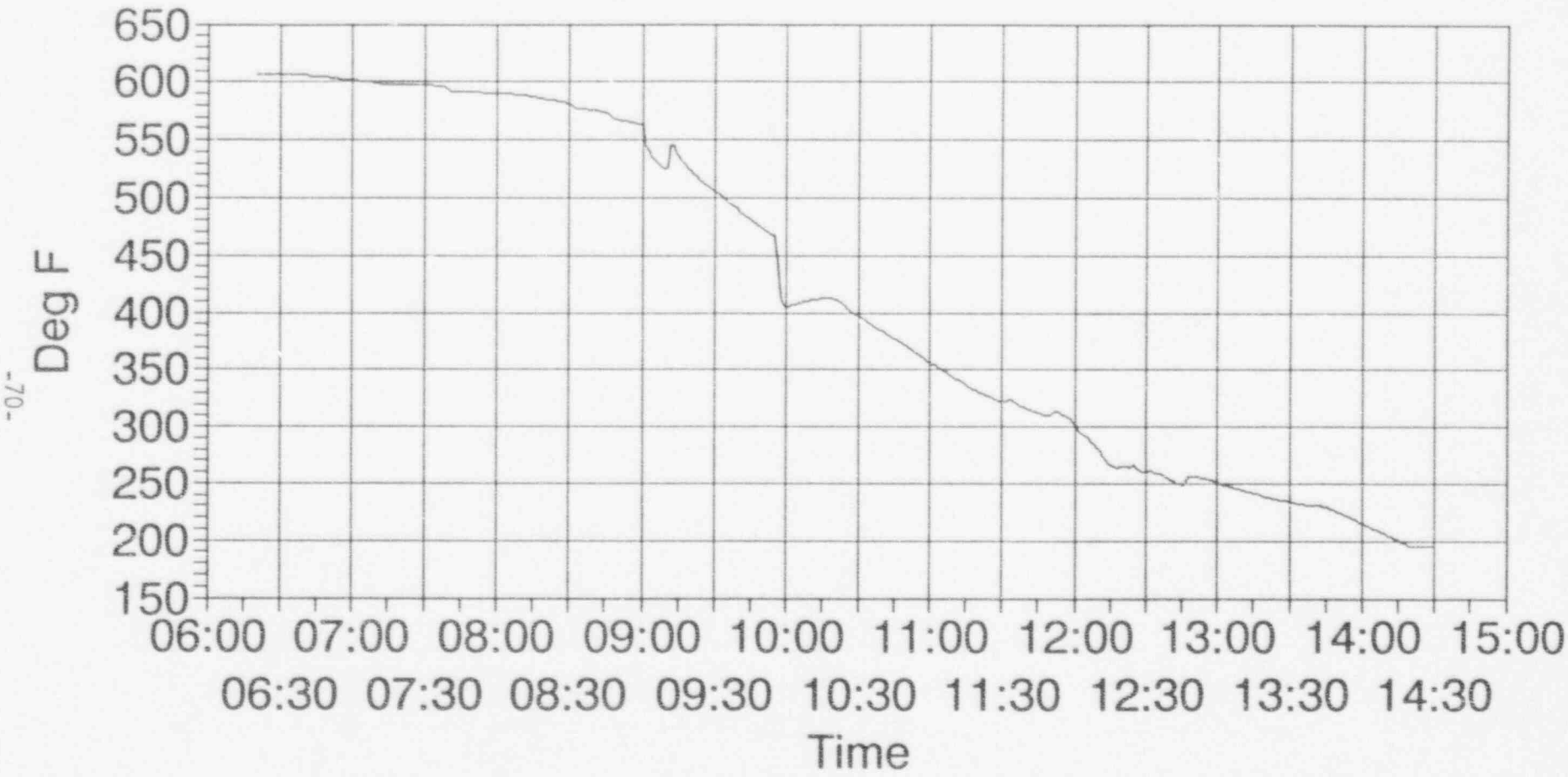


RTD-TEMP.WQ1

FINAL DRAFT

J. M. Farley Nuclear Plant

1990 Emergency Drill Data

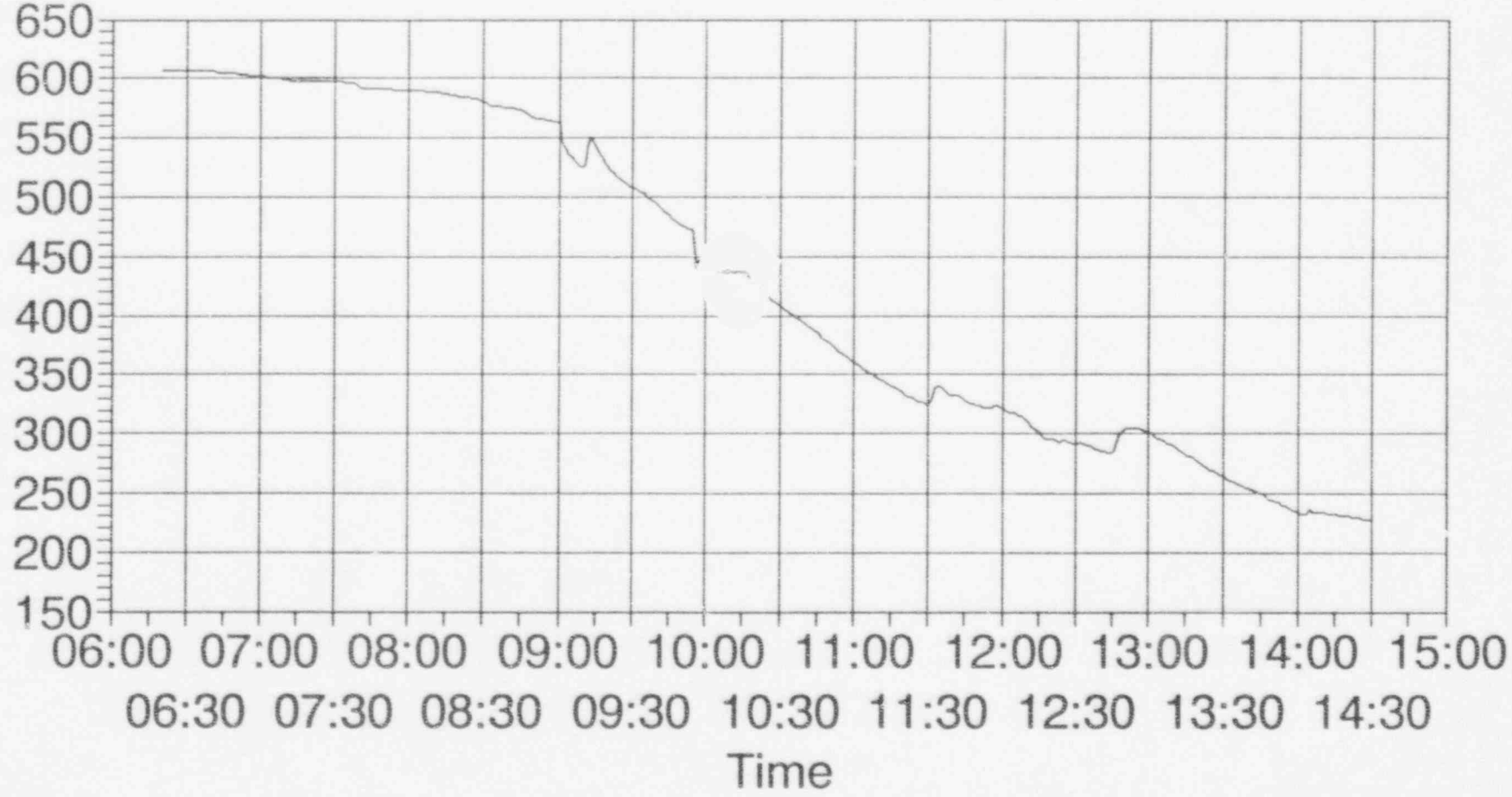


RTD-TEMP.WQ1

FINAL DRAFT

J. M. Farley Nuclear Plant

1990 Emergency Drill Data



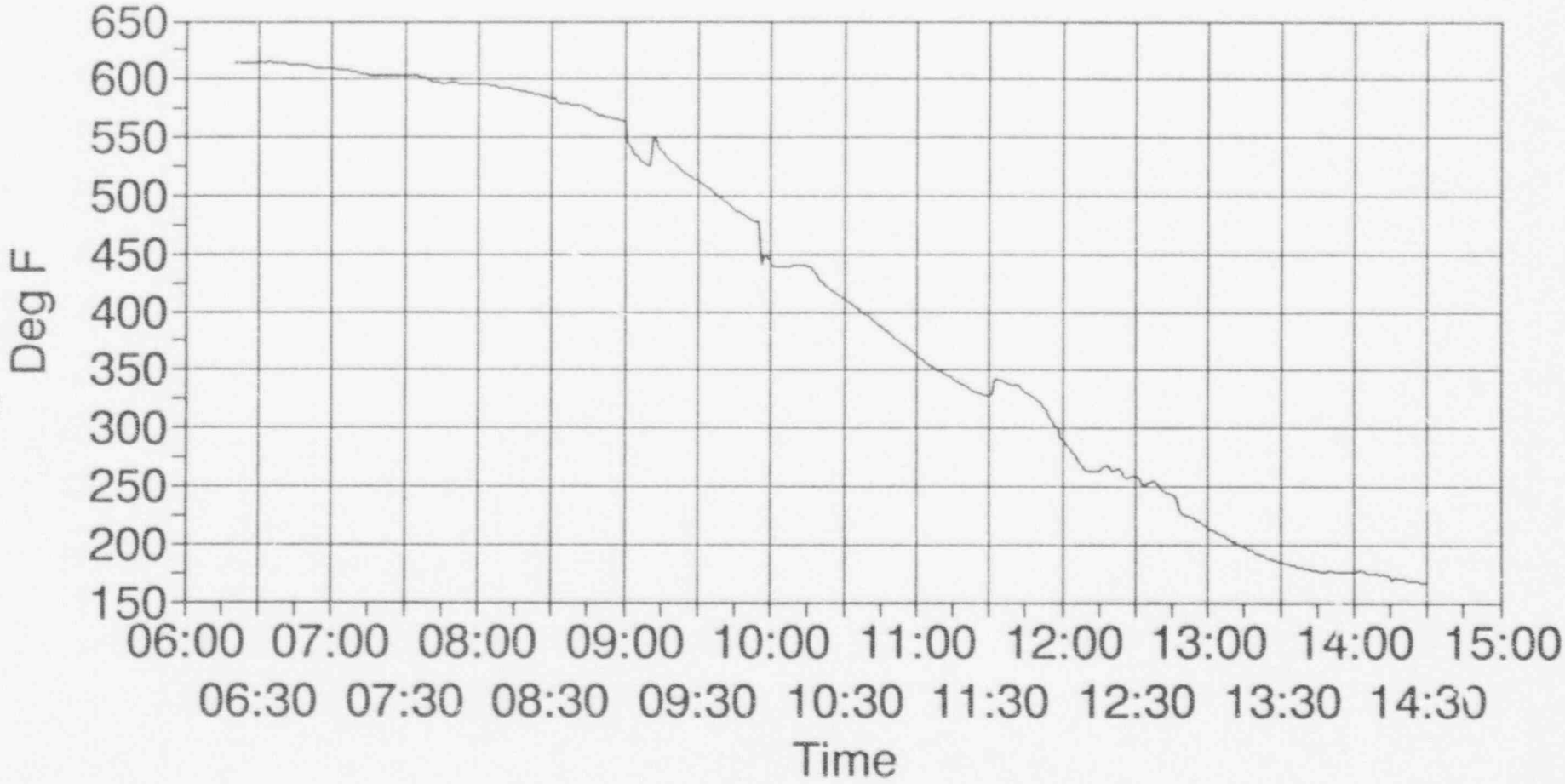
RCS,TH,Loop B

RTD-TEMP.WQ1

FINAL DRAFT

J. M. Farley Nuclear Plant

1990 Emergency Drill Data

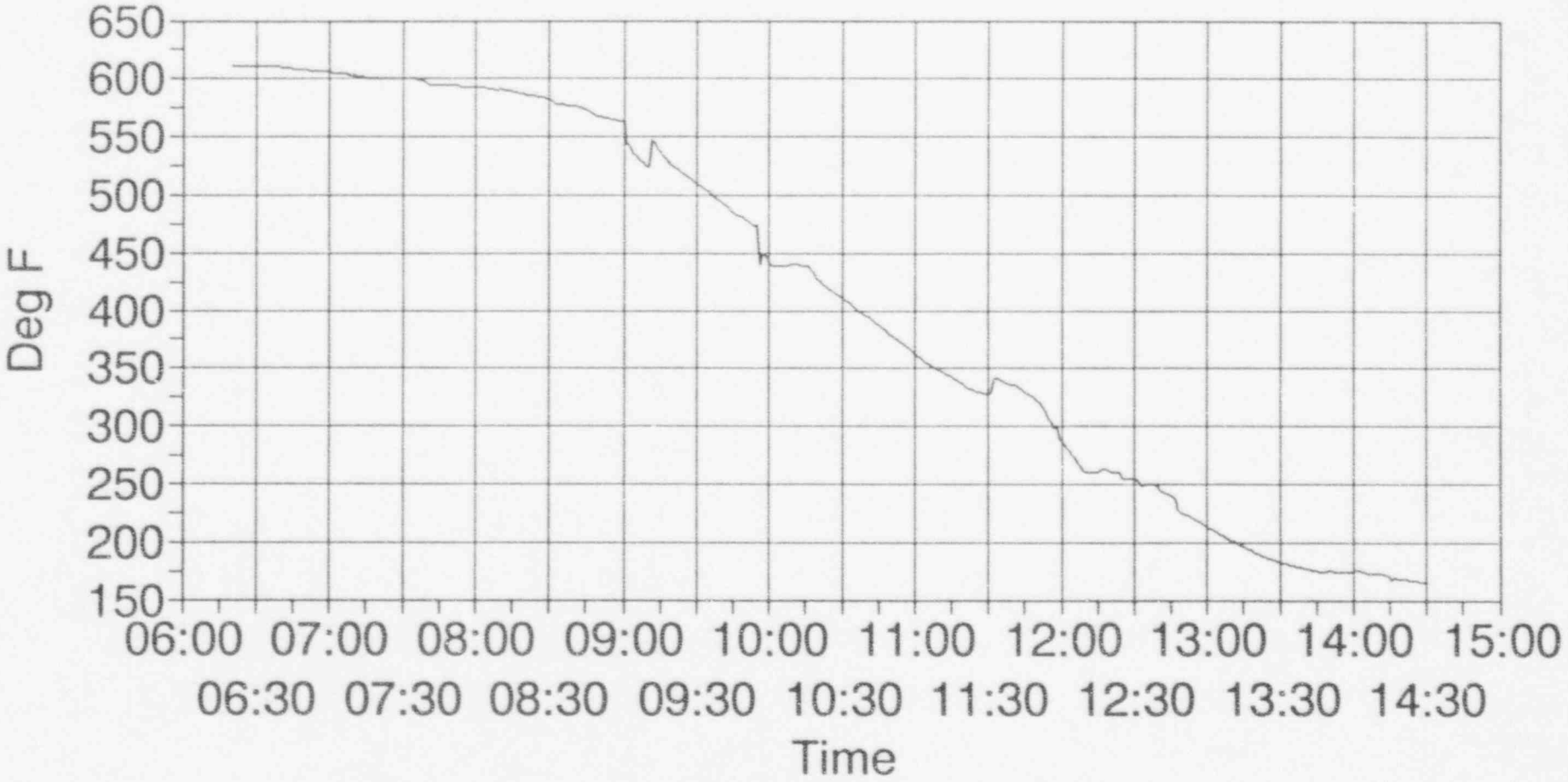


T_C-DATA.WQ1

FINAL DRAFT

J. M. Farley Nuclear Plant

1990 Emergency Drill Data

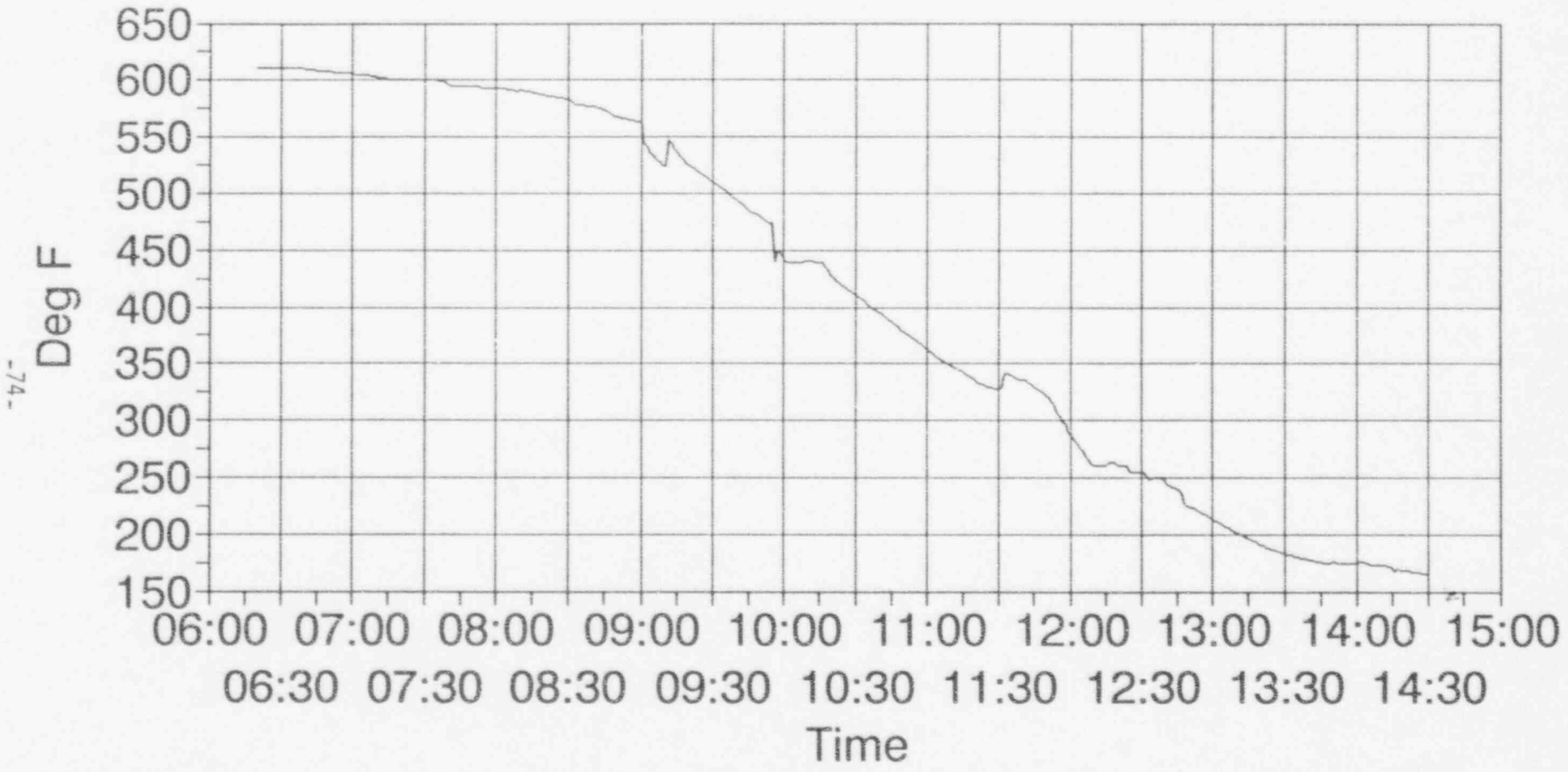


T_C-DATA.WQ1

FINAL DRAFT

J. M. Farley Nuclear Plant

1990 Emergency Drill Data

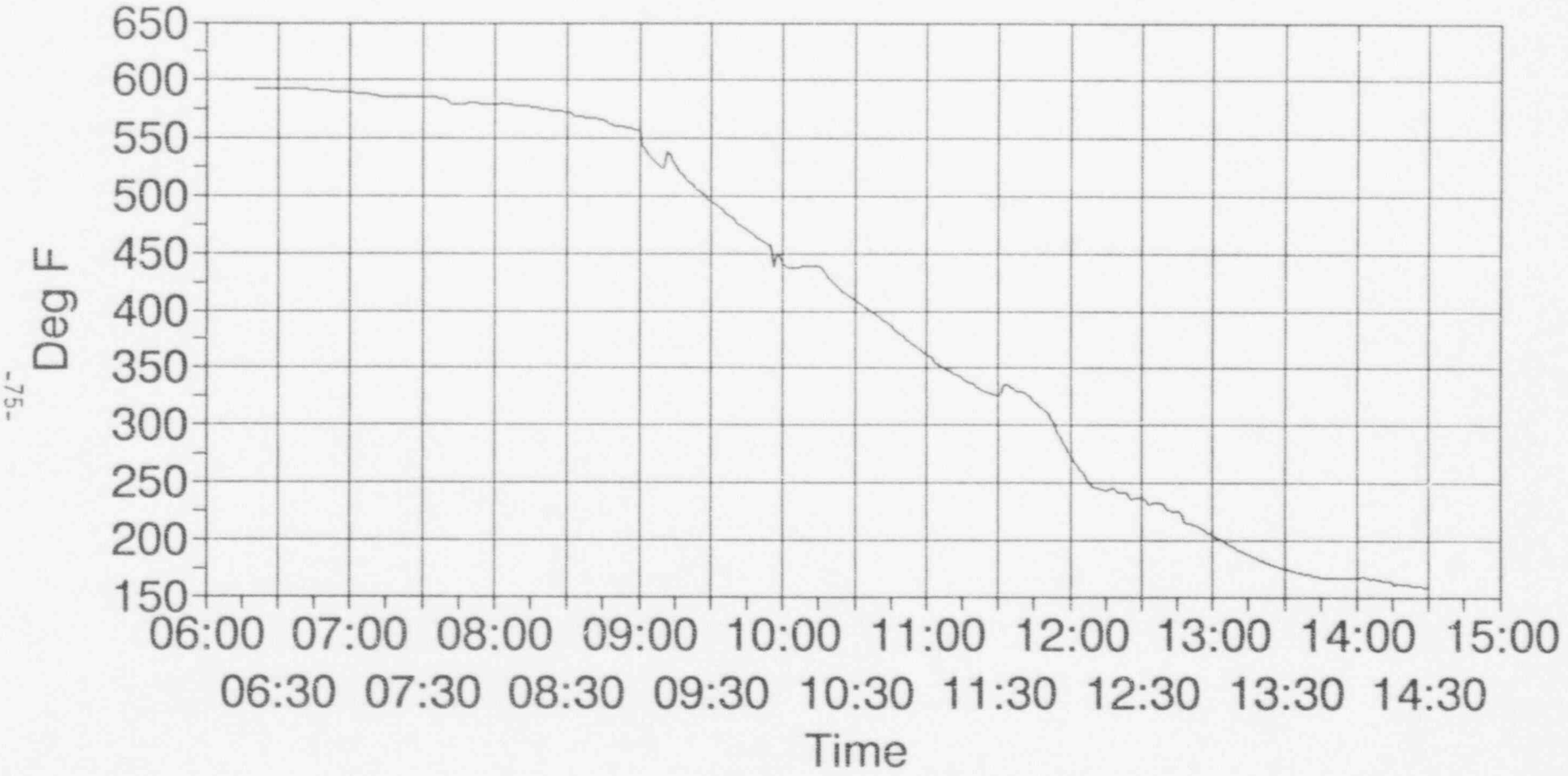


T_C-DATA.WQ1

FINAL DRAFT

J. M. Farley Nuclear Plant

1990 Emergency Drill Data



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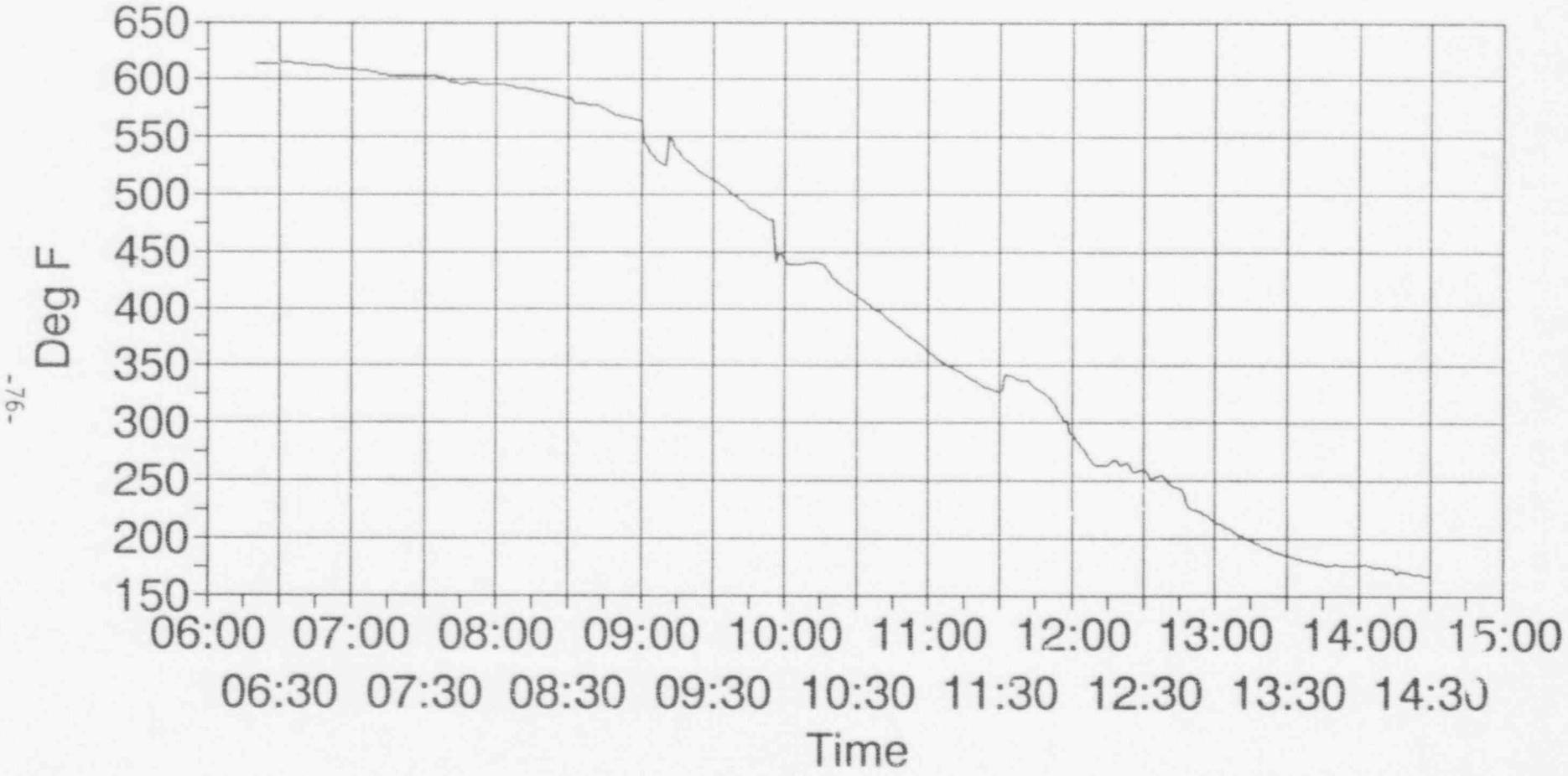
FINAL DRAFT

J. M. Farley Nuclear Plant

1990 Emergency Drill Data



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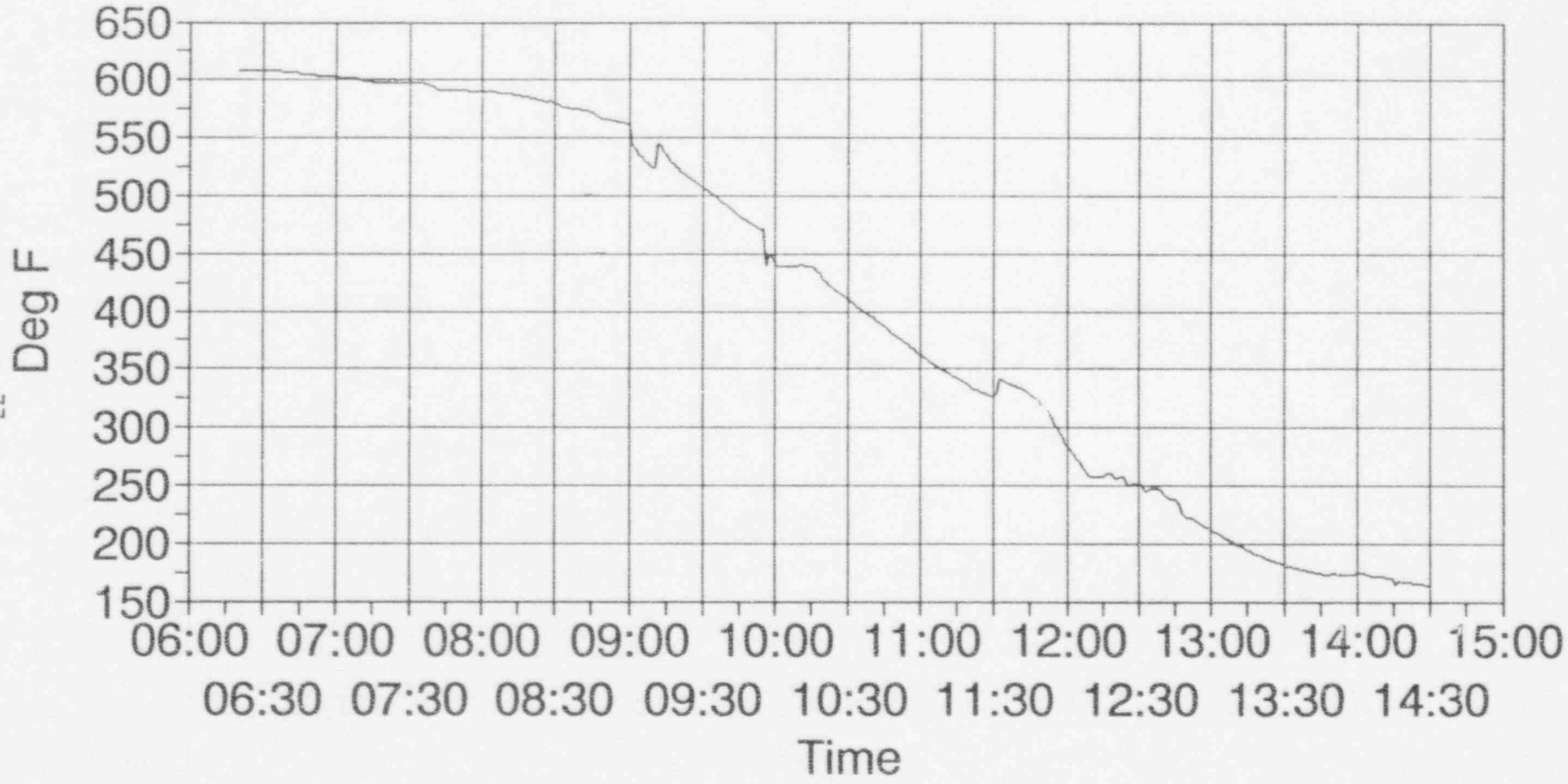
FINAL DRAFT

J. M. Farley Nuclear Plant

1990 Emergency Drill Data



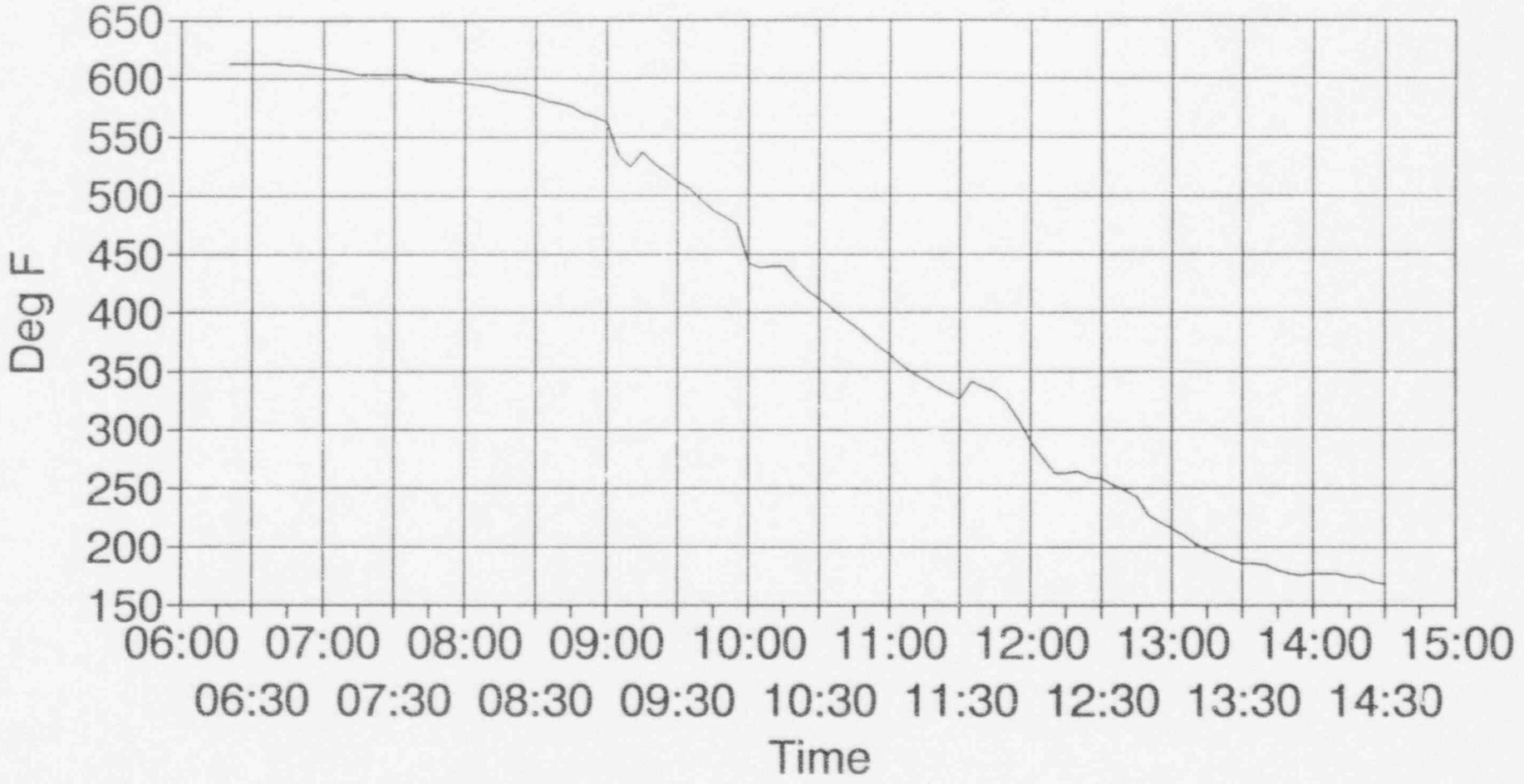
RTC,UP HEAD TC

T_C-DATA.WQ1

FINAL DRAFT

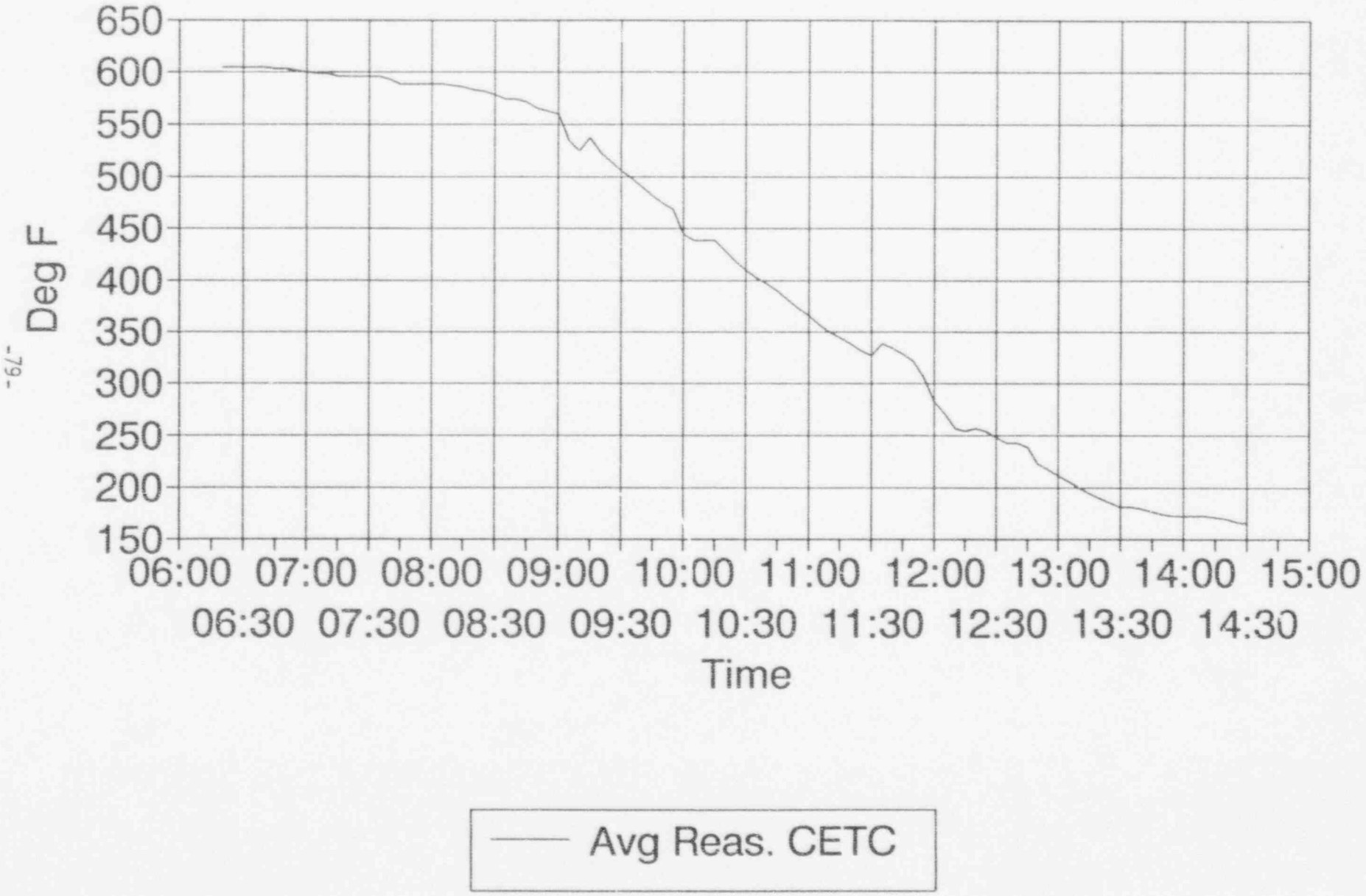
J. M. Farley Nuclear Plant

1990 Emergency Drill Data



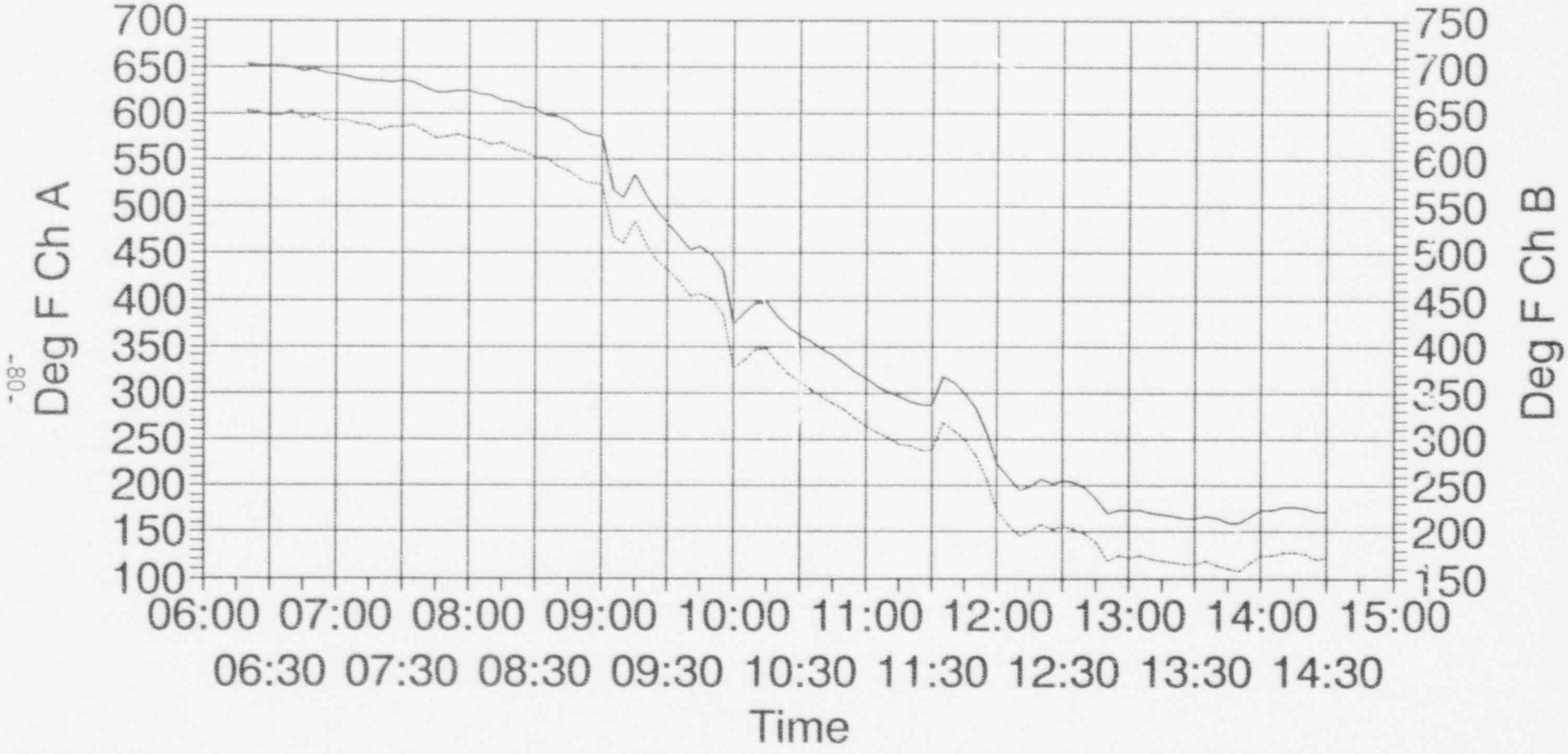
J. M. Farley Nuclear Plant

1990 Emergency Drill Data



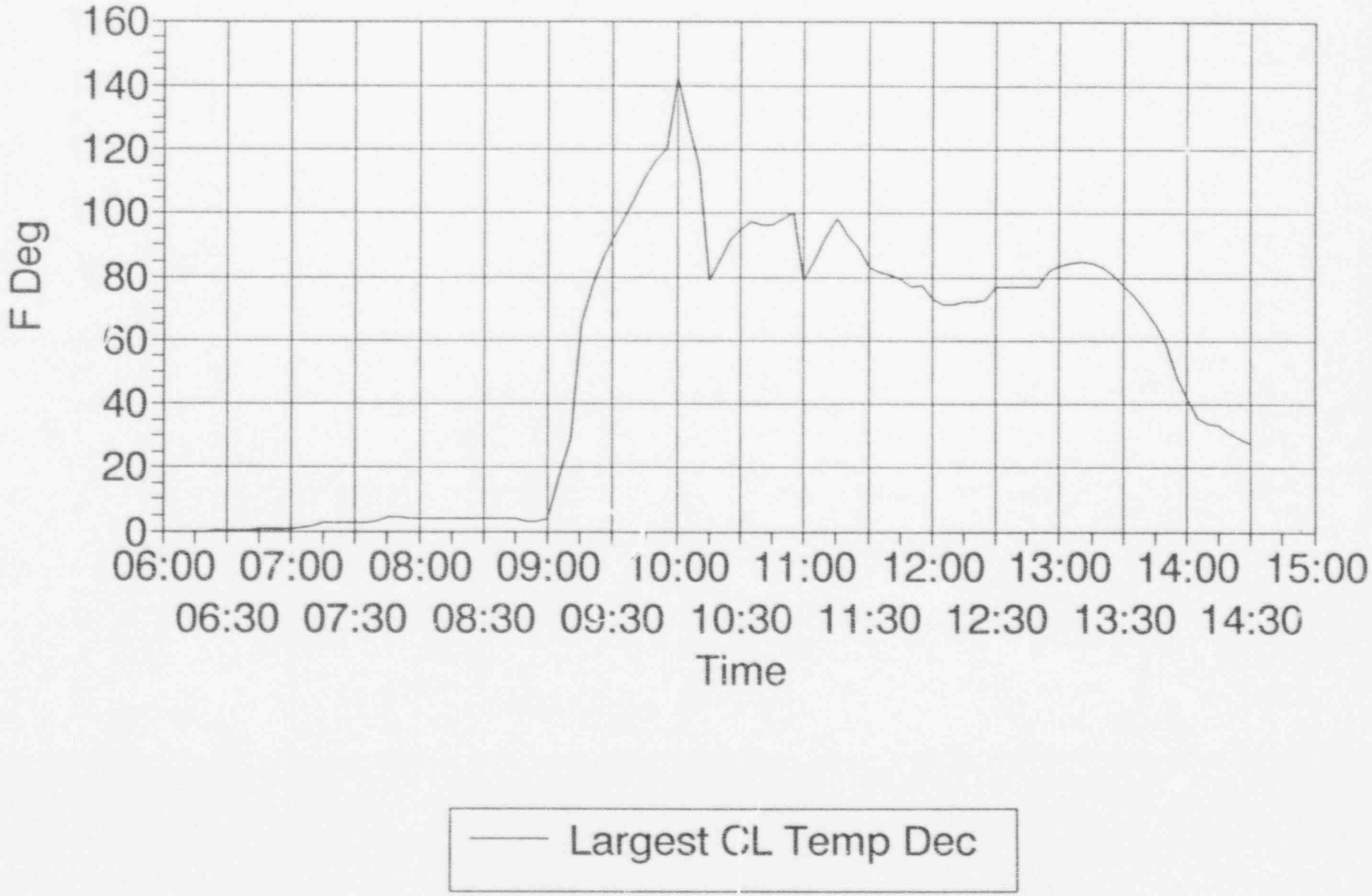
J. M. Farley Nuclear Plant

1990 Emergency Drill Data



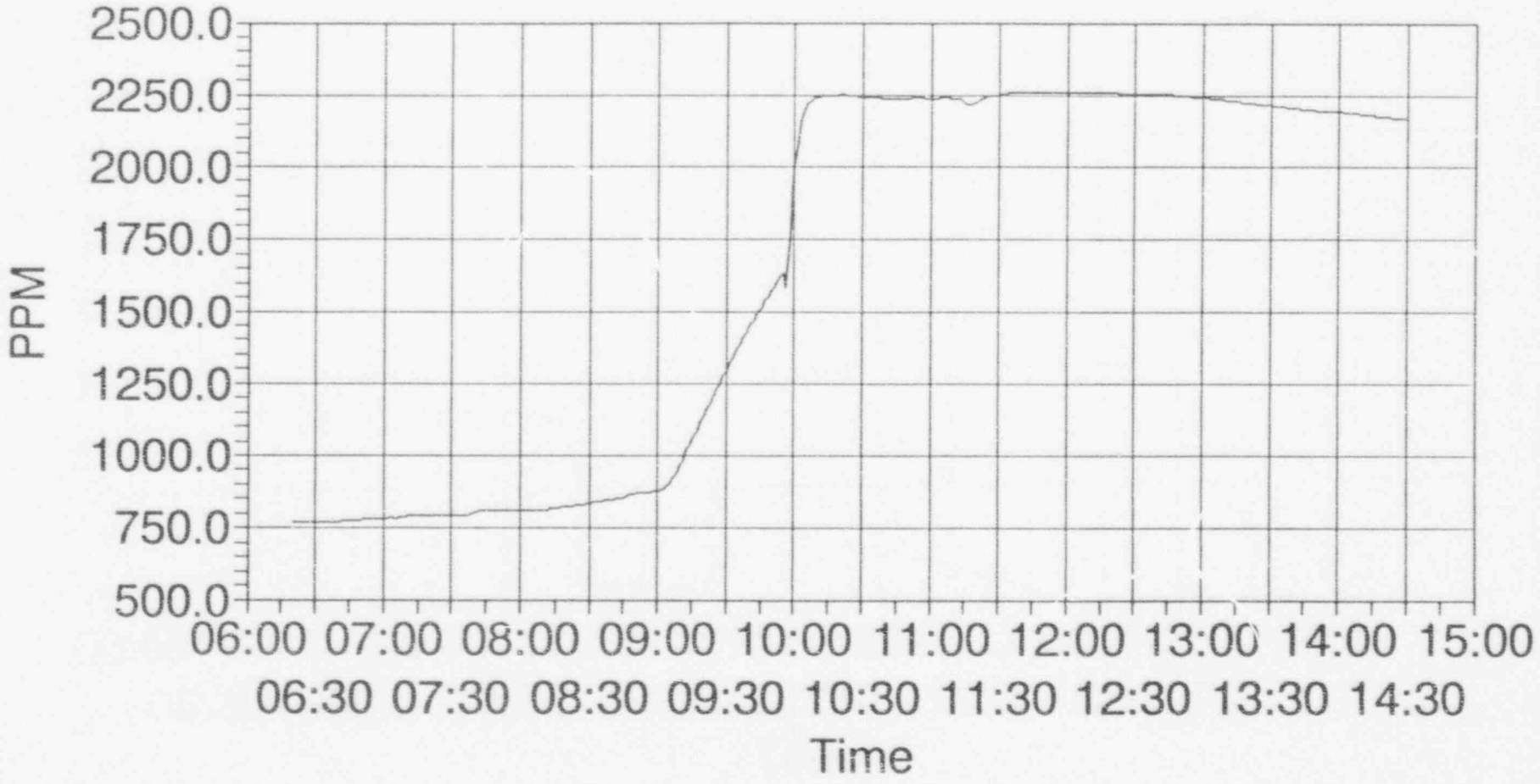
J. M. Farley Nuclear Plant

1990 Emergency Drill Data



J. M. Farley Nuclear Plant

1990 Emergency Drill Data

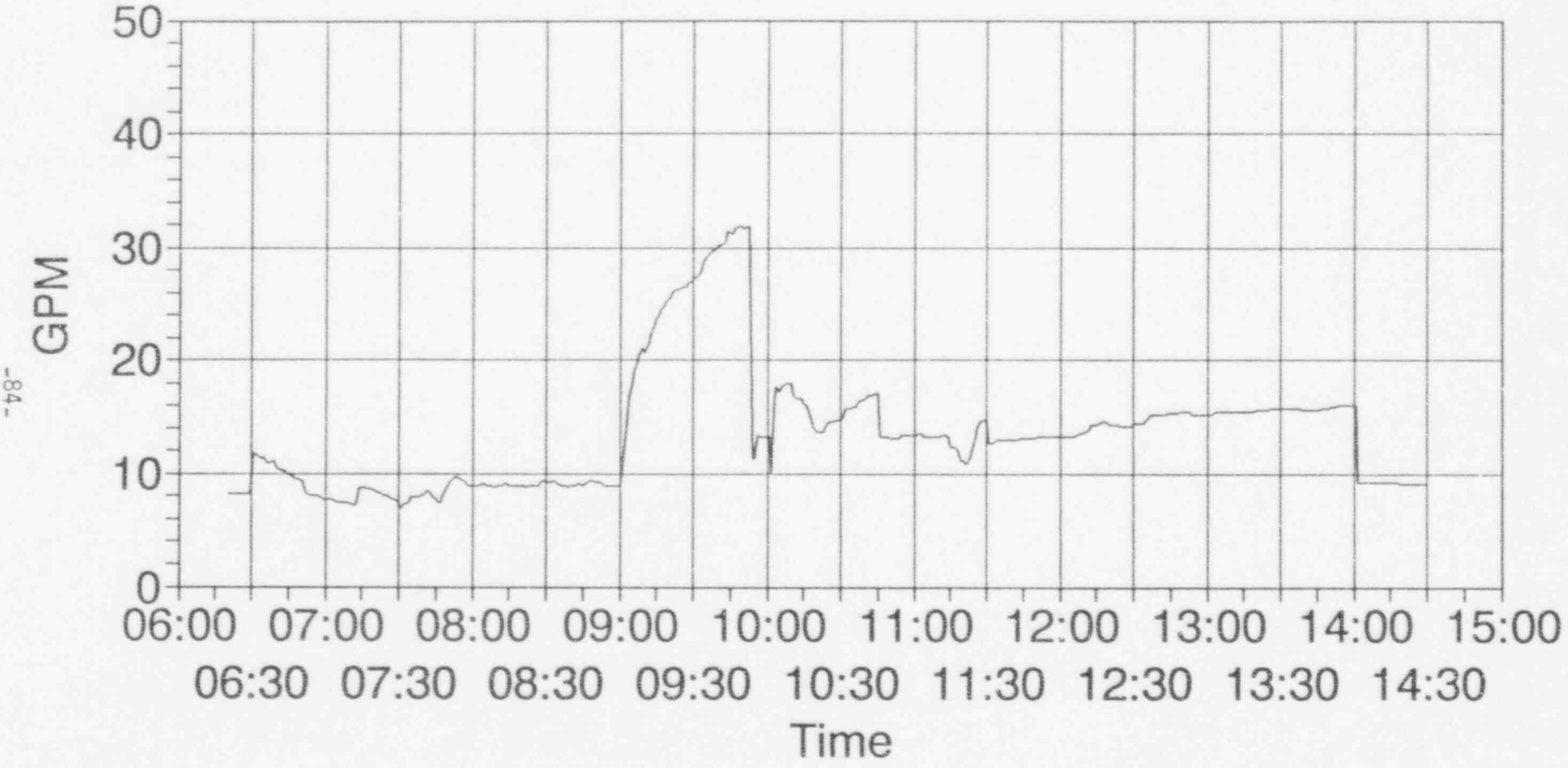


RCS-DAT.WQ1

FINAL DRAFT

J. M. Farley Nuclear Plant

1990 Emergency Drill Data

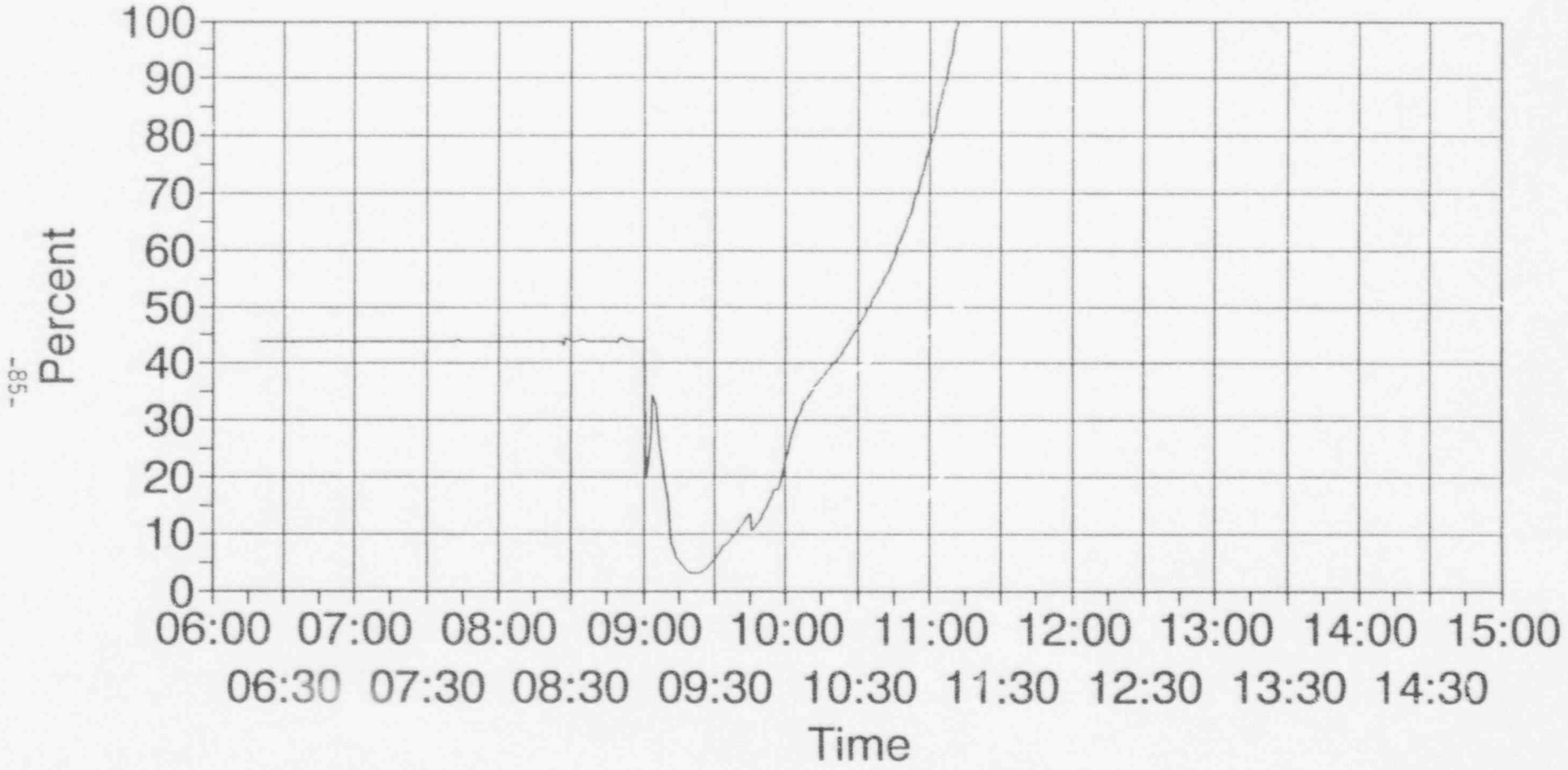


CVC-DAT.WQ1

FINAL DRAFT

J. M. Farley Nuclear Plant

1990 Emergency Drill Data

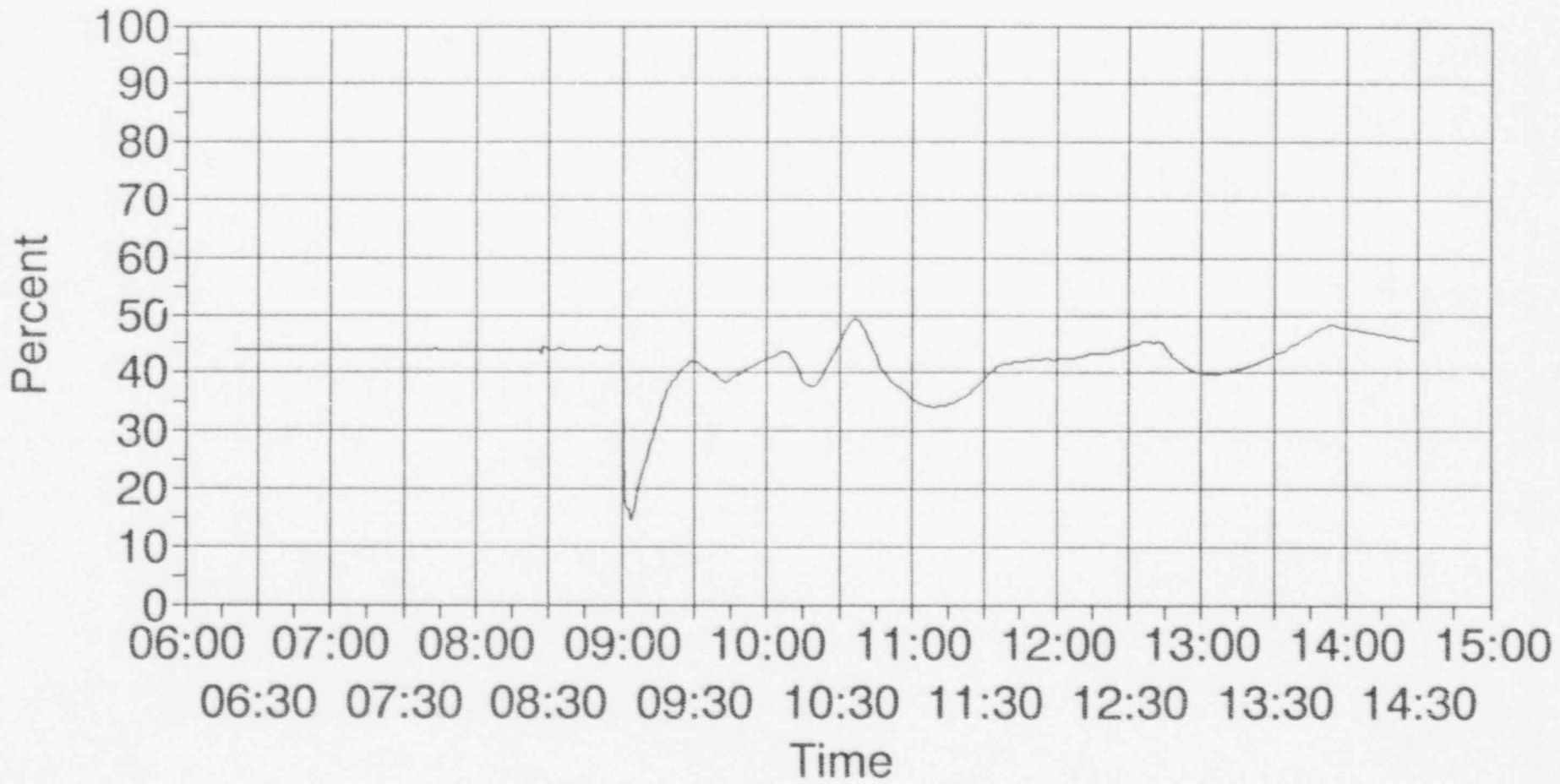


S_G-DATA.WQ1

FINAL DRAFT

J. M. Farley Nuclear Plant

1990 Emergency Drill Data

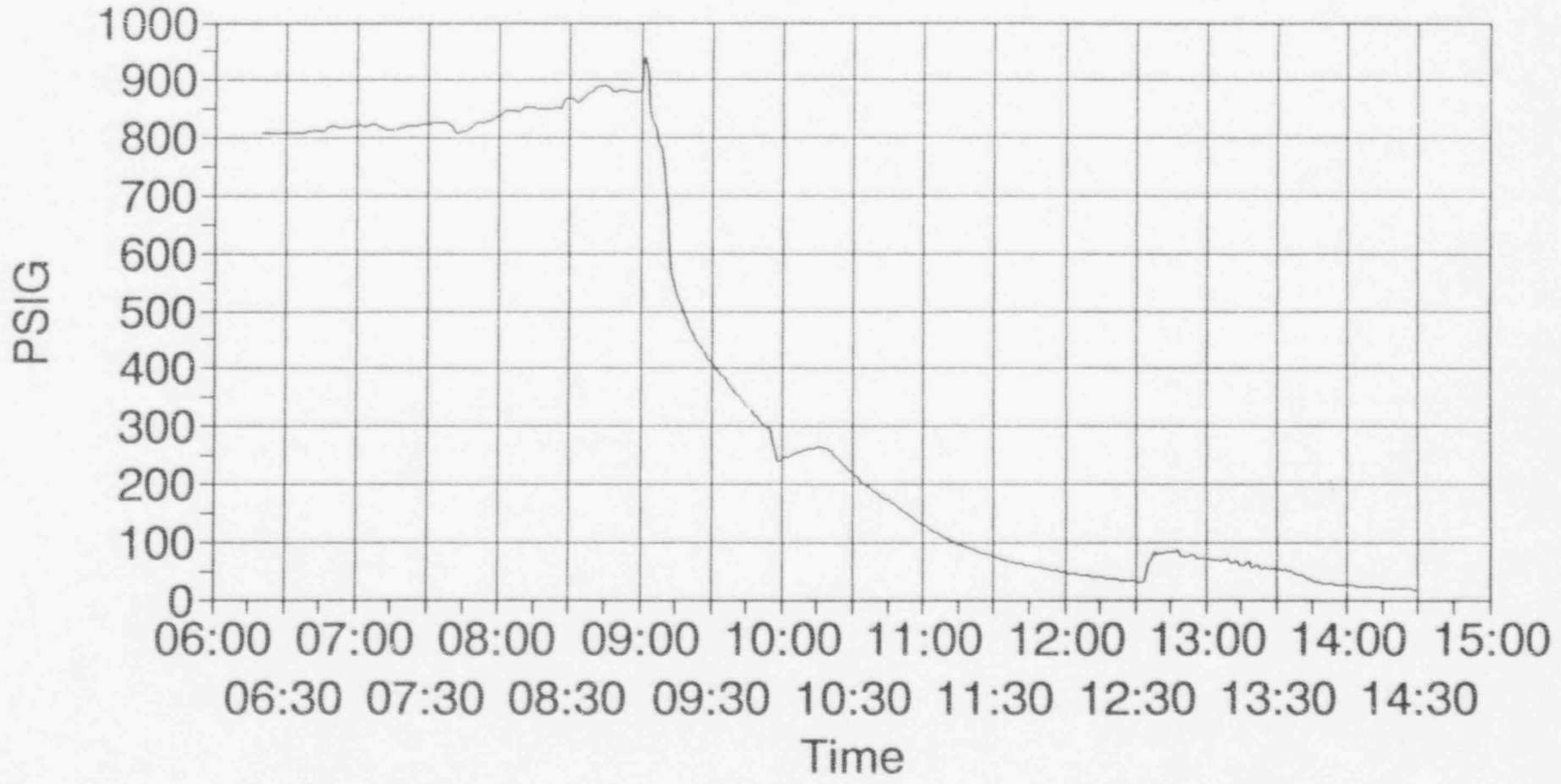


S_G-DATA.WQ1

FINAL DRAFT

J. M. Farley Nuclear Plant

1990 Emergency Drill Data



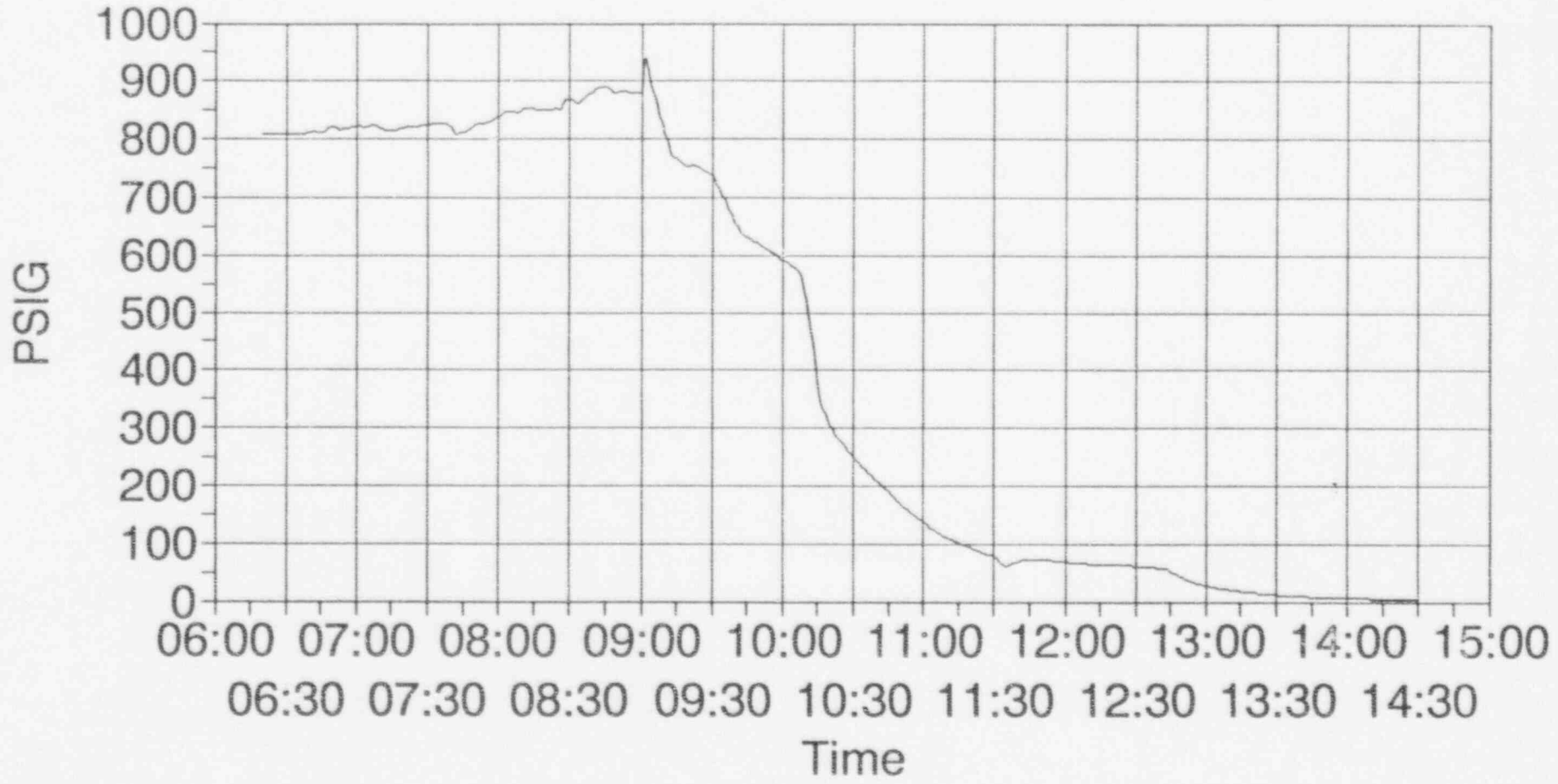
SGN,Pressure,S/G A

S_G-DATA.WQ1

FINAL DRAFT

J. M. Farley Nuclear Plant

1990 Emergency Drill Data

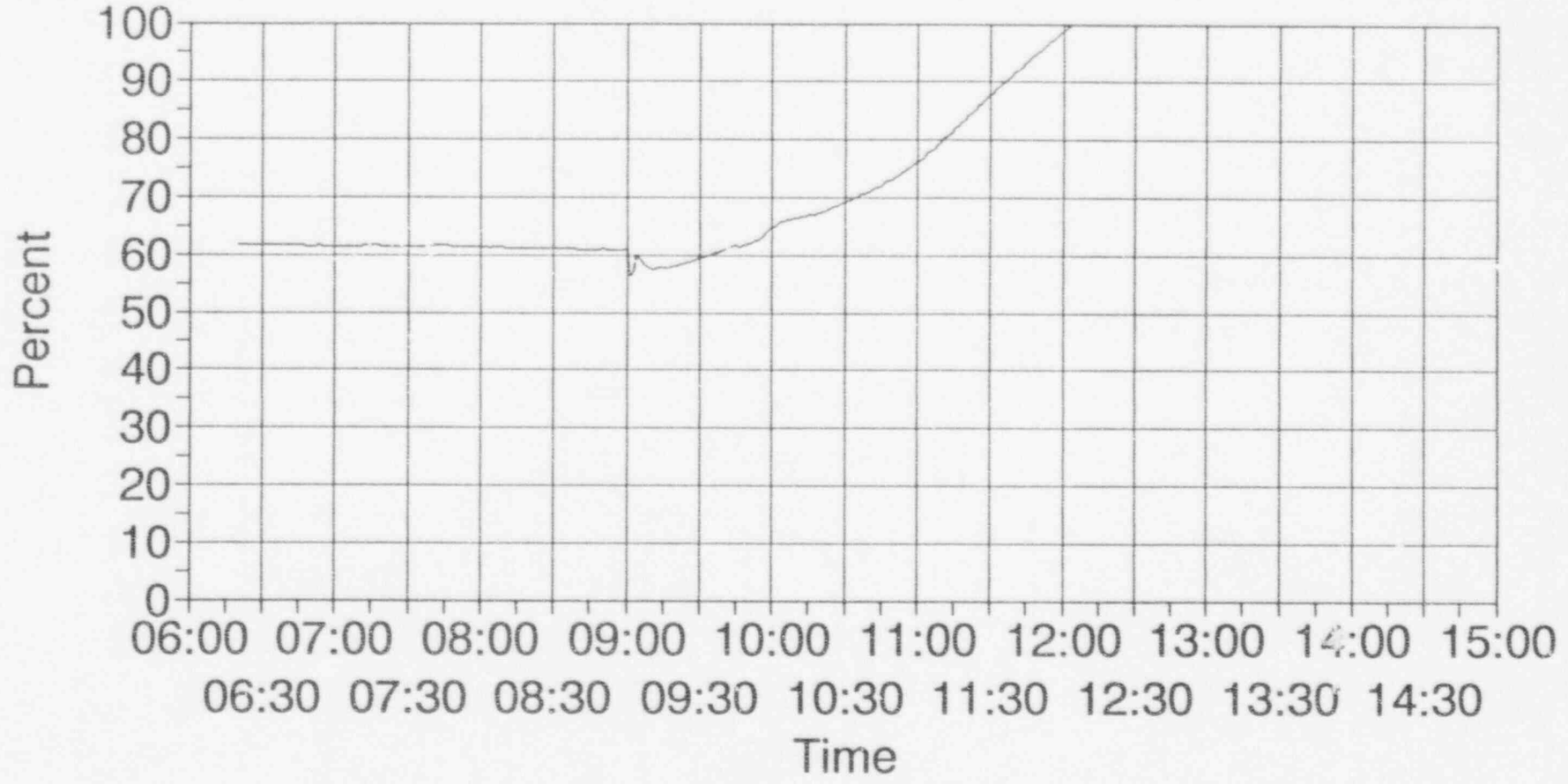


S_G-DATA.WQ1

FINAL DRAFT

J. M. Farley Nuclear Plant

1990 Emergency Drill Data

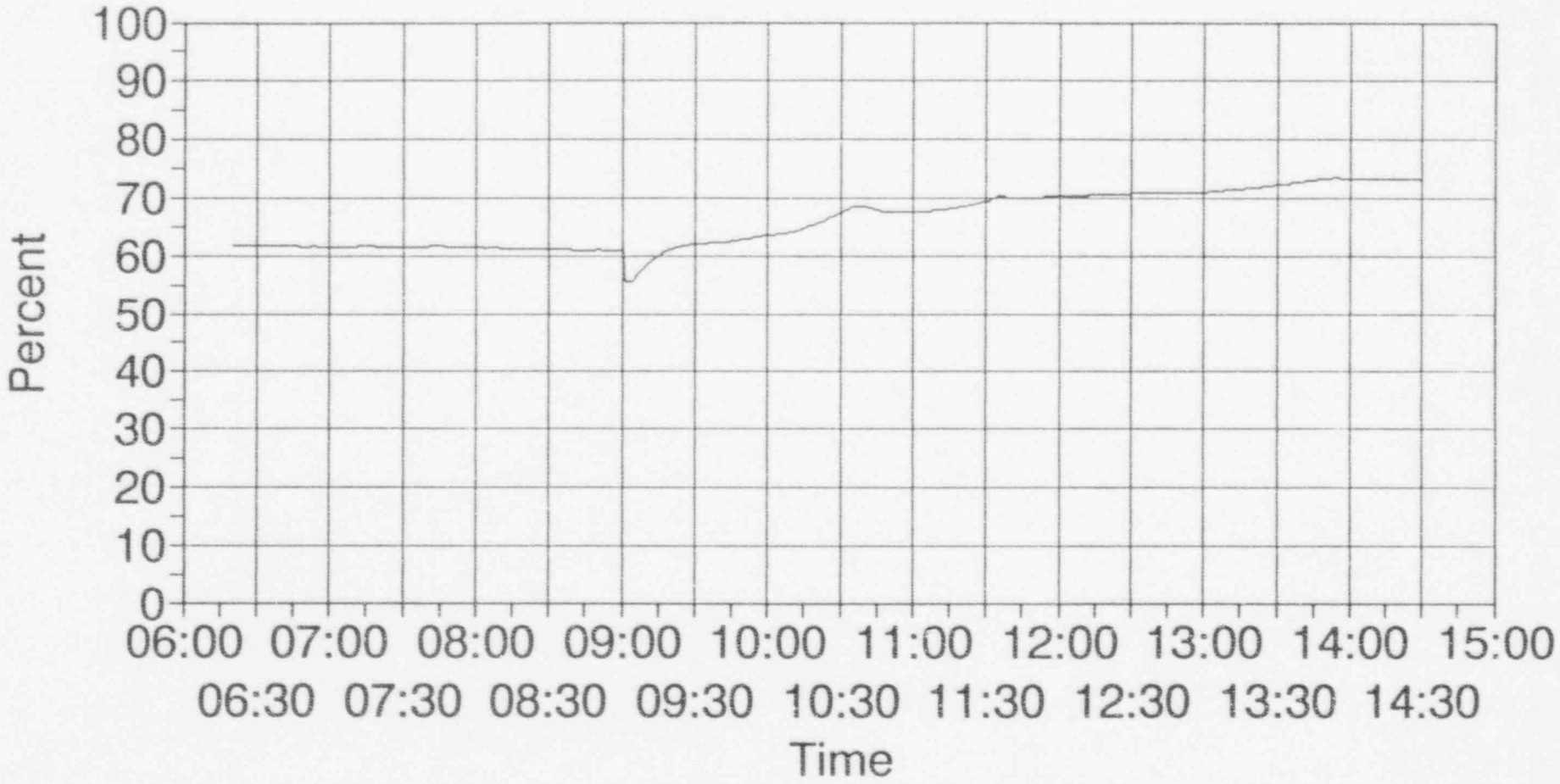


S_G-DATA.WQ1

FINAL DRAFT

J. M. Farley Nuclear Plant

1990 Emergency Drill Data

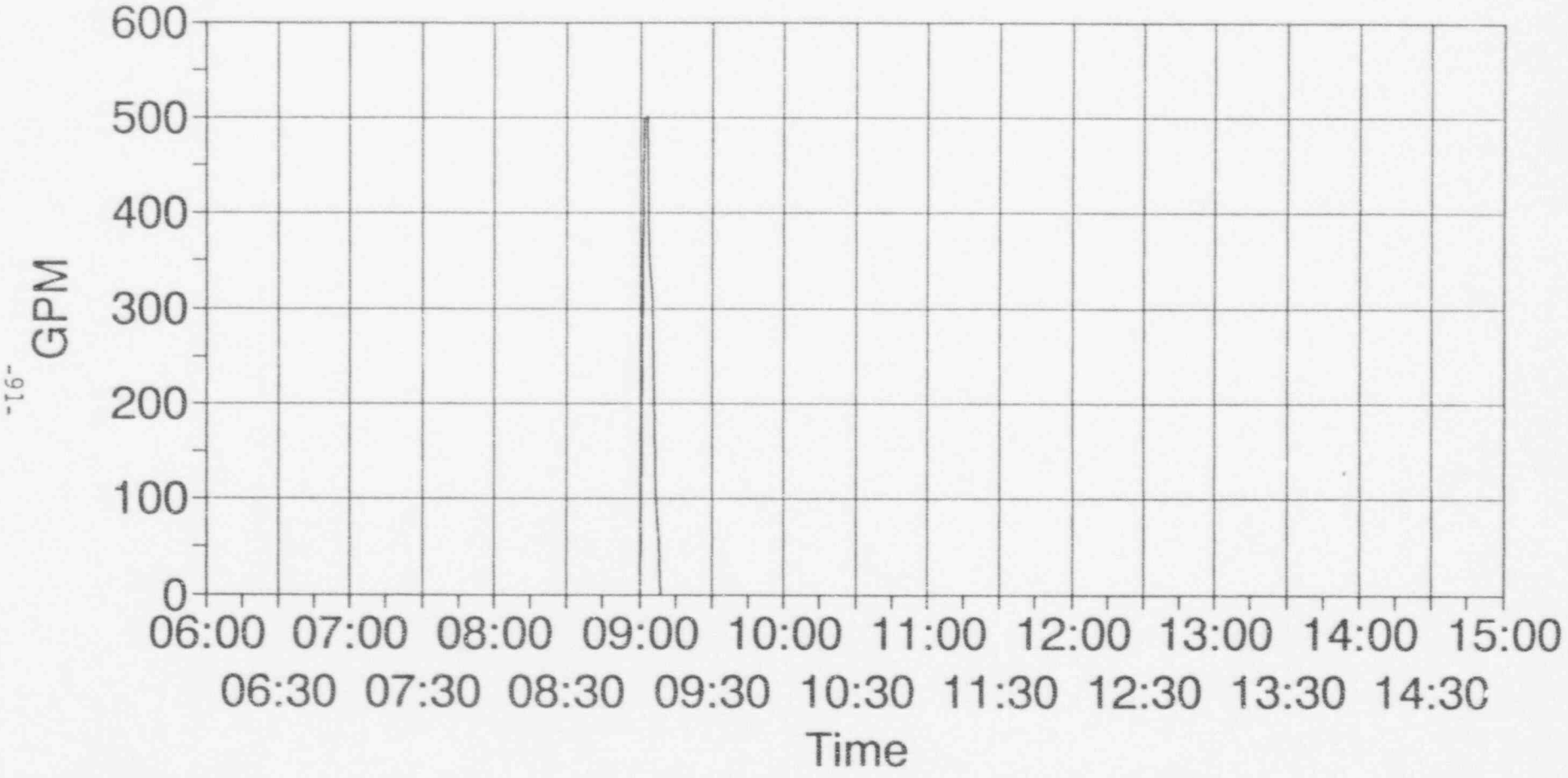


S_G-DATA.WQ1

FINAL DRAFT

J. M. Farley Nuclear Plant

1990 Emergency Drill Data

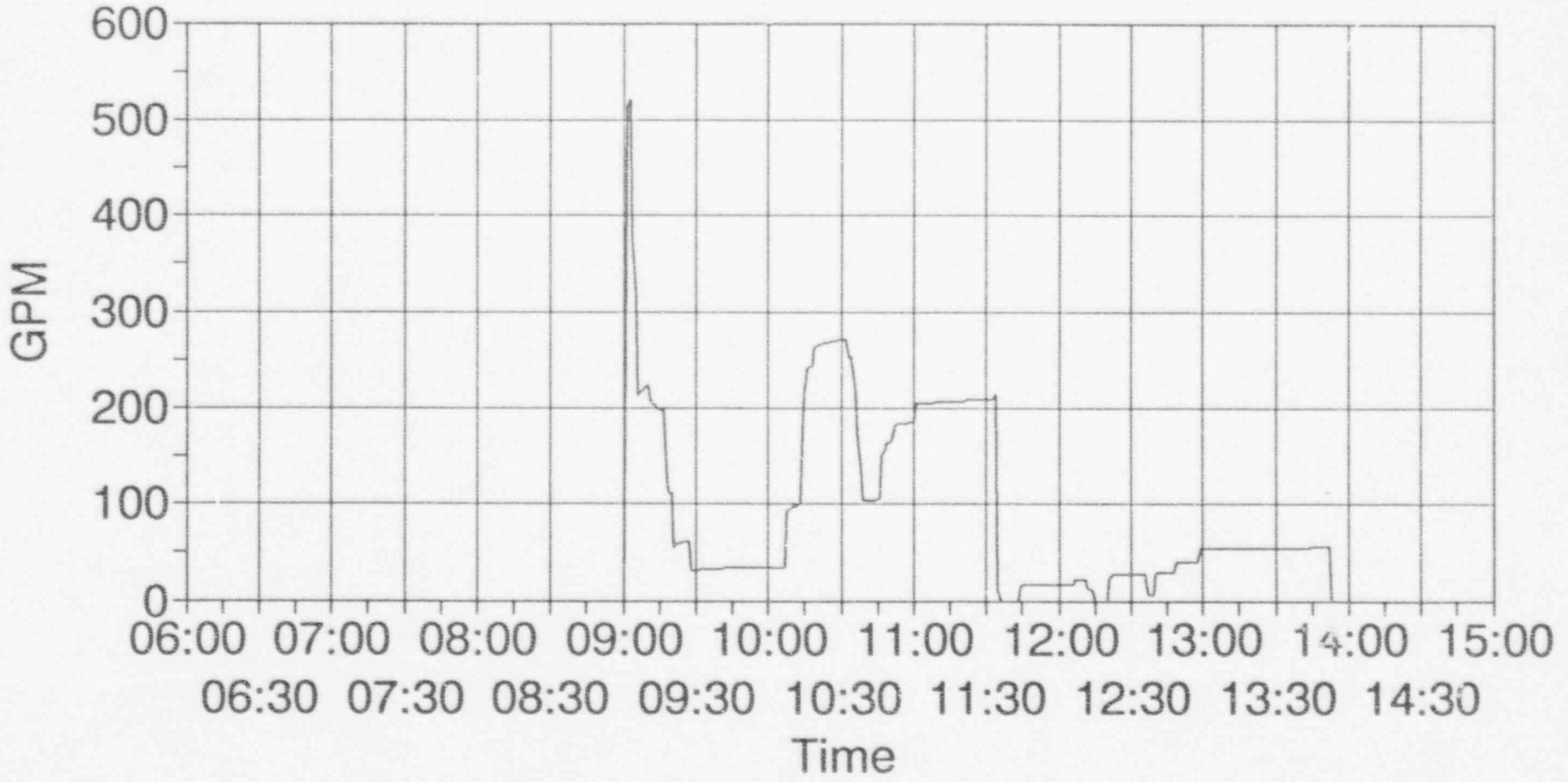


STM&FEED.WQ1

FINAL DRAFT

J. M. Farley Nuclear Plant

1990 Emergency Drill Data



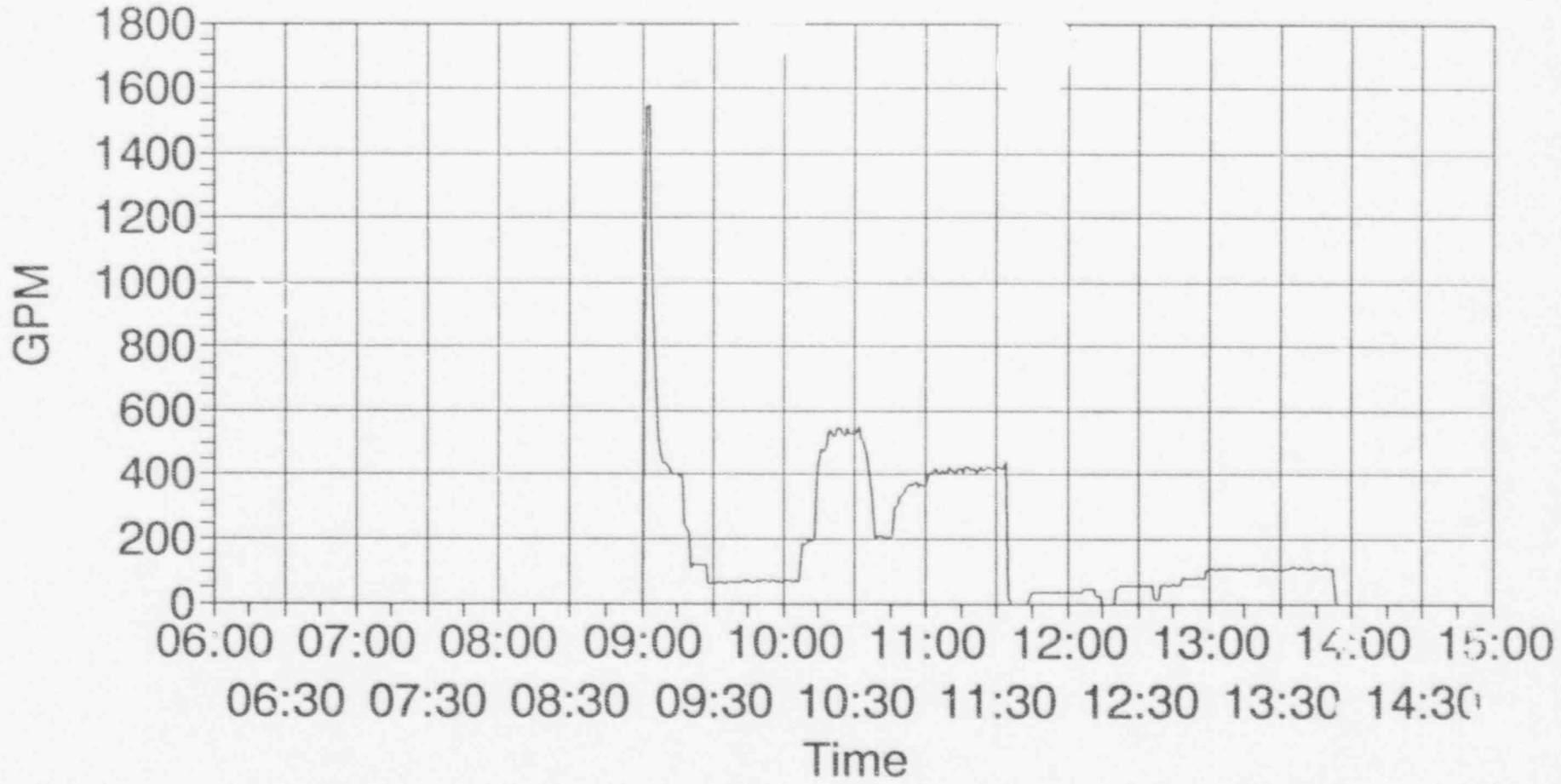
AFW,Flow,S/G B

STM&FEED.WQ1

FINAL DRAFT

J. M. Farley Nuclear Plant

1990 Emergency Drill Data

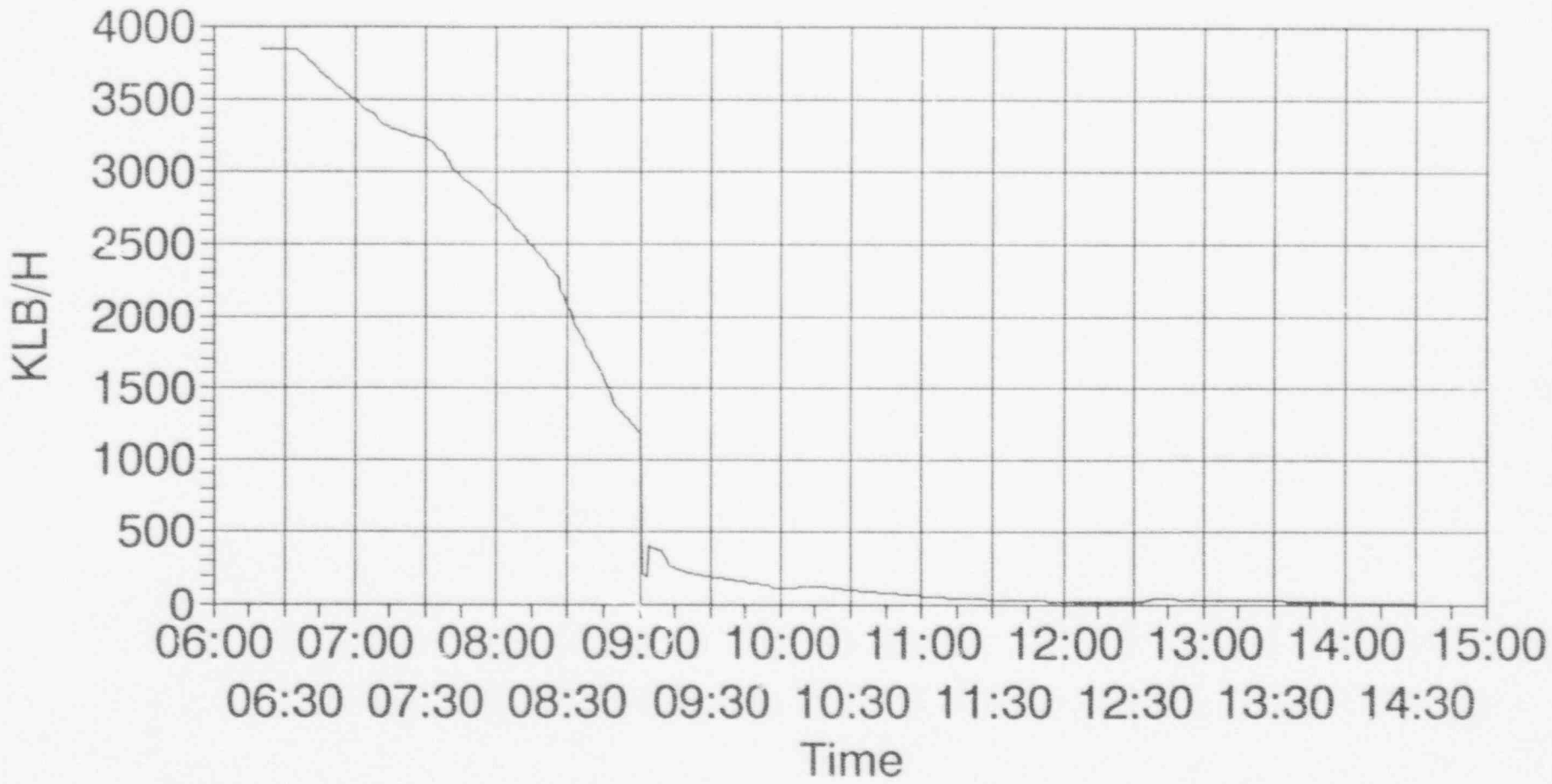


STM&FEED.WQ1

FINAL DRAFT

J. M. Farley Nuclear Plant

1990 Emergency Drill Data

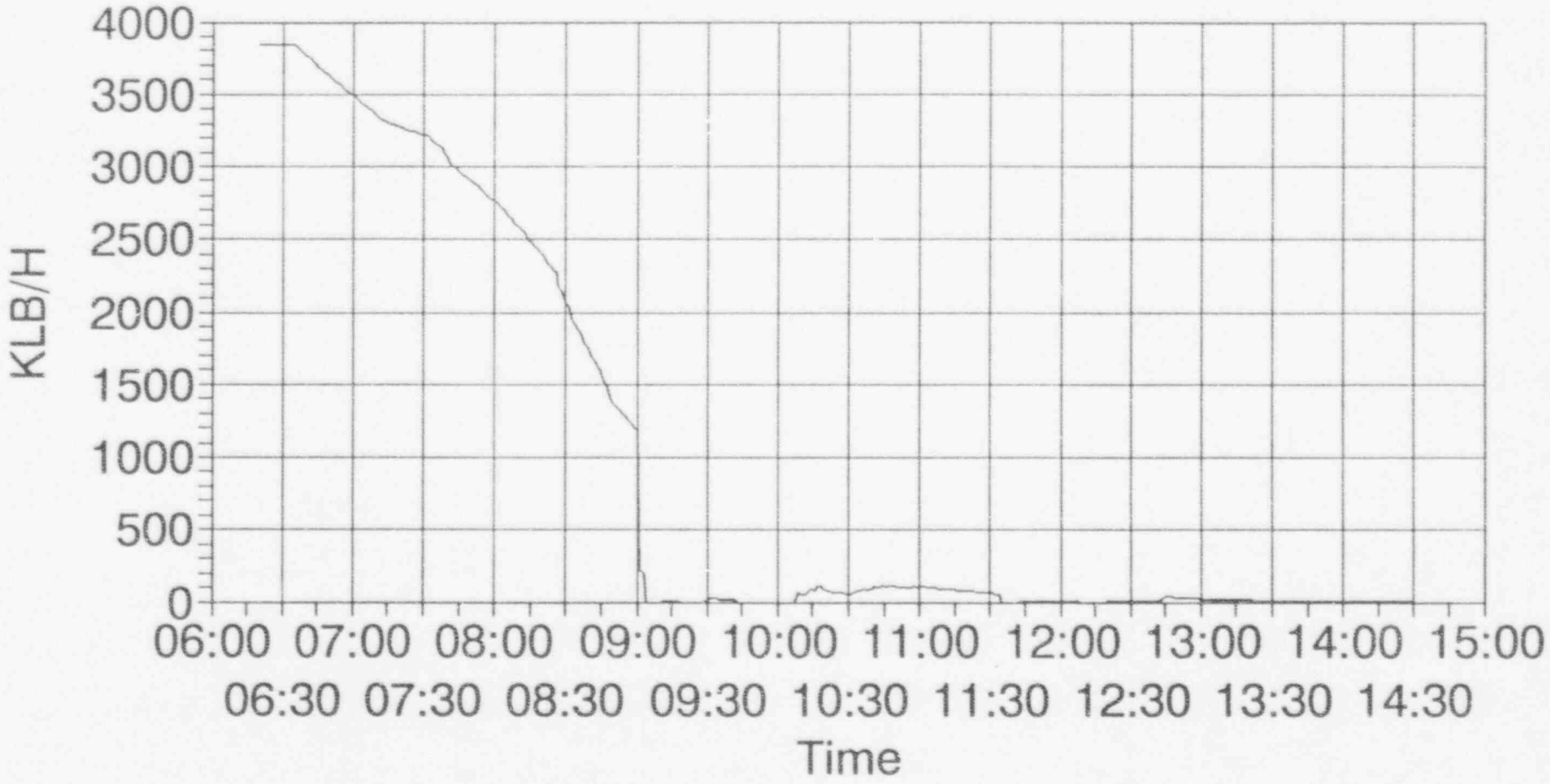


STM&FEED.WQ1

FINAL DRAFT

J. M. Farley Nuclear Plant

1990 Emergency Drill Data



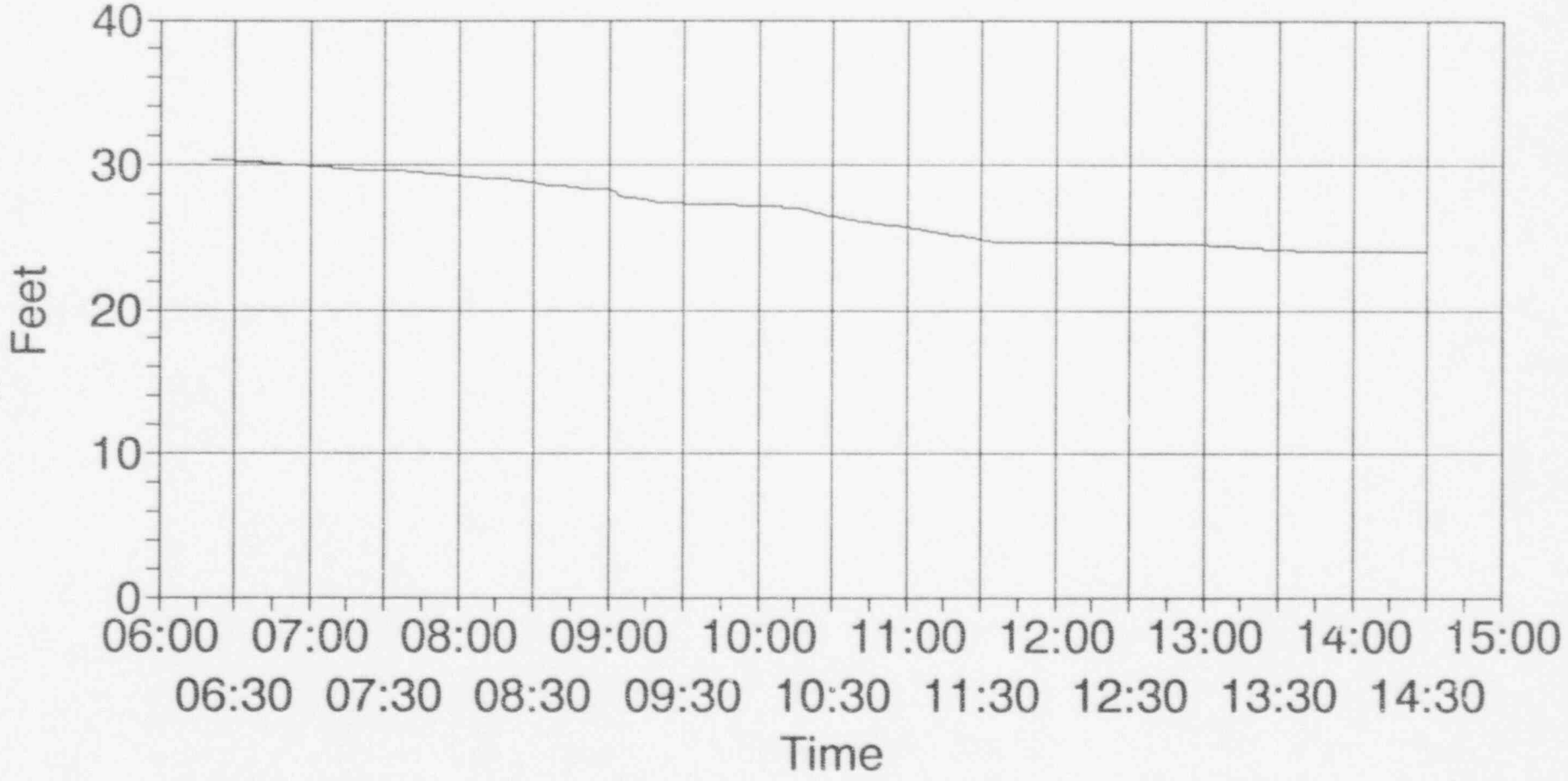
MSH,Stm Flow,S/G B

STM&FEED.WQ1

FINAL DRAFT

J. M. Farley Nuclear Plant

1990 Emergency Drill Data

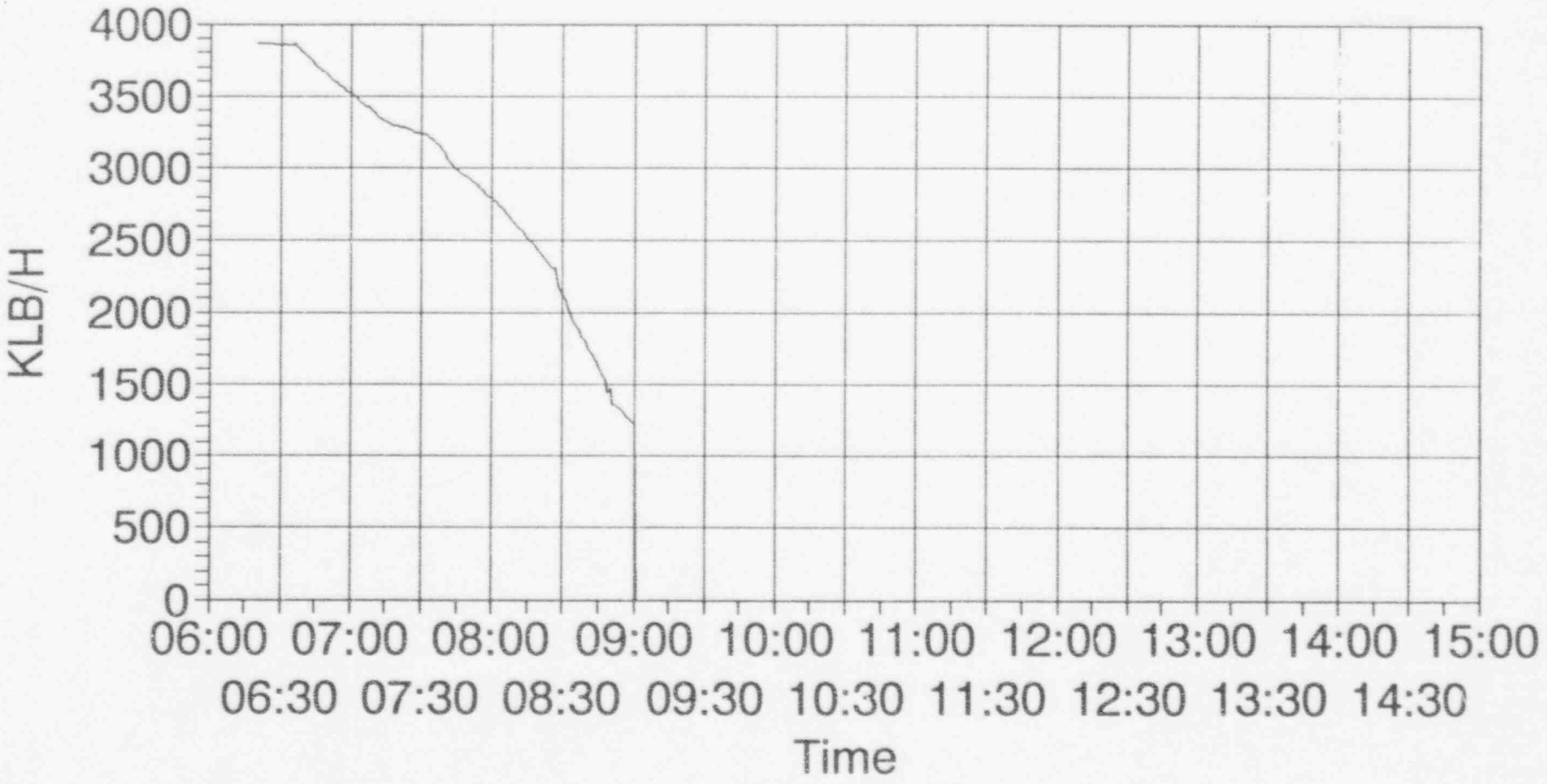


STM&FEED.WQ1

FINAL DRAFT

J. M. Farley Nuclear Plant

1990 Emergency Drill Data



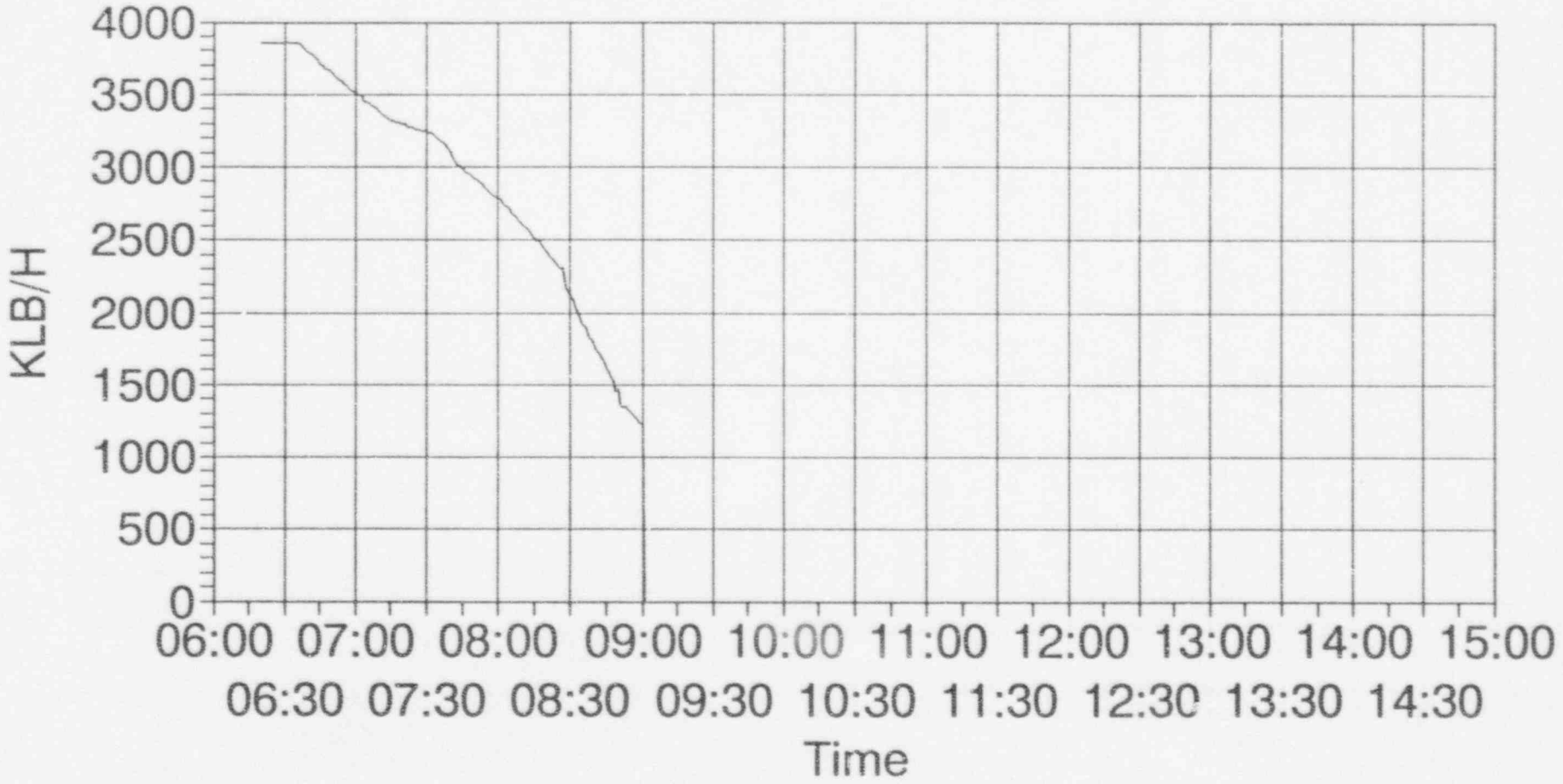
CFW,MFW Flow,S/G A

STM&FEED.WQ1

FINAL DRAFT

J. M. Farley Nuclear Plant

1990 Emergency Drill Data



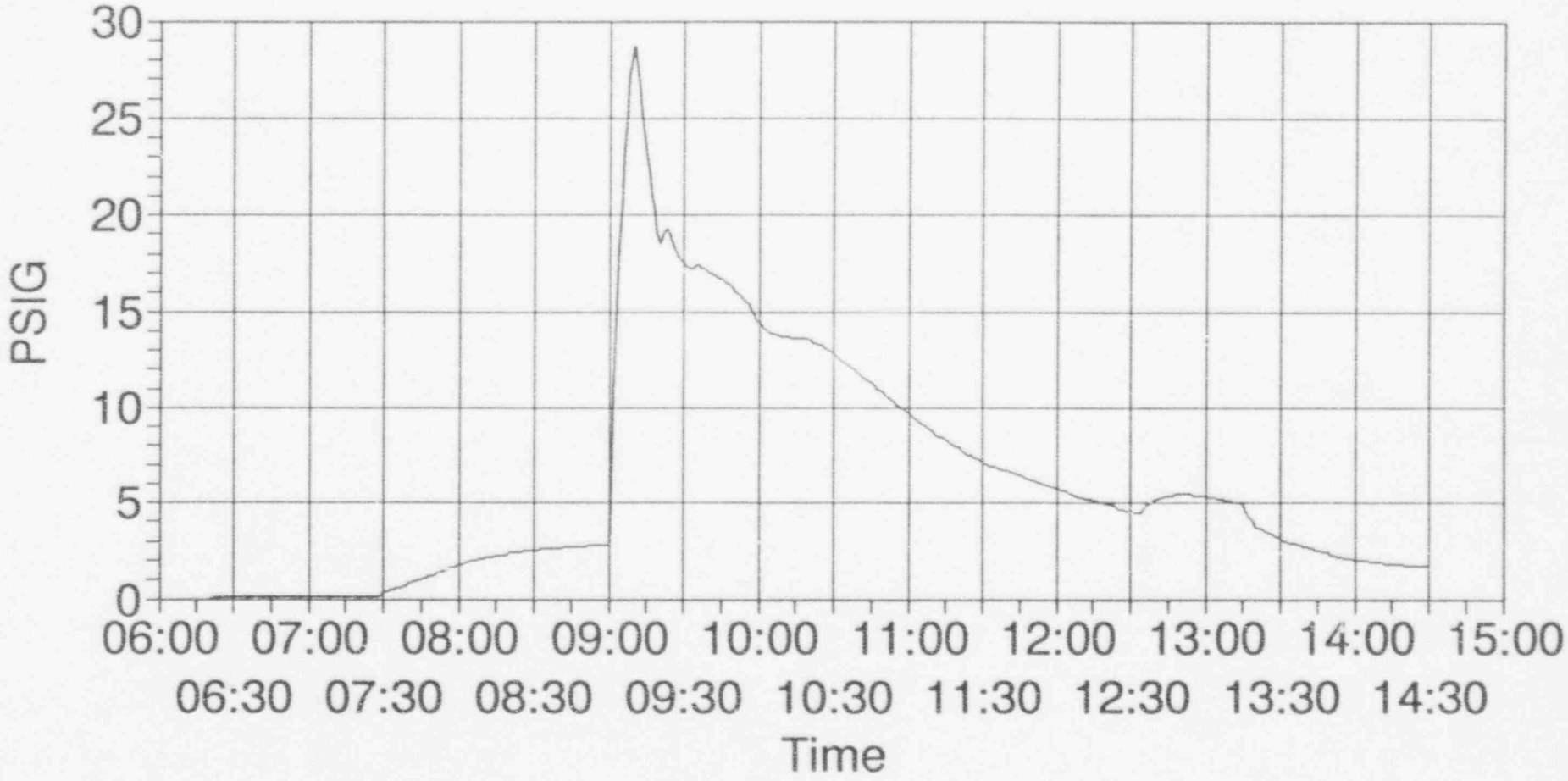
CFW,MFW Flow,S/G B

STM&FEED.WQ1

FINAL DRAFT

J. M. Farley Nuclear Plant

1990 Emergency Drill Data

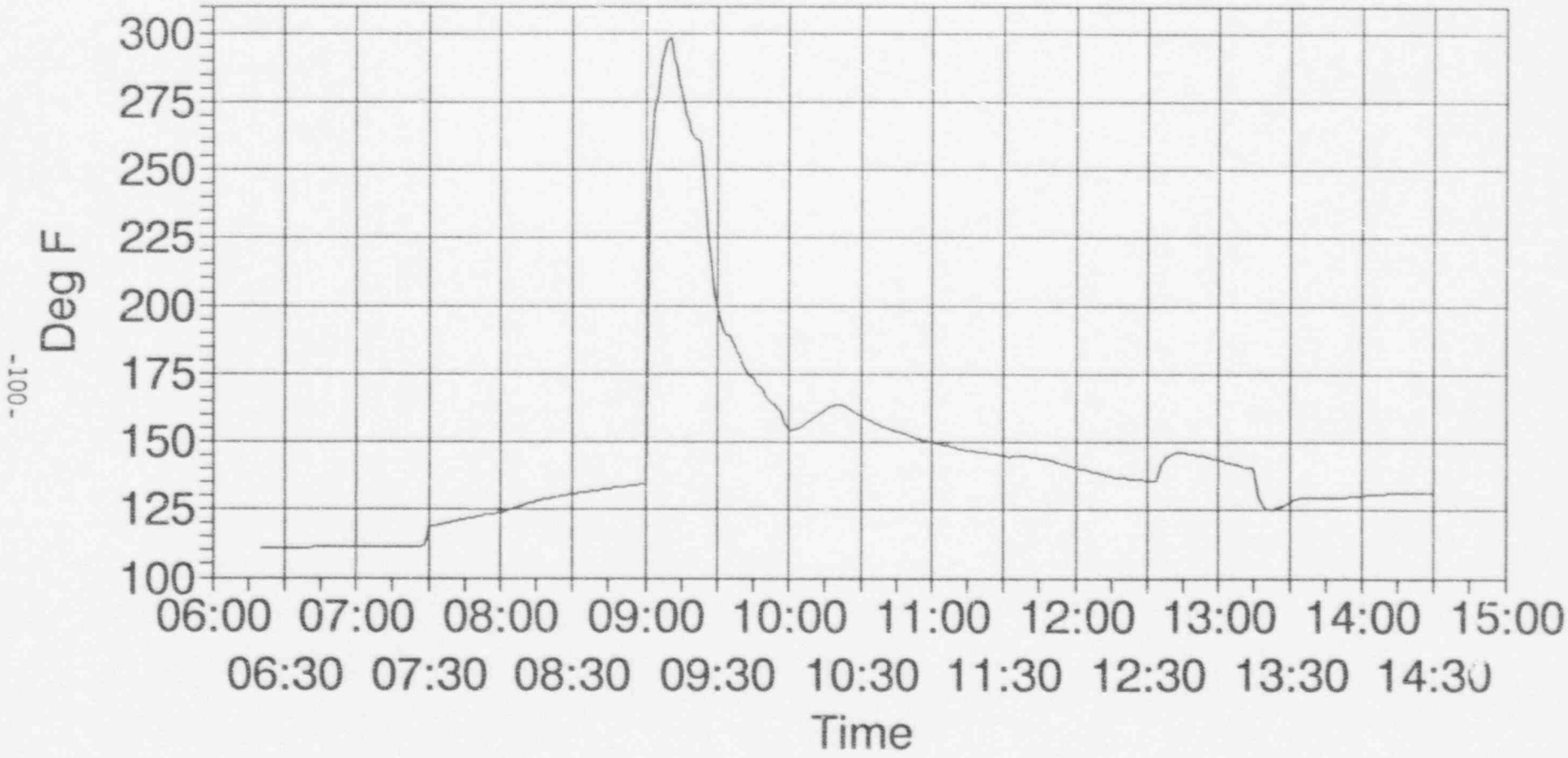


PRT-CNMT.WQ1

FINAL DRAFT

J. M. Farley Nuclear Plant

1990 Emergency Drill Data

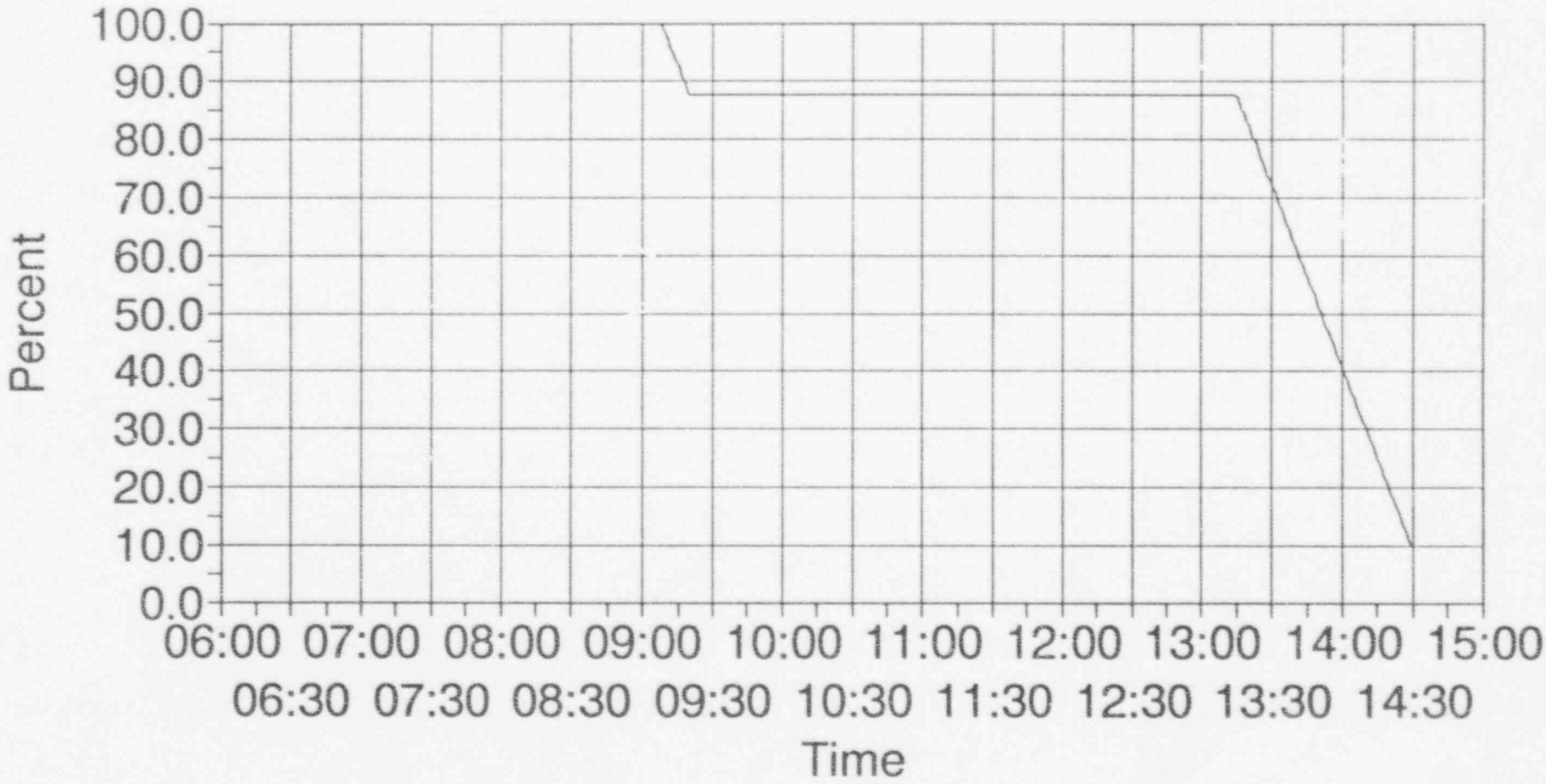


PRT-CNMT.WQ1

FINAL DRAFT

J. M. Farley Nuclear Plant

1990 Emergency Drill Data

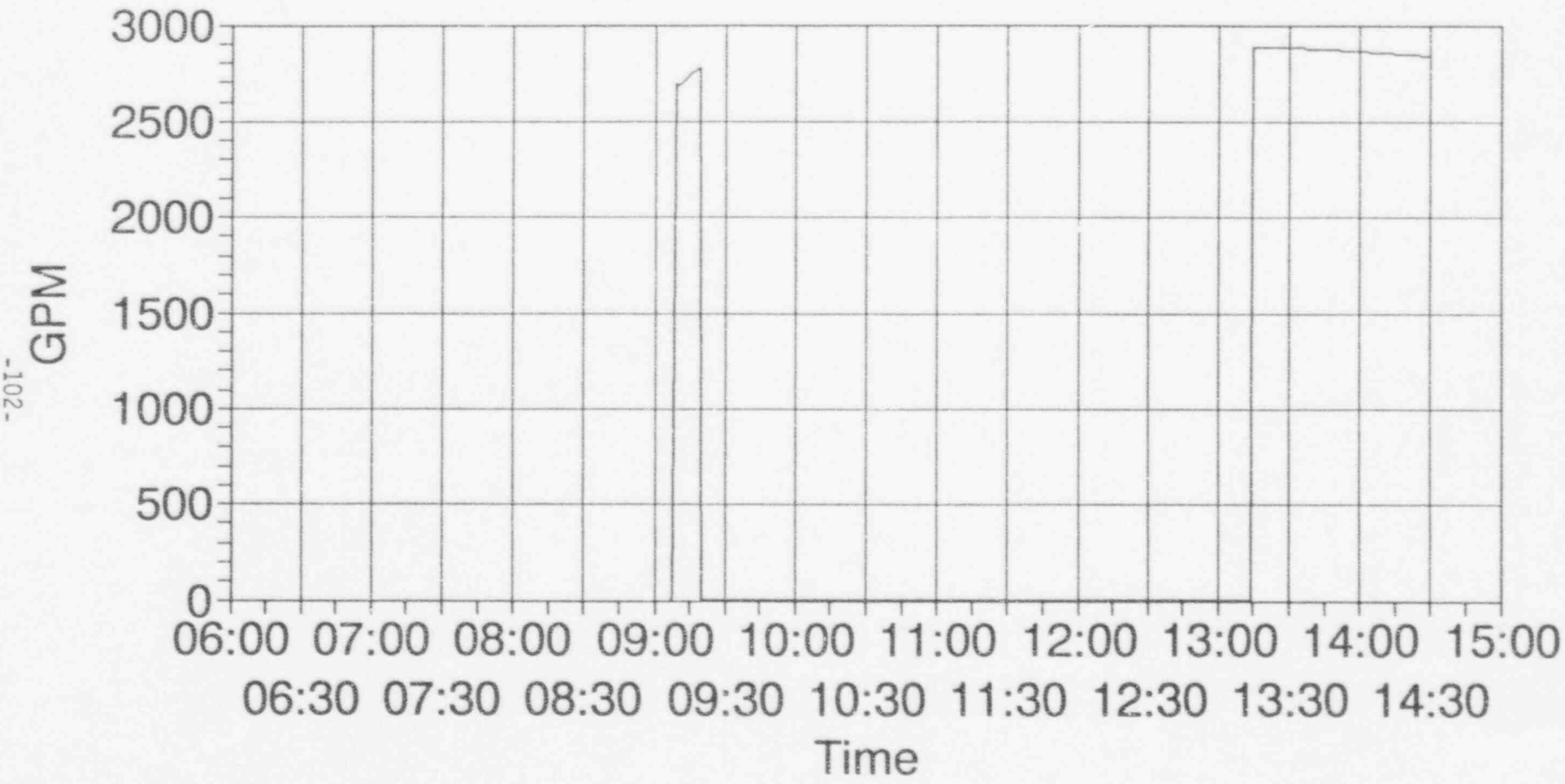


ECCS-DAT.WQ1

FINAL DRAFT

J. M. Farley Nuclear Plant

1990 Emergency Drill Data

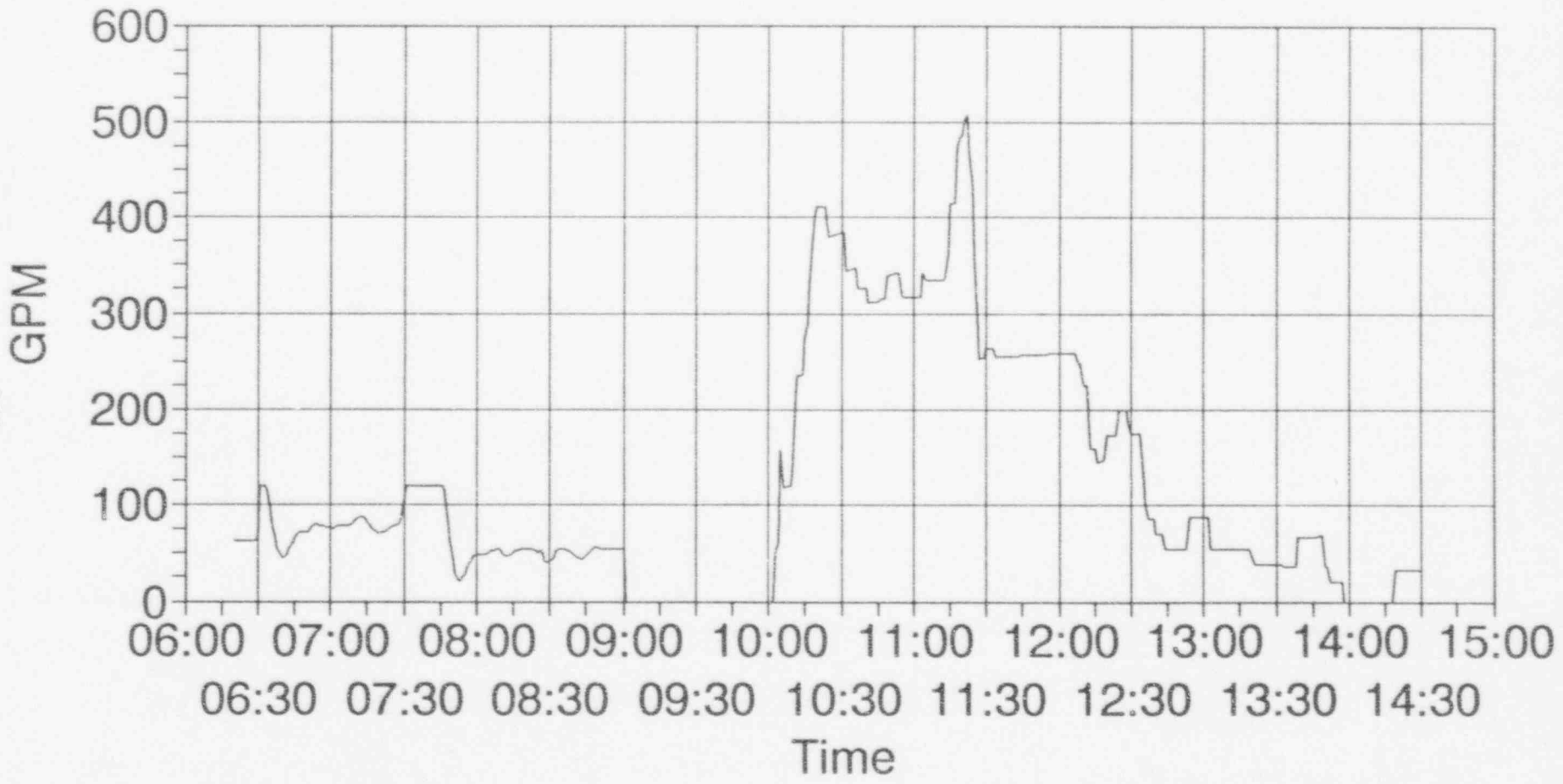


ECCS-DAT.WQ1

FINAL DRAFT

J. M. Farley Nuclear Plant

1990 Emergency Drill Data



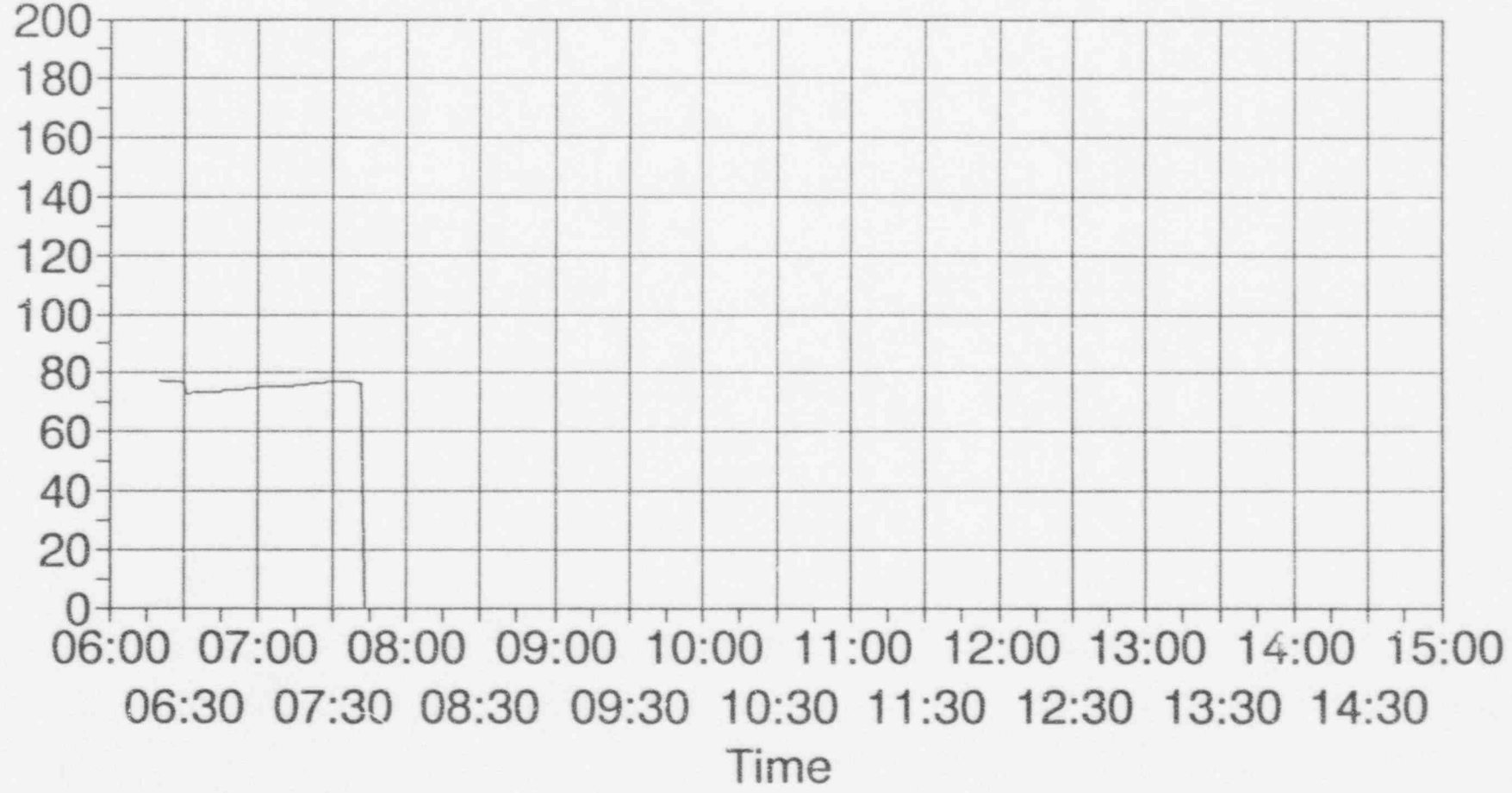
CVCS,Charging,Flow

CVC-DAT.WQ1

FINAL DRAFT

J. M. Farley Nuclear Plant

1990 Emergency Drill Data



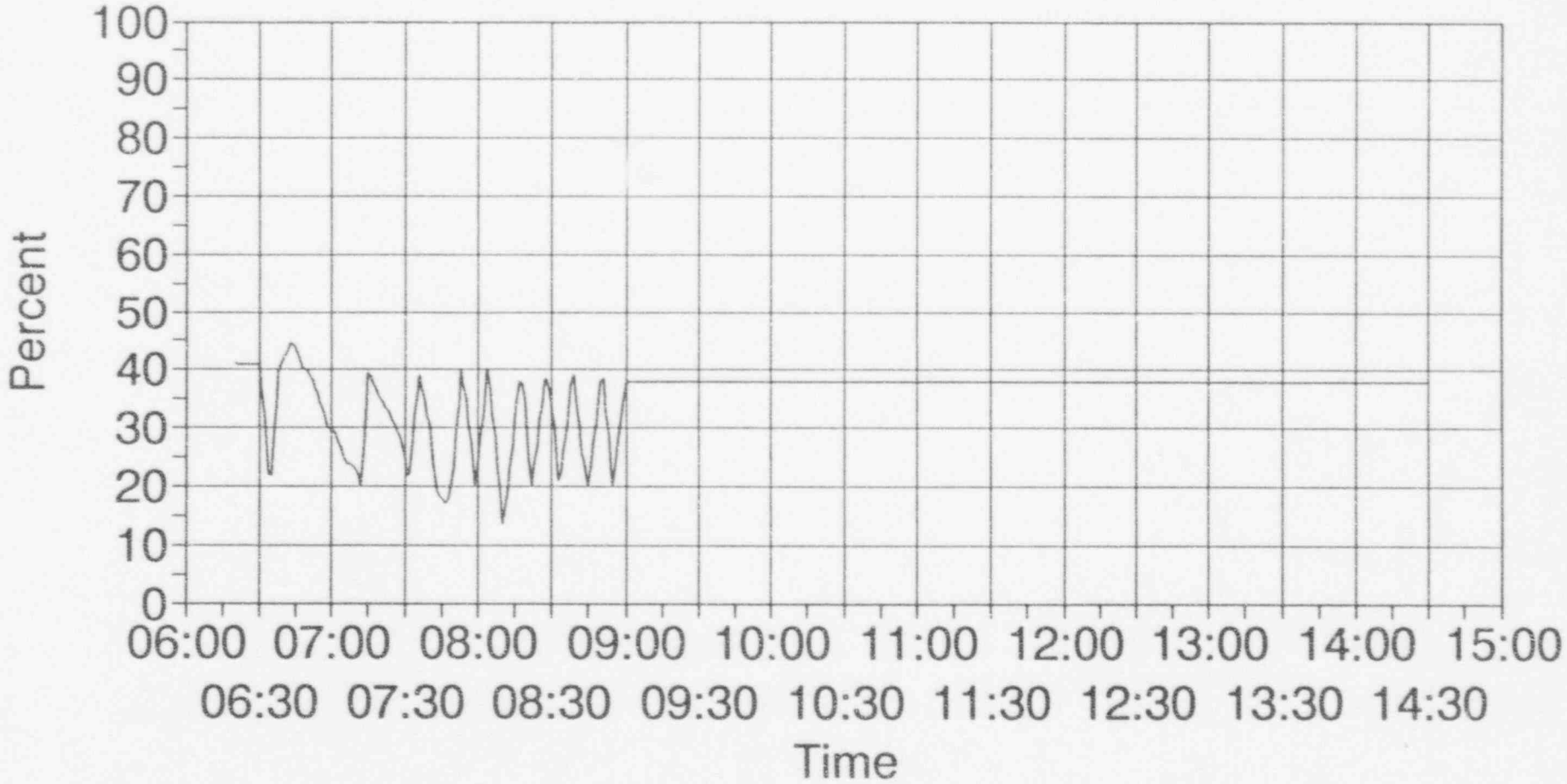
CVCS,Letdown,Flow

CVC-DAT.WQ1

FINAL DRAFT

J. M. Farley Nuclear Plant

1990 Emergency Drill Data

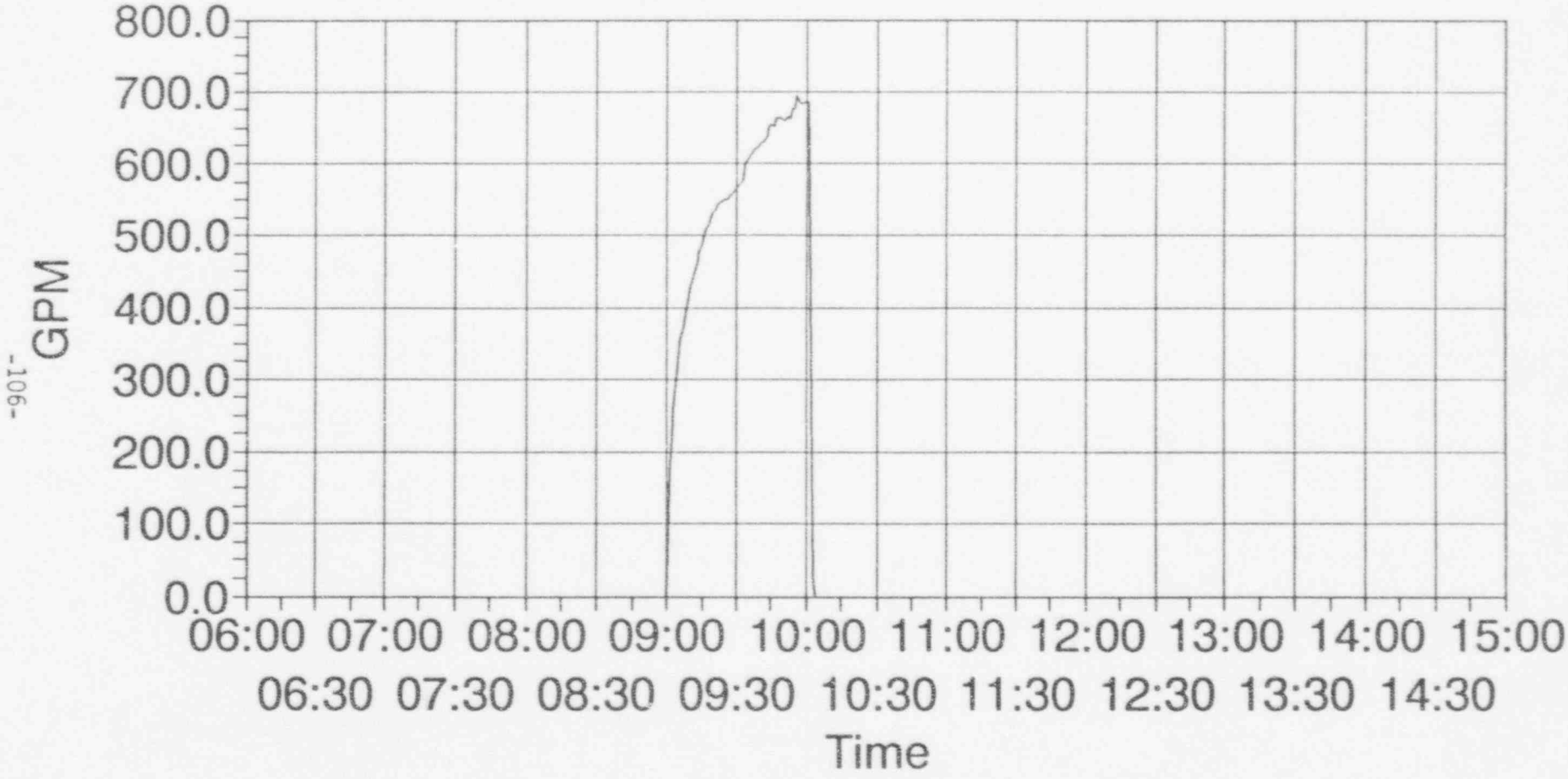


CVC-DAT.WQ1

FINAL DRAFT

J. M. Farley Nuclear Plant

1990 Emergency Drill Data



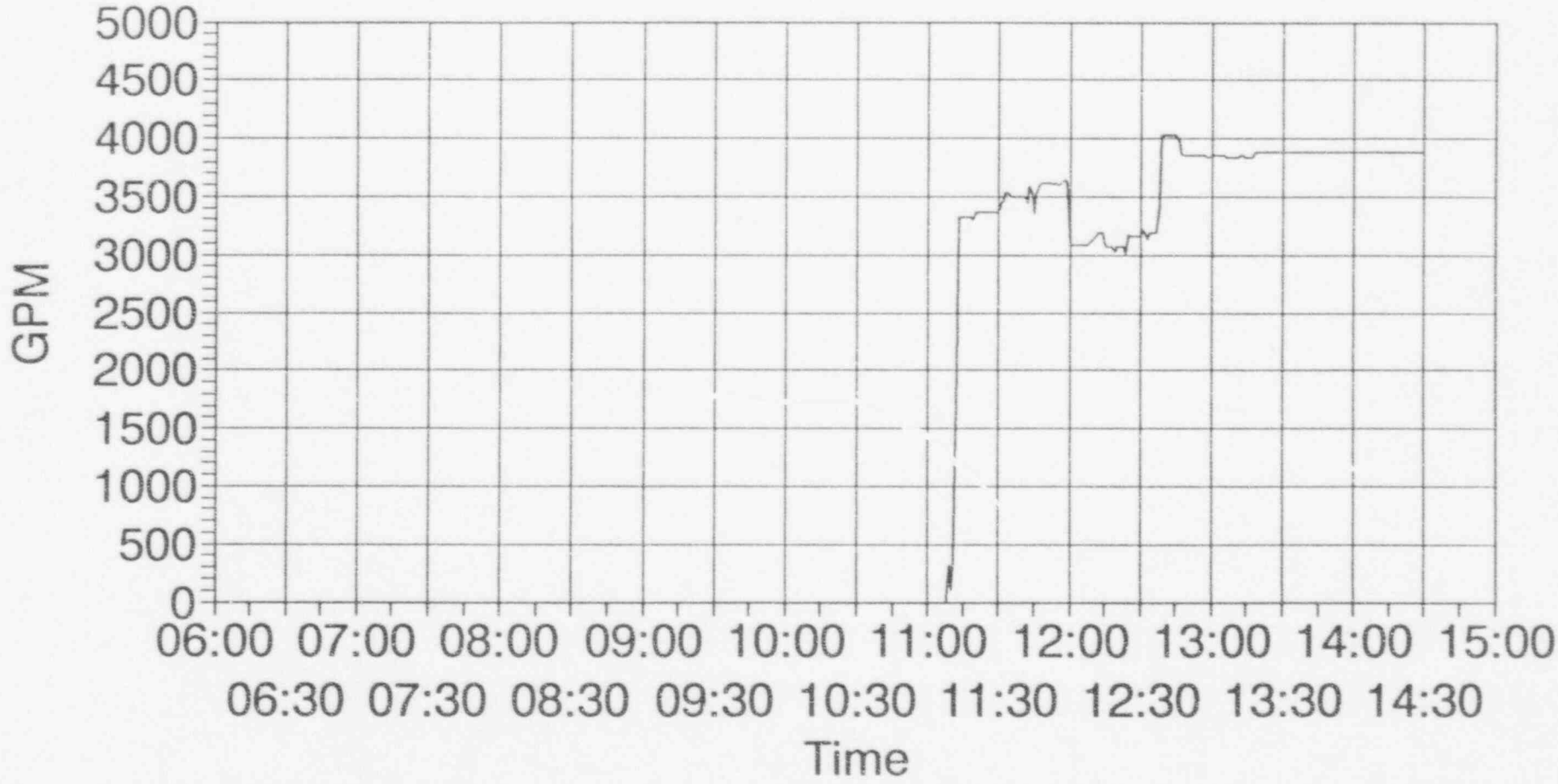
ECCS,BIT Flow (SI)

ECCS-DAT.WQ1

FINAL DRAFT

J. M. Farley Nuclear Plant

1990 Emergency Drill Data

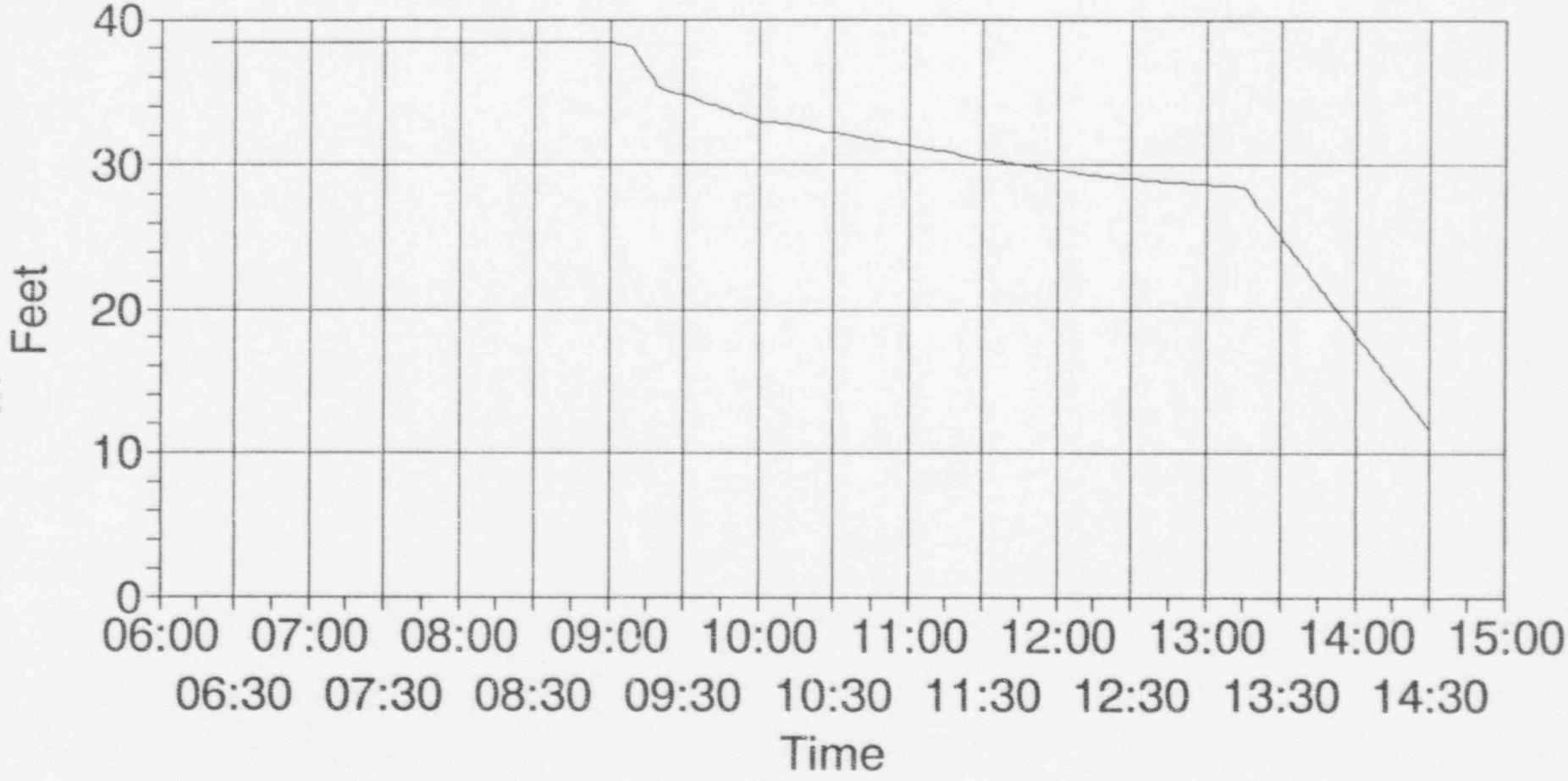


ECCS-DAT.WQ1

FINAL DRAFT

J. M. Farley Nuclear Plant

1990 Emergency Drill Data

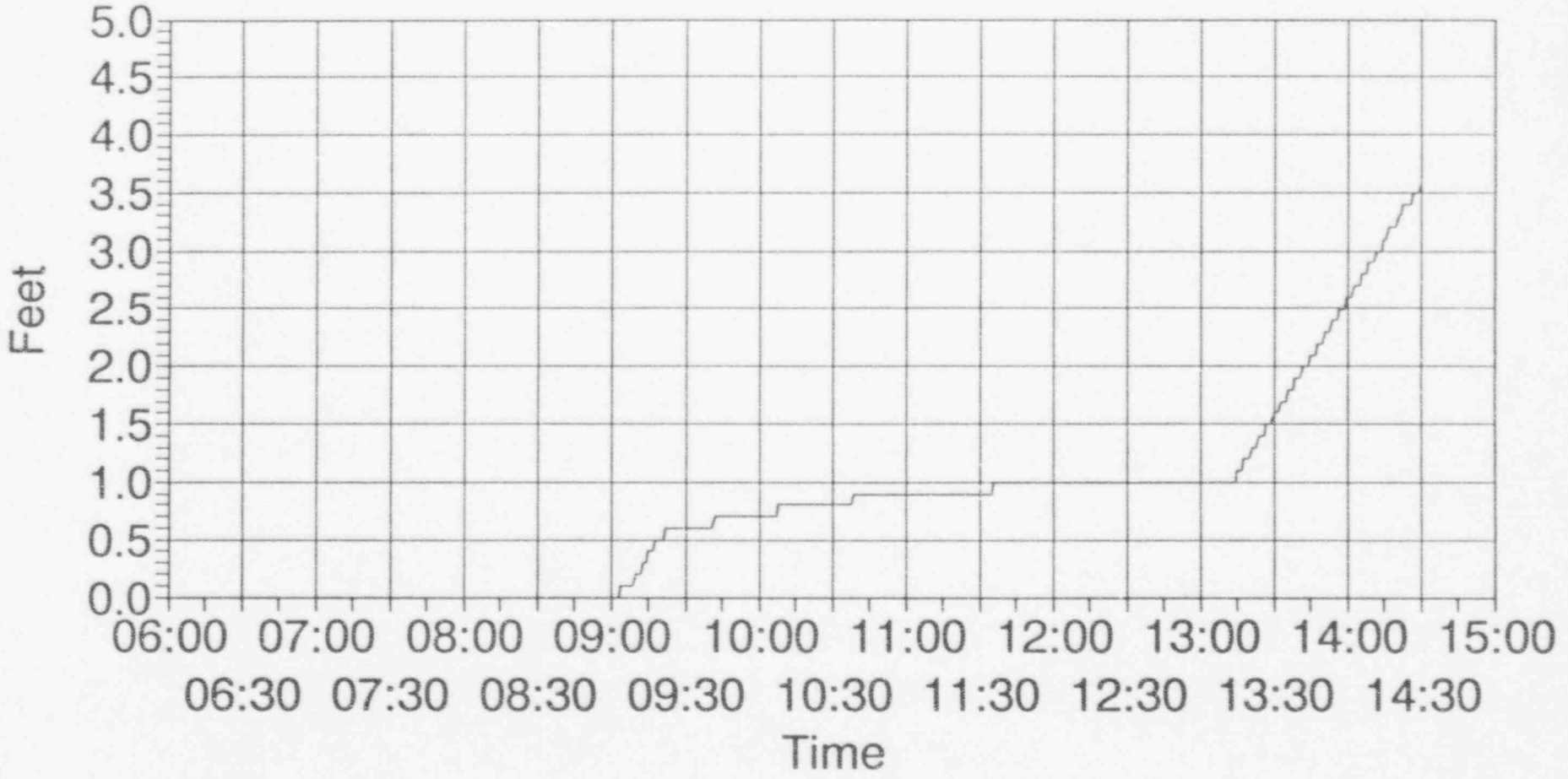


ECCS-DAT.WQ1

FINAL DRAFT

J. M. Farley Nuclear Plant

1990 Emergency Drill Data

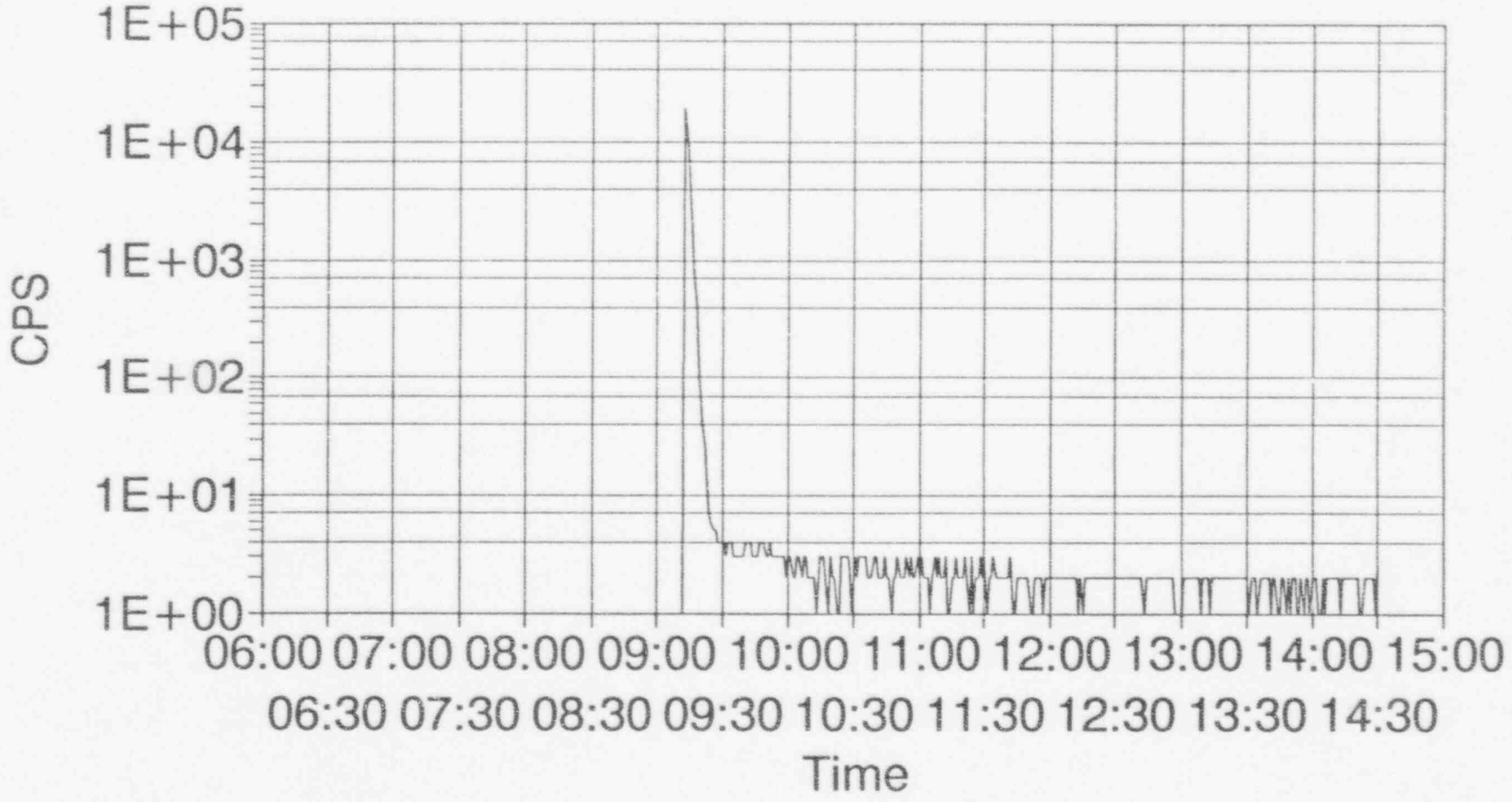


ECCS-DAT.WQ1

FINAL DRAFT

J. M. Farley Nuclear Plant

1990 Emergency Drill Data



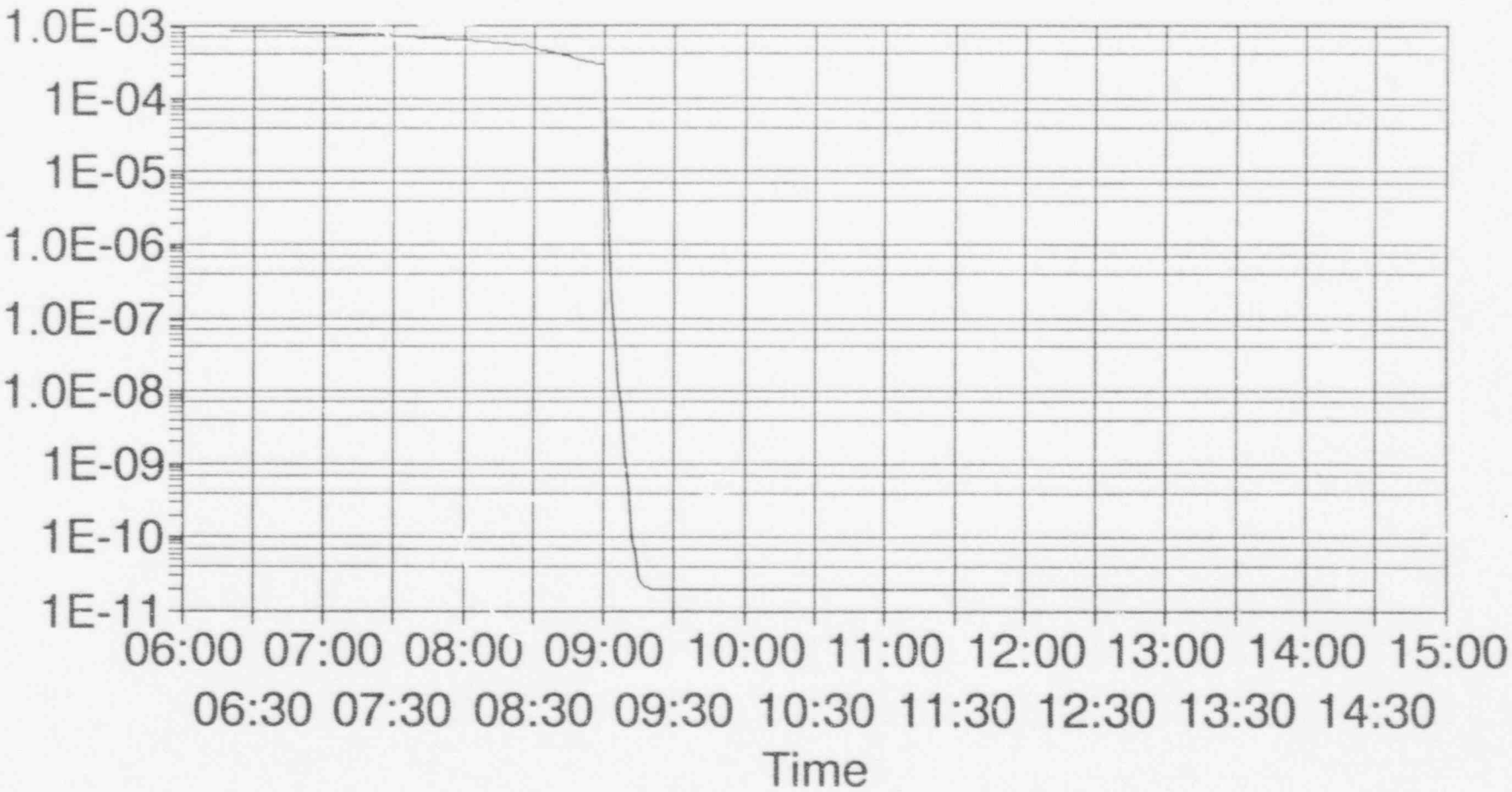
NIS,NI-31

NIS-DAT.WQ1

FINAL DRAFT

J. M. Farley Nuclear Plant

1990 Emergency Drill Data

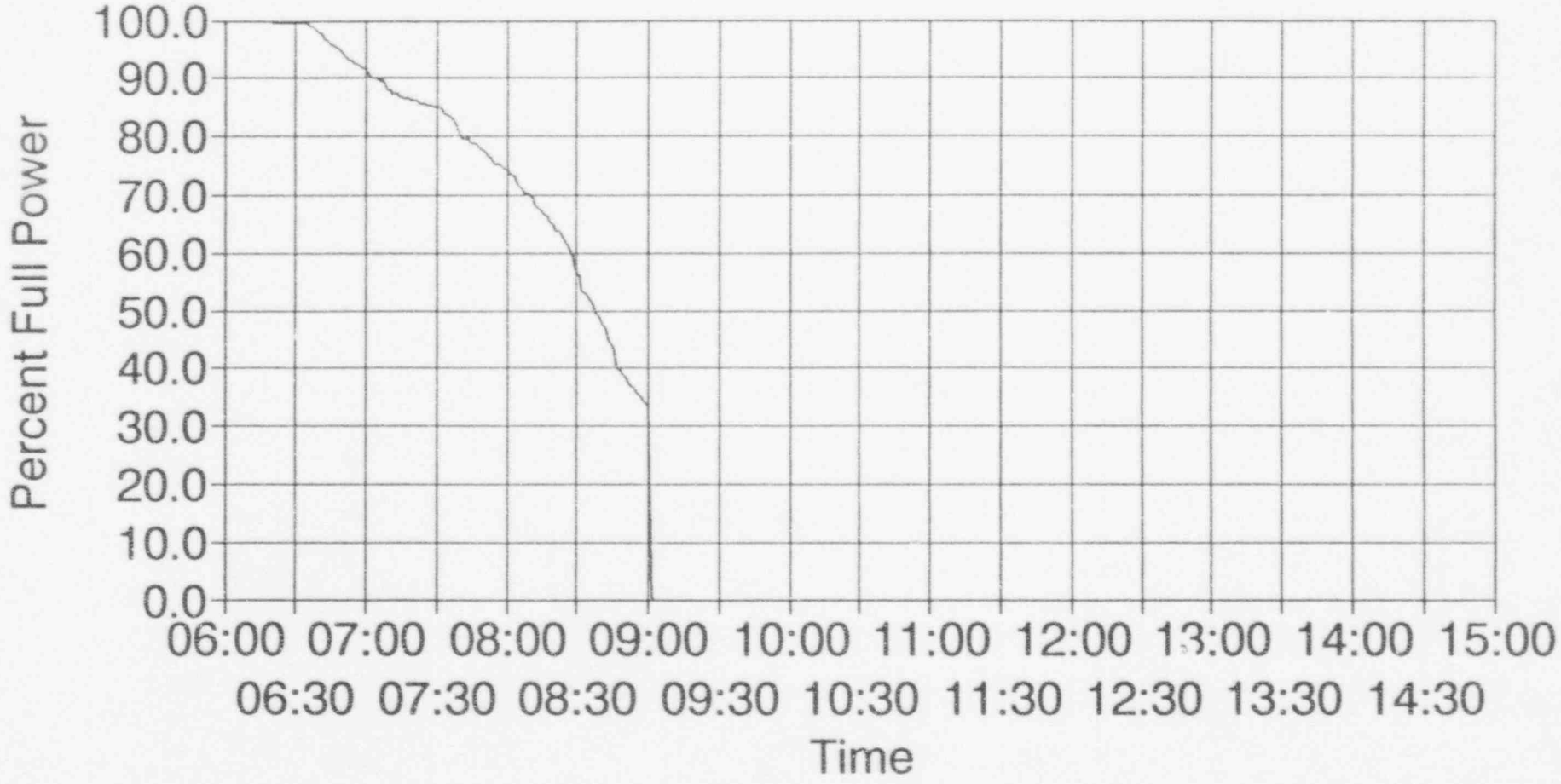


NIS-DAT.WQ1

FINAL DRAFT

J. M. Farley Nuclear Plant

1990 Emergency Drill Data

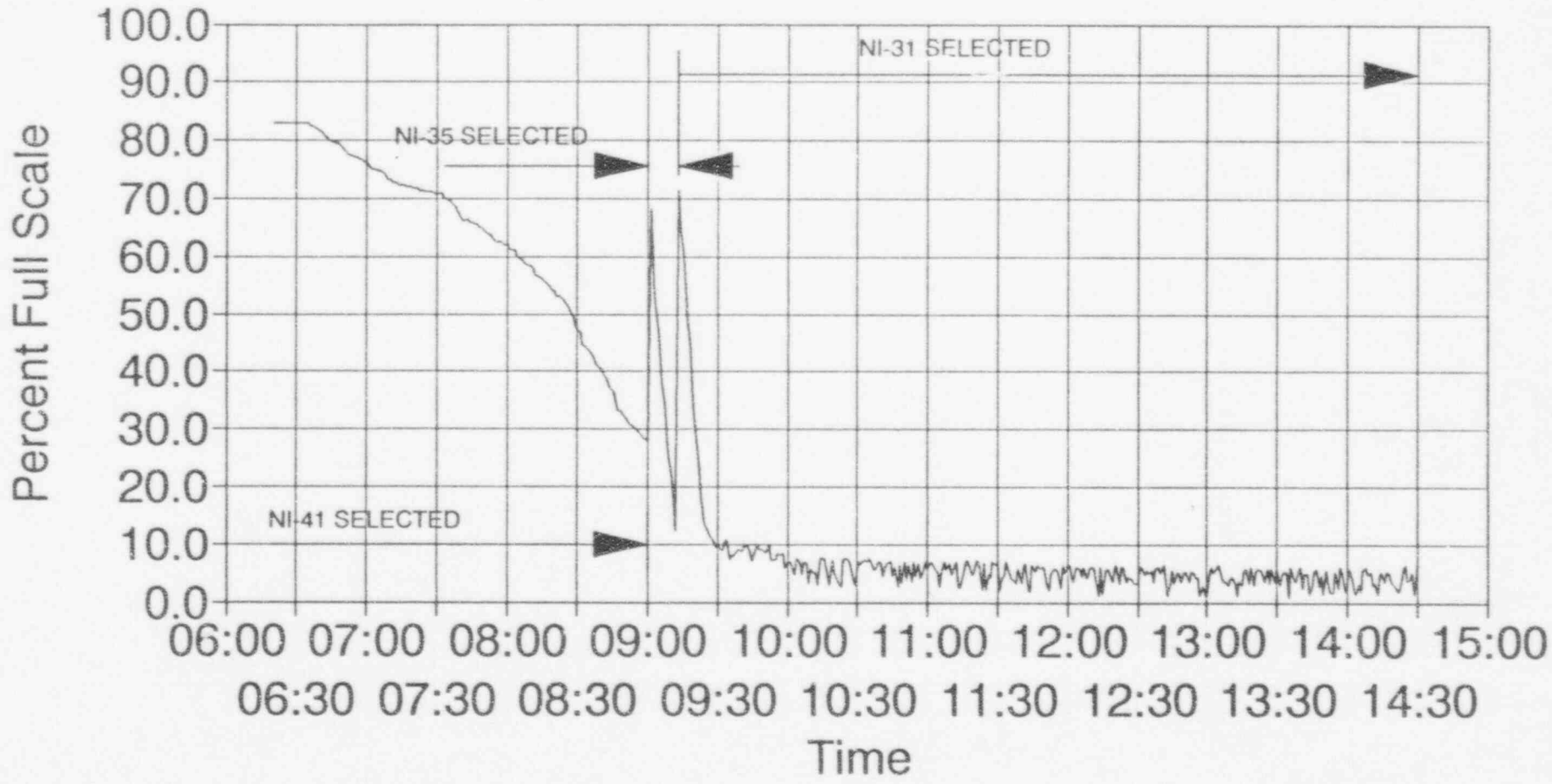


NIS-DAT.WQ1

FINAL DRAFT

J. M. Farley Nuclear Plant

1990 Emergency Drill Data



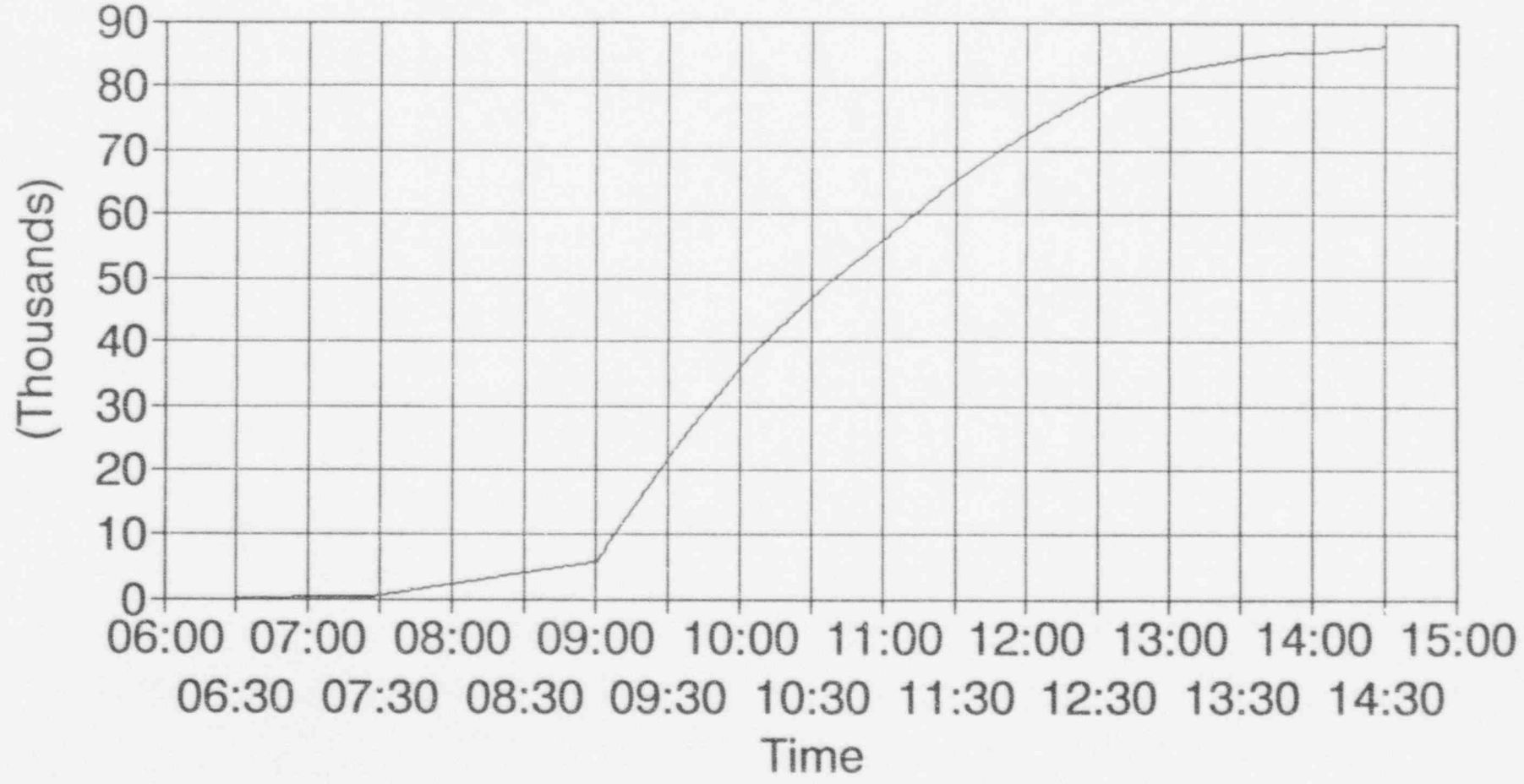
NIS,NR-45

NIS-DAT.WQ1

FINAL DRAFT

J. M. Farley Nuclear Plant

1990 Emergency Drill Data

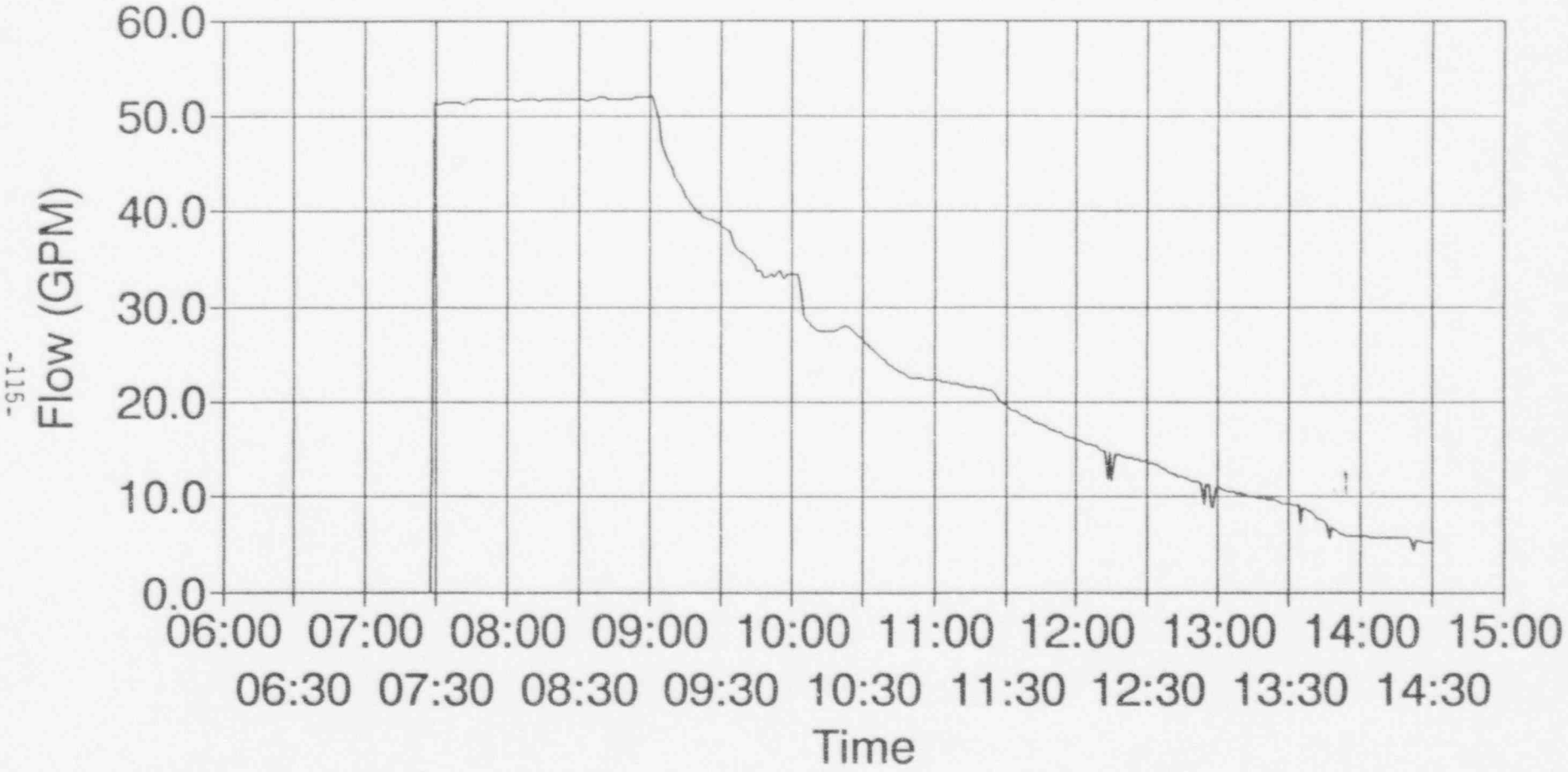


LEAK-DAT.WQ1

FINAL DRAFT

J. M. Farley Nuclear Plant

1990 Emergency Drill Data

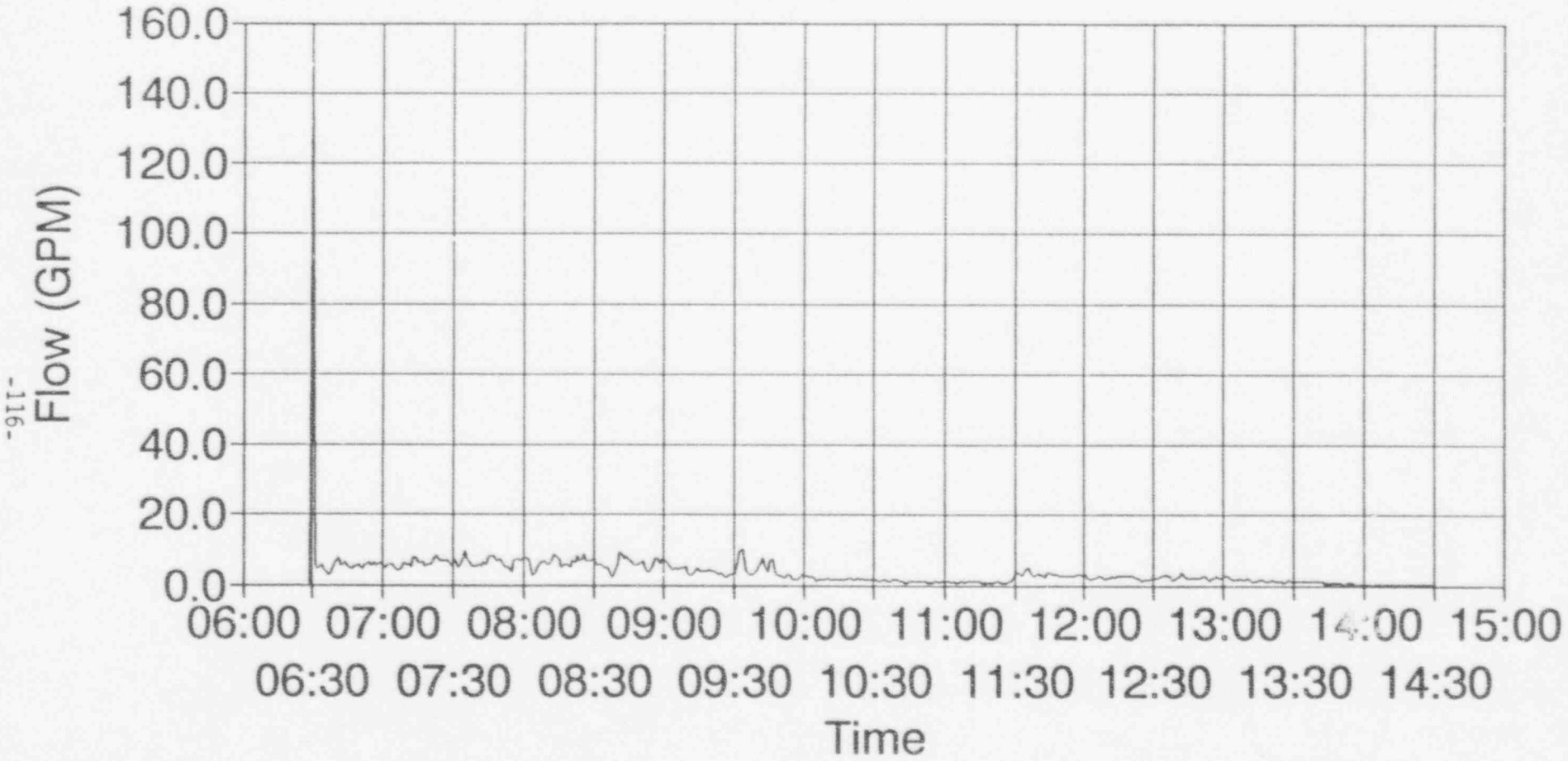


LEAK-DAT.WQ1

FINAL DRAFT

J. M. Farley Nuclear Plant

1990 Emergency Drill Data

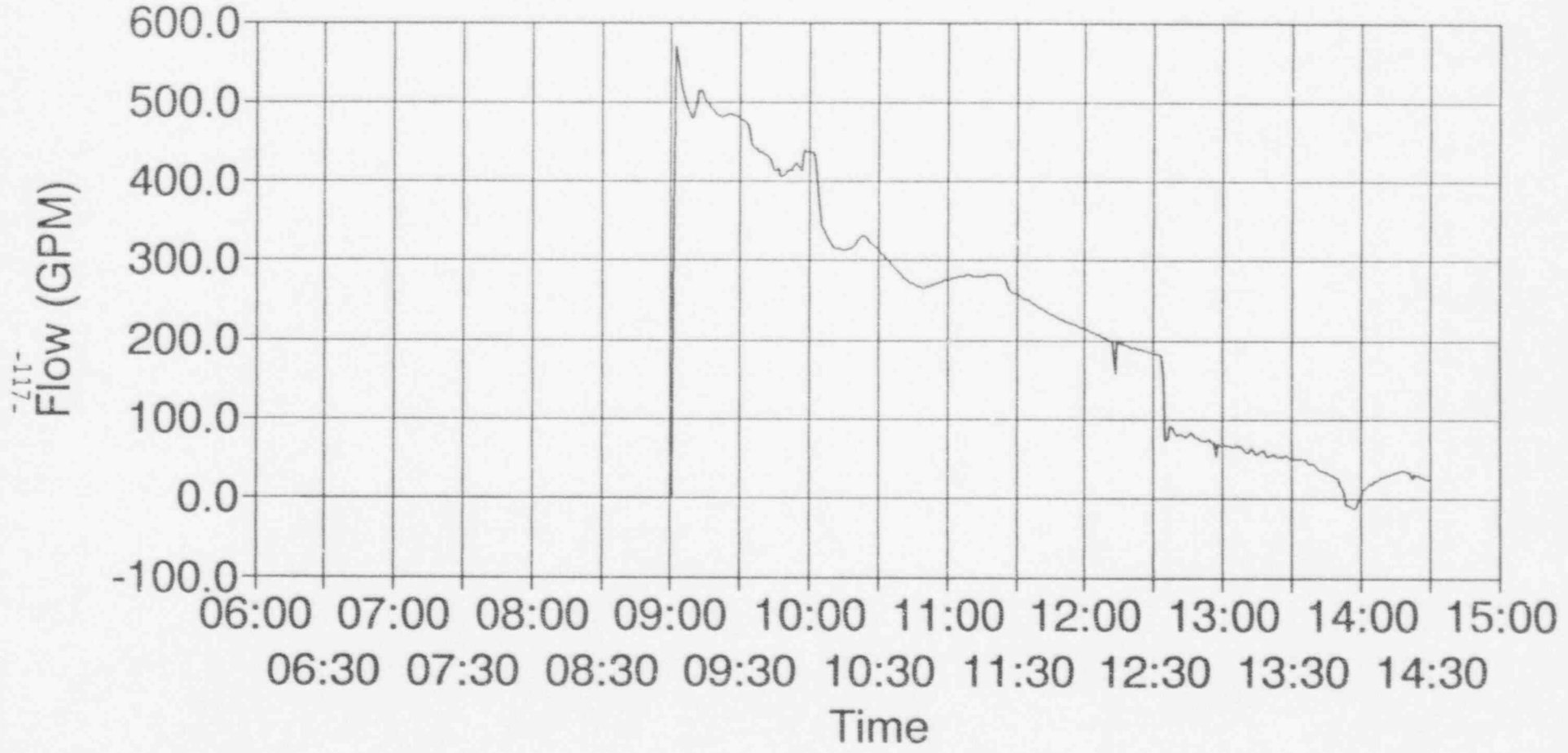


LEAK-DAT.WQ1

FINAL DRAFT

J. M. Farley Nuclear Plant

1990 Emergency Drill Data

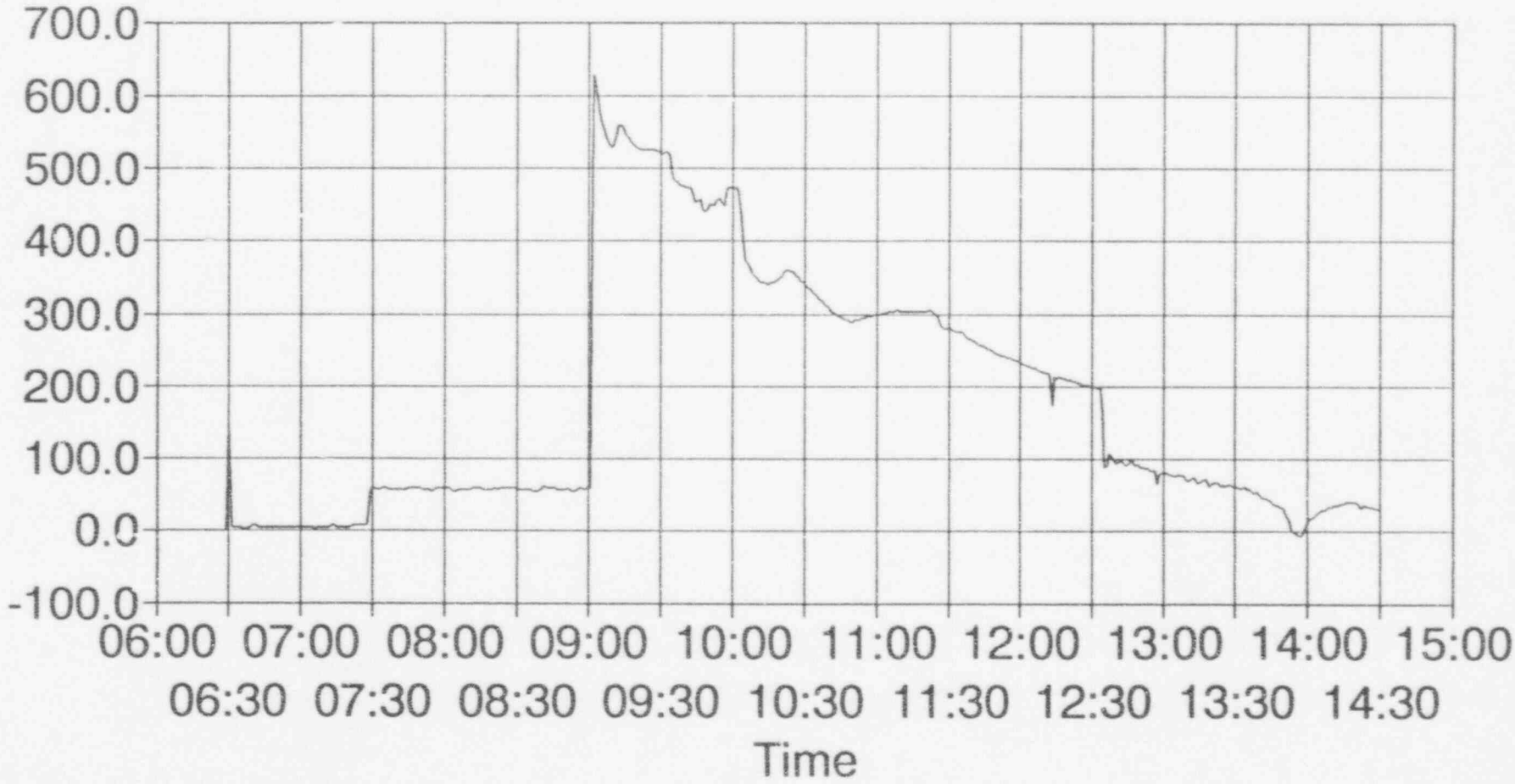


LEAK-DAT.WQ1

FINAL DRAFT

J. M. Farley Nuclear Plant

1990 Emergency Drill Data



LEAK,Total Flow

LEAK-DAT.WQ1

FINAL DRAFT

RADIATION MONITOR READINGS

These data sheets are designed to match RMS panels/racks both inside and outside of the control room. Where BKGD reading is given, the actual control room indication will be the numerical reading.

TIME	UNITS	615	630	645	700	715	730	745	800	815	830	845
RE-2	R/HR	6.55E-02	6.82E-02	6.90E-02	7.27E-02	7.50E-02	8.50E-02	1.00E+00	3.50E+00	1.00E+01	1.00E+01	1.00E+01
RE-4	R/HR	1.39E-02	1.31E-02	1.42E-02	1.38E-02	1.40E-02	1.30E-02	1.38E-02	6.00E-01	1.12E+00	2.30E+00	3.50E+00
RE-6	R/HR	1.60E-02	1.54E-02	1.51E-02	1.62E-02	1.65E-02	1.54E-02	1.60E-02	2.50E-01	5.24E-01	8.33E-01	2.10E+00
RE-7	R/HR	2.00E-02	2.00E-02	2.10E-02	2.30E-02	2.30E-02	6.50E-02	1.25E+00	5.25E+00	1.00E+01	1.00E+01	1.00E+01
RE-10	CPM	1.51E+02	1.68E+02	1.64E+02	1.55E+02	1.48E+02	1.56E+02	1.52E+02	1.56E+02	1.43E+02	1.54E+02	1.65E+02
RE-11	CPM	3.00E+03	2.70E+03	3.10E+03	3.18E+03	3.05E+03	2.00E+04	5.20E+05	8.80E+05	1.00E+06	1.00E+06	1.00E+06
RE-12	CPM	1.66E+02	1.45E+02	1.73E+02	1.60E+02	1.80E+02	3.50E+04	8.60E+05	1.00E+06	1.00E+06	1.00E+06	1.00E+06
RE-14	CPM	1.80E+03	1.75E+03	1.60E+03	1.73E+03	1.70E+03	1.00E+05	2.20E+03	1.85E+03	1.80E+03	1.75E+03	1.85E+03
RE-19	CPM	7.50E+01	6.50E+01	7.30E+01	7.10E+01	6.70E+01	7.30E+01	8.50E+01	7.10E+01	6.30E+01	6.40E+01	8.30E+01
RE-21	CPM	2.90E+02	3.00E+02	3.12E+02	2.75E+02	3.20E+02	8.00E+02	4.10E+02	3.70E+02	3.20E+02	3.75E+02	3.17E+02
RE-22	CPM	5.50E+01	4.40E+01	4.90E+01	4.10E+01	5.60E+01	1.50E+02	9.00E+01	5.20E+01	4.80E+01	4.50E+01	5.30E+01
RE-23A	CPM	7.20E+01	6.80E+01	7.40E+01	6.90E+01	7.00E+01	7.30E+01	6.50E+01	7.50E+01	7.30E+01	7.10E+01	6.70E+01
RE-23B	CPM	9.80E+01	9.90E+01	1.02E+02	1.06E+02	1.04E+02	9.70E+01	9.40E+01	1.03E+02	1.01E+02	9.80E+01	9.20E+01
RE-24A	CPM	2.21E+02	3.24E+02	2.34E+02	2.87E+02	2.80E+02	1.00E+06	9.50E+05	6.50E+04	9.40E+03	4.50E+02	2.20E+02
RE-24B	CPM	2.45E+02	2.98E+02	3.20E+02	3.00E+02	2.67E+02	1.00E+06	9.10E+05	6.90E+04	9.70E+03	3.99E+02	2.10E+02
RE-27A	R/HR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E+00	1.50E+01	2.70E+01	3.80E+01
RE-27B	R/HR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E+00	1.70E+01	3.10E+01	3.70E+01

TIME	UNITS	900	915	930	945	1000	1015	1030	1045	1100	1115	1130
RE-2	R/HR	1.00E+01	1.00E+01	1.00E+01	1.00E+01	1.00E+01	1.00E+01	1.00E+01	1.00E+01	1.00E+01	1.00E+01	1.00E+01
RE-4	R/HR	2.50E-02	1.50E-02	1.00E-02	9.00E-03	8.00E-03	6.90E-03	5.80E-03	2.90E-03	1.90E-03	1.30E-03	1.39E-03
RE-6	R/HR	3.20E+00	2.92E+00	2.13E+00	2.07E+00	1.92E+00	1.83E+00	1.66E+00	1.50E+00	1.45E+00	1.40E+00	1.36E+00
RE-7	R/HR	1.00E+01	1.00E+01	1.00E+01	1.00E+01	1.00E+01	1.00E+01	1.00E+01	1.00E+01	1.00E+01	1.00E+01	1.00E+01
RE-10	CPM	1.62E+02	1.41E+02	1.53E+02	1.48E+02	1.60E+02	1.65E+02	4.50E+03	6.20E+05	1.00E+06	1.00E+06	1.00E+06
RE-11	CPM	1.00E+06	1.77E+05	3.13E+04	5.54E+03	9.81E+02	6.19E+02	5.42E+02	4.83E+02	5.00E+02	4.78E+02	4.86E+02
RE-12	CPM	1.00E+06	6.31E+05	3.98E+05	2.50E+05	1.59E+05	1.00E+05	6.31E+04	3.98E+04	2.51E+04	1.59E+04	1.10E+04
RE-14	CPM	1.81E+03	1.82E+03	1.84E+03	1.80E+03	1.85E+03	1.82E+03	2.00E+04	3.50E+05	1.00E+06	1.00E+06	1.00E+06
RE-19	CPM	1.00E+06	9.90E+05	8.88E+05	7.31E+05	5.98E+05	4.73E+05	3.81E+05	3.33E+05	2.82E+05	2.40E+05	2.01E+05
RE-21	CPM	3.98E+02	3.64E+02	3.21E+02	3.82E+02	3.73E+02	3.45E+02	1.20E+03	2.30E+03	7.00E+03	7.50E+03	7.30E+03
RE-22	CPM	5.10E+01	4.10E+01	6.10E+01	4.90E+01	5.20E+01	5.50E+01	4.50E+02	6.76E+02	8.50E+02	1.12E+03	1.50E+03
RE-23A	CPM	7.00E+02	1.00E+06	1.00E+06	1.00E+06	1.00E+06	1.00E+06	1.00E+06	9.90E+05	8.88E+05	7.31E+05	5.98E+05
RE-23B	CPM	1.10E+03	1.80E+03	1.50E+03	1.30E+03	1.10E+03	9.32E+02	8.11E+02	6.73E+02	5.75E+02	4.84E+02	4.10E+02
RE-24A	CPM	1.50E+02	1.64E+02	1.74E+02	1.64E+02	1.64E+02	1.61E+02	1.53E+02	1.64E+02	1.71E+02	1.64E+02	1.75E+02
RE-24B	CPM	1.90E+02	1.76E+02	1.58E+02	1.67E+02	1.76E+02	1.64E+02	1.48E+02	1.67E+02	1.75E+02	1.57E+02	1.56E+02
RE-27A	R/HR	5.50E+01	4.00E+01	3.70E+01	4.10E+01	4.30E+01	4.40E+01	4.30E+01	4.24E+01	4.19E+01	3.50E+01	3.39E+01
RE-27B	R/HR	5.00E+01	3.90E+01	3.60E+01	4.00E+01	4.30E+01	4.30E+01	4.20E+01	4.14E+01	4.09E+01	3.40E+01	3.38E+01

TIME	UNITS	1145	1200	1215	1230	1245	1300	1315	1330	1345	1400	1415
RE-2	R/HR	1.00E+01	1.00E+01	1.00E+01	1.00E+01	1.00E+01	1.00E+01	1.00E+01	1.00E+01	1.00E+01	1.00E+01	1.00E+01
RE-4	R/HR	1.31E-03	1.42E-03	1.38E-03	1.40E-03	1.30E-03	1.38E-03	1.39E-03	1.31E-03	1.42E-03	1.38E-03	1.40E-03
RE-6	R/HR	1.31E+00	1.29E+00	1.24E+00	1.17E+00	1.11E+00	1.06E+00	9.12E-01	7.50E-01	6.40E-01	5.10E-01	4.80E-01
RE-7	R/HR	1.00E+01	1.00E+01	1.00E+01	1.00E+01	1.00E+01	1.00E+01	1.00E+01	1.00E+01	1.00E+01	1.00E+01	1.00E+01
RE-10	CPM	1.00E+06	1.00E+06	1.00E+06	1.00E+06	1.00E+06	1.00E+06	1.00E+06	1.00E+06	1.00E+06	1.00E+06	9.80E+05
RE-11	CPM	5.32E+02	5.12E+02	4.80E+02	4.75E+02	4.21E+02	4.85E+02	4.19E+02	4.35E+02	4.01E+02	3.98E+02	4.36E+02
RE-12	CPM	6.34E+03	3.54E+03	2.38E+03	1.41E+03	8.88E+02	5.10E+02	3.36E+02	2.00E+02	1.75E+02	1.50E+02	1.60E+02
RE-14	CPM	1.00E+06	1.00E+06	1.00E+06	1.00E+06	1.00E+06	1.00E+06	1.00E+06	1.00E+06	4.00E+05	9.70E+04	5.00E+03
RE-19	CPM	1.84E+05	1.52E+05	1.21E+05	1.00E+05	9.15E+04	8.73E+04	7.74E+04	6.86E+04	6.08E+04	5.39E+04	4.78E+04
RE-21	CPM	7.98E+03	8.30E+03	7.50E+03	7.90E+03	7.78E+03	7.30E+03	7.98E+03	7.70E+03	4.10E+03	2.70E+03	1.00E+03
RE-22	CPM	1.40E+03	1.52E+03	1.70E+03	1.72E+03	1.70E+03	1.71E+03	1.80E+03	1.70E+03	4.23E+02	2.20E+02	8.40E+01
RE-23A	CPM	4.73E+05	3.81E+05	3.33E+05	2.82E+05	2.40E+05	2.01E+05	1.84E+05	1.52E+05	1.21E+05	1.00E+05	9.15E+04
RE-23B	CPM	3.52E+02	3.04E+02	2.54E+02	2.10E+02	1.83E+02	1.59E+02	1.34E+02	1.32E+02	1.31E+02	1.30E+02	1.25E+02
RE-24A	CPM	1.61E+02	1.68E+02	1.77E+02	1.65E+02	1.48E+02	1.72E+02	1.65E+02	1.54E+02	1.60E+02	1.87E+02	1.78E+02
RE-24B	CPM	1.64E+02	1.72E+02	1.81E+02	1.62E+02	1.52E+02	1.76E+02	1.47E+02	1.53E+02	1.63E+02	1.67E+02	1.82E+02
RE-27A	R/HR	3.26E+01	3.14E+01	2.89E+01	2.57E+01	2.29E+01	2.04E+01	1.50E+01	1.29E+01	1.09E+01	1.06E+01	9.40E+00
RE-27B	R/HR	3.12E+01	3.08E+01	2.75E+01	2.45E+01	2.19E+01	2.02E+01	1.48E+01	1.21E+01	1.01E+01	1.05E+01	9.50E+00

TIME	UNITS	1430	1445
RE-2	R/HR	1.00E+01	1.00E+01
RE-4	R/HR	1.30E-03	1.38E-03
RE-6	R/HR	4.20E-01	3.80E-01
RE-7	R/HR	1.00E+01	1.00E+01
RE-10	CPM	6.86E+05	4.81E+05
RE-11	CPM	3.87E+02	4.00E+02
RE-12	CPM	1.50E+02	1.61E+02
RE-14	CPM	2.00E+03	2.00E+03
RE-19	CPM	4.24E+04	3.76E+04
RE-21	CPM	4.00E+02	3.50E+02
RE-22	CPM	6.40E+01	5.70E+01
RE-23A	CPM	8.73E+04	7.74E+04
RE-23B	CPM	1.20E+02	1.20E+02
RE-24A	CPM	1.62E+02	1.54E+02
RE-24B	CPM	1.65E+02	1.57E+02
RE-27A	R/HR	8.41E+00	7.50E+00
RE-27B	R/HR	8.10E+00	7.90E+00

TURBINE BLDG. SJAE MONITORS

	RE-15A	RE-15B	RE-15C
TIME	CPM	mR/hr	R/hr
615	4.17E+01	1.96E-02	1.54E-02
630	5.30E+01	1.55E-02	1.67E-02
645	4.91E+01	1.96E-02	1.74E-02
700	5.29E+01	1.73E-02	1.80E-02
715	4.55E+01	1.71E-02	1.70E-02
730	5.82E+01	1.89E-02	2.00E-02
745	4.99E+01	1.51E-02	1.79E-02
800	5.46E+01	1.81E-02	1.84E-02
815	4.36E+01	1.70E-02	1.79E-02
830	4.68E+01	1.67E-02	1.85E-02
845	4.91E+01	1.66E-02	1.83E-02
900	4.36E+01	1.88E-02	1.82E-02
902	1.50E+02	1.89E-02	1.71E-02
905	1.70E+02	1.76E-02	1.89E-02
915	1.47E+02	1.65E-02	1.80E-02
930	1.20E+02	1.73E-02	1.96E-02
945	8.90E+01	1.55E-02	1.82E-02
1000	7.60E+01	1.50E-02	1.79E-02
1015	6.20E+01	1.67E-02	1.78E-02
1030	5.50E+01	1.78E-02	1.97E-02
1045	5.45E+01	1.56E-02	1.76E-02
1100	4.70E+01	1.67E-02	1.99E-02
1115	5.09E+01	1.91E-02	1.52E-02
1130	4.15E+01	1.86E-02	1.54E-02
1145	4.36E+01	1.85E-02	1.57E-02
1200	5.12E+01	1.58E-02	1.72E-02
1215	4.29E+01	1.70E-02	1.75E-02
1230	4.62E+01	1.55E-02	1.84E-02
1245	5.36E+01	1.68E-02	1.92E-02
1300	4.87E+01	1.95E-02	1.73E-02
1315	4.07E+01	1.80E-02	1.66E-02
1330	5.41E+01	1.51E-02	1.85E-02
1345	5.12E+01	1.68E-02	1.64E-02
1400	5.04E+01	1.66E-02	1.98E-02
1415	5.83E+01	1.79E-02	1.68E-02
1430	5.93E+01	1.68E-02	1.60E-02
1445	5.00E+01	1.75E-02	1.59E-02

R-29B Plant Vent Stack

High Range Monitoring System

	uCi/ml			uCi/ml	
TIME	SPING NG AVG	SPING I2 AVG	TIME	SPING NG AVG	SPING I2 AVG
6:30	1.34 E-6	7.58 E-11	11.30	3.24 E-2	5.89 E-8
6:45	1.35 E-6	7.59 E-11	11.45	3.16 E-2	5.87 E-8
7:00	1.34 E-6	7.58 E-11	12.00	2.32 E-2	4.38 E-8
7:15	1.34 E-6	7.58 E-11	12.15	2.27 E-2	4.37 E-8
7.30	1.35 E-6	7.58 E-11	12.30	2.22 E-2	4.36 E-8
7.45	8.38 E-6	9.22 E-11	12.45	2.18 E-2	4.34 E-8
8.00	1.37 E-7	7.60 E-12	13.00	2.14 E-2	4.33 E-8
8.15	1.57 E-8	2.22 E-14	13.15	1.74 E-3	3.75 E-9
8.30	4.21 E-8	5.96 E-14	13.30	6.86 E-4	1.50 E-9
8.45	6.54 E-8	9.25 E-14	13.45	6.78 E-6	1.50 E-11
9.00	8.54 E-8	1.21 E-13	14.00	6.70 E-7	1.43 E-12
9.15	5.30 E-7	7.50 E-13	14.15	6.61 E-7	1.43 E-12
9.30	8.76 E-7	1.28 E-12	14.30	6.53 E-7	1.43 E-12
9.45	9.39 E-7	1.42 E-12	14.45	6.46 E-7	1.43 E-12
10.00	9.41 E-7	1.47 E-12			
10.15	9.23 E-7	1.48 E-12			
10.30	9.01 E-7	1.49 E-12			
10.45	1.75 E-2	2.97 E-8			
11.00	3.41 E-2	5.93 E-8			
11.15	3.32 E-2	5.91 E-8			

CONTROL ROOM AREA

ALL READINGS IN R/HR

TIME	RE-1	RE-2	RE-3	RE-4	RE-5	RE-6	RE-7	RE-8
615	BKGRD	6.55E-02	BKGRD	1.39E-02	BKGRD	1.60E-02	2.00E-02	BKGRD
630	BKGRD	6.82E-02	BKGRD	1.31E-02	BKGRD	1.54E-02	2.80E-02	BKGRD
645	BKGRD	6.90E-02	BKGRD	1.42E-02	BKGRD	1.51E-02	2.10E-02	BKGRD
700	BKGRD	7.27E-02	BKGRD	1.38E-02	BKGRD	1.62E-02	2.30E-02	BKGRD
715	BKGRD	7.50E-02	BKGRD	1.40E-02	BKGRD	1.65E-02	2.30E-02	BKGRD
730	BKGRD	8.50E-02	BKGRD	1.30E-02	BKGRD	1.54E-02	6.50E-02	BKGRD
745	BKGRD	1.00E+00	BKGRD	1.38E-02	BKGRD	1.60E-02	1.25E+00	BKGRD
800	BKGRD	3.50E+00	BKGRD	6.00E-01	BKGRD	2.50E-01	5.25E+00	BKGRD
815	BKGRD	1.00E+01	BKGRD	1.12E+00	BKGRD	5.24E-01	1.00E+01	BKGRD
830	BKGRD	1.00E+01	BKGRD	2.30E+00	BKGRD	8.33E-01	1.00E+01	BKGRD
845	BKGRD	1.00E+01	BKGRD	3.50E+00	BKGRD	2.10E+00	1.00E+01	BKGRD
900	BKGRD	1.00E+01	BKGRD	2.50E-02	BKGRD	3.20E+00	1.00E+01	BKGRD
915	BKGRD	1.00E+01	BKGRD	1.50E-02	BKGRD	2.92E+00	1.00E+01	BKGRD
930	BKGRD	1.00E+01	BKGRD	1.00E-02	BKGRD	2.13E+00	1.00E+01	BKGRD
945	BKGRD	1.00E+01	BKGRD	9.00E-03	BKGRD	2.07E+00	1.00E+01	BKGRD
1000	BKGRD	1.00E+01	BKGRD	8.00E-03	BKGRD	1.92E+00	1.00E+01	BKGRD
1015	BKGRD	1.00E+01	BKGRD	6.90E-03	BKGRD	1.83E+00	1.00E+01	BKGRD
1030	BKGRD	1.00E+01	BKGRD	5.80E-03	BKGRD	1.66E+00	1.00E+01	BKGRD
1045	BKGRD	1.00E+01	BKGRD	2.90E-03	BKGRD	1.50E+00	1.00E+01	BKGRD
1100	BKGRD	1.00E+01	BKGRD	1.90E-03	BKGRD	1.45E+00	1.00E+01	BKGRD
1115	BKGRD	1.00E+01	BKGRD	1.30E-03	BKGRD	1.40E+00	1.00E+01	BKGRD
1130	BKGRD	1.00E+01	BKGRD	1.39E-03	BKGRD	1.36E+00	1.00E+01	BKGRD
1145	BKGRD	1.00E+01	BKGRD	1.31E-03	BKGRD	1.31E+00	1.00E+01	BKGRD
1200	BKGRD	1.00E+01	BKGRD	1.42E-03	BKGRD	1.29E+00	1.00E+01	BKGRD
1215	BKGRD	1.00E+01	BKGRD	1.38E-03	BKGRD	1.24E+00	1.00E+01	BKGRD
1230	BKGRD	1.00E+01	BKGRD	1.40E-03	BKGRD	1.17E+00	1.00E+01	BKGRD
1245	BKGRD	1.00E+01	BKGRD	1.30E-03	BKGRD	1.11E+00	1.00E+01	BKGRD
1300	BKGRD	1.00E+01	BKGRD	1.38E-03	BKGRD	1.06E+00	1.00E+01	BKGRD
1315	BKGRD	1.00E+01	BKGRD	1.39E-03	BKGRD	9.12E-01	1.00E+01	BKGRD
1330	BKGRD	1.00E+01	BKGRD	1.31E-03	BKGRD	7.50E-01	1.00E+01	BKGRD
1345	BKGRD	1.00E+01	BKGRD	1.42E-03	BKGRD	6.40E-01	1.00E+01	BKGRD
1400	BKGRD	1.00E+01	BKGRD	1.38E-03	BKGRD	5.10E-01	1.00E+01	BKGRD
1415	BKGRD	1.00E+01	BKGRD	1.40E-03	BKGRD	4.80E-01	1.00E+01	BKGRD
1430	BKGRD	1.00E+01	BKGRD	1.30E-03	BKGRD	4.20E-01	1.00E+01	BKGRD
1445	BKGRD	1.00E+01	BKGRD	1.38E-03	BKGRD	3.80E-01	1.00E+01	BKGRD

CONTROL ROOM AREA

ALL READINGS IN CPM

TIME	RE-17A	RE-17B	RE-20A	RE-20B	RE-21	RE-22	RE-23A	RE-23B	RE-26B
615	BKGRD	BKGRD	BKGRD	BKGRD	2.90E+02	5.50E+01	7.20E+01	9.80E+01	BKGRD
630	BKGRD	BKGRD	BKGRD	BKGRD	3.00E+02	4.40E+01	6.80E+01	9.90E+01	BKGRD
645	BKGRD	BKGRD	BKGRD	BKGRD	3.12E+02	4.90E+01	7.40E+01	1.02E+02	BKGRD
700	BKGRD	BKGRD	BKGRD	BKGRD	2.75E+02	4.10E+01	6.90E+01	1.06E+02	BKGRD
715	BKGRD	BKGRD	BKGRD	BKGRD	3.20E+02	5.60E+01	7.00E+01	1.04E+02	BKGRD
730	BKGRD	BKGRD	BKGRD	BKGRD	8.00E+02	1.50E+02	7.30E+01	9.70E+01	BKGRD
745	BKGRD	BKGRD	BKGRD	BKGRD	4.10E+02	9.00E+01	6.50E+01	9.40E+01	BKGRD
800	BKGRD	BKGRD	BKGRD	BKGRD	3.70E+02	5.20E+01	7.50E+01	1.03E+02	BKGRD
815	BKGRD	BKGRD	BKGRD	BKGRD	3.20E+02	4.80E+01	7.30E+01	1.01E+02	BKGRD
830	BKGRD	BKGRD	BKGRD	BKGRD	3.75E+02	4.50E+01	7.10E+01	9.80E+01	BKGRD
845	BKGRD	BKGRD	BKGRD	BKGRD	3.17E+02	5.30E+01	6.70E+01	9.20E+01	BKGRD
900	BKGRD	BKGRD	BKGRD	BKGRD	3.98E+02	5.10E+01	7.00E+02	1.10E+03	BKGRD
915	BKGRD	BKGRD	BKGRD	BKGRD	3.64E+02	4.10E+01	1.00E+06	1.80E+03	BKGRD
930	BKGRD	BKGRD	BKGRD	BKGRD	3.21E+02	6.10E+01	1.00E+06	1.50E+03	BKGRD
945	BKGRD	BKGRD	BKGRD	BKGRD	3.82E+02	4.90E+01	1.00E+06	1.30E+03	BKGRD
1000	BKGRD	BKGRD	BKGRD	BKGRD	3.73E+02	5.20E+01	1.00E+06	1.10E+03	BKGRD
1015	BKGRD	BKGRD	BKGRD	BKGRD	3.45E+02	5.50E+01	1.00E+06	9.32E+02	BKGRD
1030	BKGRD	BKGRD	BKGRD	BKGRD	1.20E+03	4.50E+02	1.00E+06	8.11E+02	BKGRD
1045	BKGRD	BKGRD	BKGRD	BKGRD	2.30E+03	6.76E+02	9.90E+05	6.73E+02	BKGRD
1100	BKGRD	BKGRD	BKGRD	BKGRD	7.00E+03	8.50E+02	8.88E+05	5.75E+02	BKGRD
1115	BKGRD	BKGRD	BKGRD	BKGRD	7.50E+03	1.12E+03	7.31E+05	4.84E+02	BKGRD
1130	BKGRD	BKGRD	BKGRD	BKGRD	7.30E+03	1.50E+03	5.98E+05	4.10E+02	BKGRD
1145	BKGRD	BKGRD	BKGRD	BKGRD	7.98E+03	1.40E+03	4.73E+05	3.52E+02	BKGRD
1200	BKGRD	BKGRD	BKGRD	BKGRD	8.30E+03	1.52E+03	3.81E+05	3.04E+02	BKGRD
1215	BKGRD	BKGRD	BKGRD	BKGRD	7.50E+03	1.70E+03	3.33E+05	2.54E+02	BKGRD
1230	BKGRD	BKGRD	BKGRD	BKGRD	7.90E+03	1.72E+03	2.82E+05	2.10E+02	BKGRD
1245	BKGRD	BKGRD	BKGRD	BKGRD	7.78E+03	1.70E+03	2.40E+05	1.83E+02	BKGRD
1300	BKGRD	BKGRD	BKGRD	BKGRD	7.30E+03	1.71E+03	2.01E+05	1.59E+02	BKGRD
1315	BKGRD	BKGRD	BKGRD	BKGRD	7.98E+03	1.80E+03	1.84E+05	1.34E+02	BKGRD
1330	BKGRD	BKGRD	BKGRD	BKGRD	7.70E+03	1.78E+03	1.52E+05	1.32E+02	BKGRD
1345	BKGRD	BKGRD	BKGRD	BKGRD	4.10E+03	4.23E+02	1.21E+05	1.31E+02	BKGRD
1400	BKGRD	BKGRD	BKGRD	BKGRD	2.70E+03	2.20E+02	1.00E+05	1.30E+02	BKGRD
1415	BKGRD	BKGRD	BKGRD	BKGRD	1.00E+03	8.40E+01	9.15E+04	1.25E+02	BKGRD
1430	BKGRD	BKGRD	BKGRD	BKGRD	4.00E+02	6.40E+01	8.73E+04	1.20E+02	BKGRD
1445	BKGRD	BKGRD	BKGRD	BKGRD	3.50E+02	5.70E+01	7.74E+04	1.20E+02	BKGRD

CONTROL ROOM AREA

ALL READINGS IN CPM

TIME	RE-10	RE-11	RE-12	RE-13	RE-14	RE-15A	RE-16	RE-18	RE-19	RE-26A
615	1.51E+02	3.00E+03	1.66E+02	BKGRD	1.80E+03	4.17E+01	BKGRD	BKGRD	7.50E+01	BKGRD
630	1.68E+02	2.70E+03	1.45E+02	BKGRD	1.75E+03	5.30E+01	BKGRD	BKGRD	6.50E+01	BKGRD
645	1.64E+02	3.10E+03	1.73E+02	BKGRD	1.60E+03	4.91E+01	BKGRD	BKGRD	7.30E+01	BKGRD
700	1.55E+02	3.18E+03	1.60E+02	BKGRD	1.73E+03	5.29E+01	BKGRD	BKGRD	7.10E+01	BKGRD
715	1.48E+02	3.05E+03	1.80E+02	BKGRD	1.70E+03	4.55E+01	BKGRD	BKGRD	6.70E+01	BKGRD
730	1.56E+02	2.00E+04	3.50E+04	BKGRD	1.00E+05	5.82E+01	BKGRD	BKGRD	7.30E+01	BKGRD
745	1.52E+02	5.20E+05	8.60E+05	BKGRD	2.20E+03	4.99E+01	BKGRD	BKGRD	8.50E+01	BKGRD
800	1.56E+02	8.80E+05	1.00E+06	BKGRD	1.85E+03	5.46E+01	BKGRD	BKGRD	7.10E+01	BKGRD
815	1.43E+02	1.00E+06	1.00E+06	BKGRD	1.80E+03	4.36E+01	BKGRD	BKGRD	6.30E+01	BKGRD
830	1.54E+02	1.00E+06	1.00E+06	BKGRD	1.75E+03	4.68E+01	BKGRD	BKGRD	6.40E+01	BKGRD
845	1.65E+02	1.00E+06	1.00E+06	BKGRD	1.85E+03	4.91E+01	BKGRD	BKGRD	8.30E+01	BKGRD
900	1.62E+02	1.00E+06	1.00E+06	BKGRD	1.81E+03	4.36E+01	BKGRD	BKGRD	1.00E+06	BKGRD
915	1.41E+02	1.77E+05	6.31E+05	BKGRD	1.82E+03	1.47E+02	BKGRD	BKGRD	9.90E+05	BKGRD
930	1.53E+02	3.13E+04	3.98E+05	BKGRD	1.84E+03	1.20E+02	BKGRD	BKGRD	8.88E+05	BKGRD
945	1.48E+02	5.54E+03	2.50E+05	BKGRD	1.80E+03	8.90E+01	BKGRD	BKGRD	7.31E+05	BKGRD
1000	1.60E+02	9.81E+02	1.59E+05	BKGRD	1.85E+03	7.60E+01	BKGRD	BKGRD	5.98E+05	BKGRD
1015	1.65E+02	6.19E+02	1.00E+05	BKGRD	1.82E+03	6.20E+01	BKGRD	BKGRD	4.73E+05	BKGRD
1030	4.50E+03	5.42E+02	6.31E+04	BKGRD	2.00E+04	5.50E+01	BKGRD	BKGRD	3.81E+05	BKGRD
1045	6.20E+05	4.83E+02	3.98E+04	BKGRD	3.50E+05	5.45E+01	BKGRD	BKGRD	3.33E+05	BKGRD
1100	1.00E+06	5.00E+02	2.51E+04	BKGRD	1.00E+06	4.70E+01	BKGRD	BKGRD	2.82E+05	BKGRD
1115	1.00E+06	4.78E+02	1.59E+04	BKGRD	1.00E+06	5.09E+01	BKGRD	BKGRD	2.40E+05	BKGRD
1130	1.00E+06	4.86E+02	1.10E+04	BKGRD	1.00E+06	4.15E+01	BKGRD	BKGRD	2.01E+05	BKGRD
1145	1.00E+06	5.32E+02	6.34E+03	BKGRD	1.00E+06	4.36E+01	BKGRD	BKGRD	1.84E+05	BKGRD
1200	1.00E+06	5.12E+02	3.54E+03	BKGRD	1.00E+06	5.12E+01	BKGRD	BKGRD	1.52E+05	BKGRD
1215	1.00E+06	4.80E+02	2.38E+03	BKGRD	1.00E+06	4.29E+01	BKGRD	BKGRD	1.21E+05	BKGRD
1230	1.00E+06	4.75E+02	1.41E+03	BKGRD	1.00E+06	4.62E+01	BKGRD	BKGRD	1.00E+05	BKGRD
1245	1.00E+06	4.21E+02	8.88E+02	BKGRD	1.00E+06	5.36E+01	BKGRD	BKGRD	9.15E+04	BKGRD
1300	1.00E+06	4.85E+02	5.10E+02	BKGRD	1.00E+06	4.87E+01	BKGRD	BKGRD	8.73E+04	BKGRD
1315	1.00E+06	4.19E+02	3.36E+02	BKGRD	1.00E+06	4.07E+01	BKGRD	BKGRD	7.74E+04	BKGRD
1330	1.00E+06	4.35E+02	2.00E+02	BKGRD	1.00E+06	5.41E+01	BKGRD	BKGRD	6.86E+04	BKGRD
1345	1.00E+06	4.01E+02	1.75E+02	BKGRD	4.00E+05	5.12E+01	BKGRD	BKGRD	6.08E+04	BKGRD
1400	1.00E+06	3.98E+02	1.50E+02	BKGRD	9.70E+04	5.04E+01	BKGRD	BKGRD	5.39E+04	BKGRD
1415	9.80E+05	4.36E+02	1.60E+02	BKGRD	5.00E+03	5.83E+01	BKGRD	BKGRD	4.78E+04	BKGRD
1430	6.86E+05	3.87E+02	1.50E+02	BKGRD	2.00E+03	5.93E+01	BKGRD	BKGRD	4.24E+04	BKGRD
1445	4.81E+05	4.00E+02	1.61E+02	BKGRD	2.00E+03	5.00E+01	BKGRD	BKGRD	3.76E+04	BKGRD

BOP AREA

RE-24A & B READINGS IN CPM
RE-25A & B READINGS IN CPM
RE-27A & B READINGS IN R/hr

TIME	RE-24A	RE-24B	RE-25A	RE-25B	RE-27A	RE-27B
615	2.21E+02	2.45E+02	BKGRD	BKGRD	0.00E+00	0.00E+00
630	3.24E+02	2.98E+02	BKGRD	BKGRD	0.00E+00	0.00E+00
645	2.34E+02	3.20E+02	BKGRD	BKGRD	0.00E+00	0.00E+00
700	2.87E+02	3.00E+02	BKGRD	BKGRD	0.00E+00	0.00E+00
715	2.80E+02	2.67E+02	BKGRD	BKGRD	0.00E+00	0.00E+00
730	1.00E+06	1.00E+06	BKGRD	BKGRD	0.00E+00	0.00E+00
745	9.50E+05	9.10E+05	BKGRD	BKGRD	0.00E+00	0.00E+00
800	6.50E+04	6.90E+04	BKGRD	BKGRD	2.00E+00	2.00E+00
815	9.40E+03	9.70E+03	BKGRD	BKGRD	1.50E+01	1.70E+01
830	4.50E+02	3.99E+02	BKGRD	BKGRD	2.70E+01	3.10E+01
845	2.20E+02	2.10E+02	BKGRD	BKGRD	3.80E+01	3.70E+01
900	1.50E+02	1.90E+02	BKGRD	BKGRD	5.50E+01	5.00E+01
915	1.64E+02	1.76E+02	BKGRD	BKGRD	4.00E+01	3.90E+01
930	1.74E+02	1.58E+02	BKGRD	BKGRD	3.70E+01	3.60E+01
945	1.64E+02	1.67E+02	BKGRD	BKGRD	4.10E+01	4.00E+01
1000	1.64E+02	1.76E+02	BKGRD	BKGRD	4.30E+01	4.30E+01
1015	1.61E+02	1.64E+02	BKGRD	BKGRD	4.40E+01	4.30E+01
1030	1.53E+02	1.48E+02	BKGRD	BKGRD	4.30E+01	4.20E+01
1045	1.64E+02	1.67E+02	BKGRD	BKGRD	4.24E+01	4.14E+01
1100	1.71E+02	1.75E+02	BKGRD	BKGRD	4.19E+01	4.09E+01
1115	1.64E+02	1.57E+02	BKGRD	BKGRD	3.50E+01	3.40E+01
1130	1.75E+02	1.56E+02	BKGRD	BKGRD	3.39E+01	3.38E+01
1145	1.61E+02	1.64E+02	BKGRD	BKGRD	3.26E+01	3.12E+01
1200	1.68E+02	1.72E+02	BKGRD	BKGRD	3.14E+01	3.08E+01
1215	1.77E+02	1.81E+02	BKGRD	BKGRD	2.89E+01	2.75E+01
1230	1.65E+02	1.62E+02	BKGRD	BKGRD	2.57E+01	2.45E+01
1245	1.48E+02	1.52E+02	BKGRD	BKGRD	2.29E+01	2.19E+01
1300	1.72E+02	1.76E+02	BKGRD	BKGRD	2.04E+01	2.02E+01
1315	1.65E+02	1.47E+02	BKGRD	BKGRD	1.50E+01	1.48E+01
1330	1.54E+02	1.53E+02	BKGRD	BKGRD	1.29E+01	1.21E+01
1345	1.60E+02	1.63E+02	BKGRD	BKGRD	1.09E+01	1.01E+01
1400	1.87E+02	1.67E+02	BKGRD	BKGRD	1.06E+01	1.05E+01
1415	1.78E+02	1.82E+02	BKGRD	BKGRD	9.40E+00	9.50E+00
1430	1.62E+02	1.65E+02	BKGRD	BKGRD	8.41E+00	8.10E+00
1445	1.54E+02	1.57E+02	BKGRD	BKGRD	7.50E+00	7.90E+00

IN PLANT AREA

DOSE RATES

DRILL MONITOR THUMB RULES

1. Determining frisker readings on air filters:

   a. Volume of air sample in liters:

      Air activity (uci/ml) * 2.2 E8 * Vol_{sample} (l) = Frisker cpm

   b. Volume of air sample in ft^3:

      Air activity (uci/ml) * 6.2 E9 * Vol_{sample} (ft^3) = Frisker cpm

2. Converting cpm to mR/hr:

   50,000 cpm = 1 mR/hr

(THESE DOSERATES APPLY TO ALL ROOMS WITH SUCH PIPING)
(EXCEPT THE PENETRATION ROOMS.)
(O.W. = C.W. ASSUMING NO PIPING LEAKS)

TIME	POSITION	READINGS	
615	CONTACT	0.500	R/hr
	3'	0.028	R/hr
	6'	0.014	R/hr
630	CONTACT	0.500	R/hr
	3'	0.028	R/hr
	6'	0.014	R/hr
645	CONTACT	0.500	R/hr
	3'	0.028	R/hr
	6'	0.014	R/hr
700	CONTACT	0.500	R/hr
	3'	0.028	R/hr
	6'	0.014	R/hr
715	CONTACT	0.500	R/hr
	3'	0.028	R/hr
	6'	0.014	R/hr
730	CONTACT	0.500	R/hr
	3'	0.028	R/hr
	6'	0.014	R/hr
745	CONTACT	0.500	R/hr
	3'	0.028	R/hr
	6'	0.014	R/hr
800	CONTACT	0.7	R/hr
	3'	0.039	R/hr
	6'	0.019	R/hr
815	CONTACT	1.7	R/hr
	3'	0.092	R/hr
	6'	0.046	R/hr
830	CONTACT	25.0	R/hr
	3'	1.389	R/hr
	6'	0.694	R/hr
845	CONTACT	29.7	R/hr
	3'	1.652	R/hr
	6'	0.826	R/hr
900	CONTACT	35.4	R/hr
	3'	1.964	R/hr
	6'	0.982	R/hr

(THESE DOSERATES APPLY TO ALL ROOMS WITH SUCH PIPING)
(EXCEPT THE PENETRATION ROOMS.)
(O.W. = C.W. ASSUMING NO PIPING LEAKS)

TIME	POSITION	READINGS	
915	CONTACT	50.0	R/hr
	3'	2.778	R/hr
	6'	1.389	R/hr
930	CONTACT	46.7	R/hr
	3'	2.592	R/hr
	6'	1.296	R/hr
945	CONTACT	43.5	R/hr
	3'	2.418	R/hr
	6'	1.209	R/hr
1000	CONTACT	40.6	R/hr
	3'	2.256	R/hr
	6'	1.128	R/hr
1015	CONTACT	37.9	R/hr
	3'	2.105	R/hr
	6'	1.053	R/hr
1030	CONTACT	35.4	R/hr
	3'	1.964	R/hr
	6'	0.982	R/hr
1045	CONTACT	33.0	R/hr
	3'	1.833	R/hr
	6'	0.916	R/hr
1100	CONTACT	30.8	R/hr
	3'	1.710	R/hr
	6'	0.855	R/hr
1115	CONTACT	28.7	R/hr
	3'	1.596	R/hr
	6'	0.798	R/hr
1130	CONTACT	26.8	R/hr
	3'	1.489	R/hr
	6'	0.744	R/hr
1145	CONTACT	25.0	R/hr
	3'	1.389	R/hr
	6'	0.695	R/hr
1200	CONTACT	23.3	R/hr
	3'	1.296	R/hr
	6'	0.648	R/hr

(THESE DOSERATES APPLY TO ALL ROOMS WITH SUCH PIPING)
(EXCEPT THE PENETRATION ROOMS.)
(O.W. = C.W. ASSUMING NO PIPING LEAKS)

TIME	POSITION	READINGS	
1215	CONTACT	21.8	R/hr
	3'	1.209	R/hr
	6'	0.605	R/hr
1230	CONTACT	20.3	R/hr
	3'	1.128	R/hr
	6'	0.564	R/hr
1245	CONTACT	19.0	R/hr
	3'	1.053	R/hr
	6'	0.526	R/hr
1300	CONTACT	17.7	R/hr
	3'	0.982	R/hr
	6'	0.491	R/hr
1315	CONTACT	16.5	R/hr
	3'	0.917	R/hr
	6'	0.458	R/hr
1330	CONTACT	15.4	R/hr
	3'	0.855	R/hr
	6'	0.428	R/hr
1345	CONTACT	14.4	R/hr
	3'	0.798	R/hr
	6'	0.399	R/hr
1400	CONTACT	13.4	R/hr
	3'	0.744	R/hr
	6'	0.372	R/hr
1415	CONTACT	12.5	R/hr
	3'	0.695	R/hr
	6'	0.347	R/hr
1430	CONTACT	11.7	R/hr
	3'	0.648	R/hr
	6'	0.324	R/hr
1445	CONTACT	10.9	R/hr
	3'	0.605	R/hr
	6'	0.302	R/hr

139' PENETRATION ROOM DOSE RATES (R/hr)

TIME	CONTACT O.W.	CONTACT C.W.	3FT O.W.	3FT C.W.	>6FT O.W.	>6FT C.W.
615	BCKGRD	BCKGRD	BCKGRD	BCKGRD	BCKGRD	BCKGRD
630	BCKGRD	BCKGRD	BCKGRD	BCKGRD	BCKGRD	BCKGRD
645	BCKGRD	BCKGRD	BCKGRD	BCKGRD	BCKGRD	BCKGRD
700	BCKGRD	BCKGRD	BCKGRD	BCKGRD	BCKGRD	BCKGRD
715	BCKGRD	BCKGRD	BCKGRD	BCKGRD	BCKGRD	BCKGRD
730	BCKGRD	BCKGRD	BCKGRD	BCKGRD	BCKGRD	BCKGRD
745	BCKGRD	BCKGRD	BCKGRD	BCKGRD	BCKGRD	BCKGRD
800	BCKGRD	BCKGRD	BCKGRD	BCKGRD	BCKGRD	BCKGRD
815	BCKGRD	BCKGRD	BCKGRD	BCKGRD	BCKGRD	BCKGRD
830	BCKGRD	BCKGRD	BCKGRD	BCKGRD	BCKGRD	BCKGRD
845	BCKGRD	BCKGRD	BCKGRD	BCKGRD	BCKGRD	BCKGRD
900	BCKGRD	BCKGRD	BCKGRD	BCKGRD	BCKGRD	BCKGRD
915	BCKGRD	BCKGRD	BCKGRD	BCKGRD	BCKGRD	BCKGRD
930	BCKGRD	BCKGRD	BCKGRD	BCKGRD	BCKGRD	BCKGRD
945	BCKGRD	BCKGRD	BCKGRD	BCKGRD	BCKGRD	BCKGRD
1000	BCKGRD	BCKGRD	BCKGRD	BCKGRD	BCKGRD	BCKGRD
1015	BCKGRD	BCKGRD	BCKGRD	BCKGRD	BCKGRD	BCKGRD
1030	56.0	5.6	56.0	5.6	56.0	5.6
1045	79.2	7.9	79.2	7.9	79.2	7.9
1100	112.0	11.2	112.0	11.2	112.0	11.2
1115	229.8	17.9	229.8	17.9	229.8	17.9
1130	214.4	16.7	214.4	16.7	214.4	16.7
1145	200.0	15.6	200.0	15.6	200.0	15.6
1200	186.6	14.5	186.6	14.5	186.6	14.5
1215	174.1	13.5	174.1	13.5	174.1	13.5
1230	162.5	12.6	162.5	12.6	162.5	12.6
1245	151.6	11.8	151.6	11.8	151.6	11.8
1300	141.5	11.0	141.5	11.0	141.5	11.0
1315	132.0	10.3	132.0	10.3	132.0	10.3
1330	123.1	9.6	123.1	9.6	123.1	9.6
1345	117.7	9.2	117.7	9.2	117.7	9.2
1400	109.8	8.5	109.8	8.5	109.8	8.5
1415	102.5	8.0	102.5	8.0	102.5	8.0
1430	95.6	7.4	95.6	7.4	95.6	7.4
1445	89.2	6.9	89.2	6.9	89.2	6.9

121' PENETRATION ROOM DOSE RATES (R/hr)

(BEFORE 10:30 DOSERATES ARE FOR RHR PIPING)
(FOR TIMES AFTER 10:15, DOSERATES ARE FOR)
(THE CTMT LEAK AREA)

TIME	CONTACT O.W.	CONTACT C.W.	3FT O.W.	3FT C.W.	>6FT O.W.	>6FT C.W.
615	0.5	0.5	0.5	0.5	0.5	0.5
630	0.5	0.5	0.5	0.5	0.5	0.5
645	0.5	0.5	0.5	0.5	0.5	0.5
700	0.5	0.5	0.5	0.5	0.5	0.5
715	0.5	0.5	0.5	0.5	0.5	0.5
730	0.5	0.5	0.5	0.5	0.5	0.5
745	0.5	0.5	0.5	0.5	0.5	0.5
800	0.7	0.7	0.0	0.0	0.0	0.0
815	1.7	1.7	0.1	0.1	0.0	0.0
830	25.0	25.0	1.4	1.4	0.7	0.7
845	29.7	29.7	1.7	1.7	0.8	0.8
900	35.4	35.4	2.0	2.0	1.0	1.0
915	50.0	50.0	2.8	2.8	1.4	1.4
930	46.7	46.7	2.6	2.6	1.3	1.3
945	43.5	43.5	2.4	2.4	1.2	1.2
1000	40.6	40.6	2.3	2.3	1.1	1.1
1015	37.9	37.9	2.1	2.1	1.1	1.1
1030	412.5	37.5	187.0	17.0	88.0	8.0
1045	384.9	35.0	216.0	19.6	124.4	11.3
1100	359.1	32.6	249.6	22.7	176.0	16.0
1115	330.4	30.0	297.3	27.0	280.8	25.5
1130	308.3	28.0	277.4	25.2	262.0	23.8
1145	287.6	26.1	258.9	23.5	244.5	22.2
1200	268.4	24.4	241.5	22.0	228.1	20.7
1215	250.4	22.8	225.4	20.5	212.8	19.3
1230	233.6	21.2	210.3	19.1	198.6	18.1
1245	218.0	19.8	196.2	17.8	185.3	16.8
1300	203.4	18.5	183.1	16.6	172.9	15.7
1315	189.8	17.3	170.8	15.5	161.3	14.7
1330	177.1	16.1	159.4	14.5	150.5	13.7
1345	165.2	15.0	165.2	15.0	165.2	15.0
1400	154.2	14.0	154.2	14.0	154.2	14.0
1415	143.8	13.1	143.8	13.1	143.8	13.1
1430	134.2	12.2	134.2	12.2	134.2	12.2
1445	125.2	11.4	125.2	11.4	125.2	11.4

100' PENETRATION ROOM DOSE RATES (R/hr)

(BEFORE 10:30 DOSERATES ARE FOR RHR PIPING)
(FOR TIMES AFTER 10:15, DOSERATES ARE FOR)
(THE CTMT LEAK AREA)

TIME	CONTACT O.W.	CONTACT C.W.	3FT O.W.	3FT C.W.	>6FT O.W.	>6FT C.W.
615	0.5	0.5	0.5	0.5	0.5	0.5
630	0.5	0.5	0.5	0.5	0.5	0.5
645	0.5	0.5	0.5	0.5	0.5	0.5
700	0.5	0.5	0.5	0.5	0.5	0.5
715	0.5	0.5	0.5	0.5	0.5	0.5
730	0.5	0.5	0.5	0.5	0.5	0.5
745	0.5	0.5	0.5	0.5	0.5	0.5
800	0.7	0.7	0.0	0.0	0.0	0.0
815	1.7	1.7	0.1	0.1	0.0	0.0
830	25.0	25.0	1.4	1.4	0.7	0.7
845	29.7	29.7	1.7	1.7	0.8	0.8
900	35.4	35.4	2.0	2.0	1.0	1.0
915	50.0	50.0	2.8	2.8	1.4	1.4
930	46.7	46.7	2.6	2.6	1.3	1.3
945	43.5	43.5	2.4	2.4	1.2	1.2
1000	40.6	40.6	2.3	2.3	1.1	1.1
1015	37.9	37.9	2.1	2.1	1.1	1.1
1030	72.0	37.5	72.0	17.0	72.0	8.0
1045	101.8	35.0	101.8	19.6	101.8	11.3
1100	144.0	32.6	144.0	22.7	144.0	16.0
1115	280.8	30.0	280.8	27.0	280.8	25.5
1130	262.0	28.0	262.0	25.2	262.0	23.8
1145	244.5	26.1	244.5	23.5	244.5	22.2
1200	228.1	24.4	228.1	22.0	228.1	20.7
1215	212.8	22.8	212.8	20.5	212.8	19.3
1230	198.6	21.2	198.6	19.1	198.6	18.1
1245	185.3	19.8	185.3	17.8	185.3	16.8
1300	172.9	18.5	172.9	16.6	172.9	15.7
1315	161.3	17.3	161.3	15.5	161.3	14.7
1330	150.5	16.1	150.5	14.5	150.5	13.7
1345	143.8	13.1	143.8	13.1	143.8	13.1
1400	134.2	12.2	134.2	12.2	134.2	12.2
1415	125.2	11.4	125.2	11.4	125.2	11.4
1430	116.8	10.6	116.8	10.6	116.8	10.6
1445	109.0	9.9	109.0	9.9	109.0	9.9

CTMT HATCH DOSERATES
WHERE AIRLOCK COMES THRU WALL

TIME	READINGS
615	0.070 R/hr
630	0.070 R/hr
645	0.070 R/hr
700	0.070 R/hr
715	0.070 R/hr
730	0.070 R/hr
745	0.070 R/hr
800	0.600 R/hr
815	0.643 R/hr
830	0.689 R/hr
845	**0.739 R/hr**
900	1.400 R/hr
915	1.306 R/hr
930	1.219 R/hr
945	1.137 R/hr
1000	1.061 R/hr
1015	0.990 R/hr
1030	0.924 R/hr
1045	0.862 R/hr
1100	0.804 R/hr
1115	0.750 R/hr
1130	0.700 R/hr
1145	0.653 R/hr
1200	0.609 R/hr
1215	0.569 R/hr
1230	0.531 R/hr
1245	0.495 R/hr
1300	0.462 R/hr
1315	0.431 R/hr
1330	0.402 R/hr
1345	0.375 R/hr
1400	0.350 R/hr
1415	0.327 R/hr
1430	0.305 R/hr
1445	0.284 R/hr

RCS SAMPLE DOSERATES (R/hr)

(0500-0800)	C.W.	O.W.
CONTACT	1.000	13.000
1'	0.028	.361
3'	0.003	0.400
6'	0.001	0.010

(1% FF)	C.W.	O.W.
CONTACT	23.000	237.000
1'	0.639	6.583
3'	0.071	0.731
6'	0.018	0.183

(5% FF)	C.W.	O.W.
CONTACT	56.000	630.000
1'	1.556	17.500
3'	0.173	1.944
6'	0.043	0.486

AUX. BLDG. HALLWAY DOSE RATES AFTER RCS SAMPLE

ST = SAMPLE TIME
+ = HOURS SINCE SAMPLE TIME
ALL READINGS ARE O.W. IN R/hr
C.W. = 1/10 O.W. READINGS

AFTER FIRST RCS SAMPLE (1% FF)(BEFORE 9:00)

ST	155 FT	139 FT	121 FT	100 FT	83 FT
+0.00	0.023	1.800	0.095	0.032	0.023
+0.25	0.020	1.010	0.061	0.025	0.020
+0.50	0.021	0.567	0.043	0.024	0.021
+0.75	0.023	0.318	0.036	0.025	0.023
+1.00	0.027	0.179	0.034	0.028	0.027
+1.25	0.031	0.100	0.035	0.032	0.031
+1.50	0.036	0.056	0.038	0.036	0.036
+1.75	0.040	0.032	0.042	0.040	0.040
+2.00	0.018	0.018	0.018	0.018	0.018
+2.25	0.010	0.010	0.010	0.010	0.010
+2.50	0.006	0.006	0.006	0.006	0.006
+2.75	0.003	0.003	0.003	0.003	0.003
+3.00	0.002	0.002	0.002	0.002	0.002
+3.25	0.001	0.001	0.001	0.001	0.001

AFTER SECOND RCS SAMPLE (5% FF)(AFTER 9:00)

ST	155 FT	139 FT	121 FT	100 FT	83 FT
+0.00	0.030	2.500	0.130	0.042	0.030
+0.25	0.024	1.403	0.080	0.031	0.024
+0.50	0.023	0.788	0.054	0.027	0.023
+0.75	0.024	0.442	0.042	0.027	0.024
+1.00	0.027	0.248	0.037	0.029	0.027
+1.25	0.031	0.139	0.037	0.032	0.031
+1.50	0.036	0.078	0.039	0.036	0.036
+1.75	0.040	0.044	0.042	0.041	0.040
+2.00	0.045	0.025	0.046	0.045	0.045
+2.25	0.014	0.014	0.014	0.014	0.014
+2.50	0.008	0.008	0.008	0.008	0.008
+2.75	0.004	0.004	0.004	0.004	0.004
+3.00	0.002	0.002	0.002	0.002	0.002
+3.25	0.001	0.001	0.001	0.001	0.001

AUX. BLDG. FLOOR AIRBORNE MONITORS

ST = SAMPLE TIME
+ = HOURS SINCE SAMPLE TIME

FIRST RCS SAMPLE - IF BETWEEN 8:00 AND 9:00 (1% FF)

ST	R-33 (CPM)	R-32 (CPM)	R-31 (CPM)	R-30 (CPM)
+0.00	BCKGRD	1000000	BCKGRD	BCKGRD
+0.25	100000	1000000	400000	200000
+0.50	56100	561000	224400	112200
+0.75	31500	315000	126000	63000
+1.00	17700	177000	70800	35400
+1.25	9900	99000	39600	19800
+1.50	5600	56000	22400	11200
+1.75	3100	31000	12400	6200
+2.00	1800	18000	7200	3600
+2.25	1000	10000	4000	2000
+2.50	600	6000	2400	1200
+2.75	300	3000	1200	600
+3.00	200	2000	800	400
+3.25	100	1000	400	200
+3.50	BCKGRD	BCKGRD	BCKGRD	BCKGRD

AUX. BLDG. FLOOR AIRBORNE MONITORS

ST = SAMPLE TIME
+ = HOURS SINCE SAMPLE TIME

SECOND RCS SAMPLE - IF AFTER 9:00 (5% FF)

ST	R-33 (CPM)	R-32 (CPM)	R 31 (CPM)	R-30 (CPM)
+0.00	BCKGRD	1000000	BCKGRD	BCKGRD
+0.25	100000	1000000	400000	200000
+0.50	78100	781000	312400	156200
+0.75	61000	610000	244000	122000
+1.00	47600	476000	190400	95200
+1.25	37200	372000	148800	74400
+1.50	29000	290000	116000	58000
+1.75	22700	227000	90800	45400
+2.00	17700	177000	70800	35400
+2.25	13800	138000	55200	27600
+2.50	10800	108000	43200	21600
+2.75	8400	84000	33600	16800
+3.00	6600	66000	26400	13200
+3.25	5100	51000	20400	10200
+3.50	4000	40000	16000	8000
+3.75	3100	31000	12400	6200
+4.00	2400	24000	9600	4800
+4.25	BCKGRD	BCKGRD	BCKGRD	BCKGRD

AUX. BLDG. HALLWAY AIRBORNE RESULTS

(1% FF)(BEFORE 9:00)

LOWEST ISOTOPE MPC LIMIT VALUE USED
FOR EACH CLASSIFICATION OF NUCLIDE.
a. Noble gases = 1 E-6 uci/ml
b. Iodines = 9 E-9 uci/ml
c. Particulates = 1 E-6 uci/ml

DURING 1st HR AFTER FIRST RCS SAMPLE

RESULTS IN (uCi/ml) UNLESS OTHERWISE INDICATED

	155 FT	139 FT	121 FT	100 FT	83 FT
KR-85	6.52E-07	6.52E-05	3.26E-06	9.78E-07	6.52E-07
KR-85M	2.81E-05	2.81E-03	1.41E-04	4.22E-05	2.81E-05
KR-87	5.50E-05	5.50E-03	2.75E-04	8.25E-05	5.50E-05
KR-88	7.93E-05	7.93E-03	3.96E-04	1.19E-04	7.93E-05
XE-131M	2.12E-10	2.12E-08	1.06E-09	3.18E-10	2.12E-10
XE-133	3.10E-07	3.10E-05	1.55E-06	4.65E-07	3.10E-07
XE-133M	8.21E-09	8.21E-07	4.11E-08	1.23E-08	8.21E-09
XE-135	8.42E-07	8.42E-05	4.21E-06	1.26E-06	8.42E-07
XE-135M	2.13E-07	2.13E-05	1.06E-06	3.19E-07	2.13E-07
XE-138	1.65E-06	1.65E-04	8.25E-06	2.48E-06	1.65E-06
I-131	5.58E-12	5.58E-10	2.79E-11	8.37E-12	5.58E-12
I-132	7.97E-12	7.97E-10	3.99E-11	1.20E-11	7.97E-12
I-133	1.09E-11	1.09E-09	5.44E-11	1.63E-11	1.09E-11
I-134	1.23E-11	1.23E-09	6.16E-11	1.85E-11	1.23E-11
I-135	1.01E-11	1.01E-09	5.07E-11	1.52E-11	1.01E-11
RB-87	1.16E-08	1.16E-06	5.81E-08	1.74E-08	1.16E-08
RB-88	2.66E-09	2.66E-07	1.33E-08	3.99E-09	2.66E-09
CS-138	2.32E-09	2.32E-07	1.16E-08	3.49E-09	2.32E-09
TOTALS:					
NG	1.66E-04	1.66E-02	8.30E-04	2.49E-04	1.66E-04
IOD	4.69E-11	4.69E-09	2.34E-10	7.03E-11	4.69E-11
PART	1.66E-08	1.66E-06	8.30E-08	2.49E-08	1.66E-08
%MPC:					
NG	1.66E+04	1.66E+06	8.30E+04	2.49E+04	1.66E+04
IOD	5.21E-01	5.21E+01	2.60E+00	7.81E-01	5.21E-01
PART	1.66E+00	1.66E+02	8.30E+00	2.49E+00	1.66E+00

AUX. BLDG. HALLWAY AIRBORNE RESULTS

(1% FF)(BEFORE 9:00)

LOWEST ISOTOPE MPC LIMIT VALUE USED
FOR EACH CLASSIFICATION OF NUCLIDE.
a. Noble gases = 1 E-6 uci/ml
b. Iodines = 9 E-9 uci/ml
c. Particulates = 1 E-6 uci/ml

DURING 2nd HR AFTER FIRST RCS SAMPLE

RESULTS IN (uCi/ml) UNLESS OTHERWISE INDICATED

	155 FT	139 FT	121 FT	100 FT	83 FT
KR-85	6.47E-08	6.47E-06	3.24E-07	9.71E-08	6.47E-08
KR-85M	2.79E-06	2.79E-04	1.40E-05	4.19E-06	2.79E-06
KR-87	5.46E-06	5.46E-04	2.73E-05	8.19E-06	5.46E-06
KR-88	7.87E-06	7.87E-04	3.93E-05	1.18E-05	7.87E-06
XE-131M	2.11E-11	2.11E-09	1.05E-10	3.16E-11	2.11E-11
XE-133	3.08E-08	3.08E-06	1.54E-07	4.62E-08	3.08E-08
XE-133M	8.15E-10	8.15E-08	4.08E-09	1.22E-09	8.15E-10
XE-135	8.36E-08	8.36E-06	4.18E-07	1.25E-07	8.36E-08
XE-135M	2.11E-08	2.11E-06	1.06E-07	3.17E-08	2.11E-08
XE-138	1.64E-07	1.64E-05	8.19E-07	2.46E-07	1.64E-07
I-131	5.54E-13	5.54E-11	2.77E-12	8.31E-13	5.54E-13
I-132	7.91E-13	7.91E-11	3.96E-12	1.19E-12	7.91E-13
I-133	1.08E-12	1.08E-10	5.39E-12	1.62E-12	1.08E-12
I-134	1.22E-12	1.22E-10	6.11E-12	1.83E-12	1.22E-12
I-135	1.01E-12	1.01E-10	5.03E-12	1.51E-12	1.01E-12
RB-87	1.17E-07	1.17E-05	5.86E-07	1.76E-07	1.17E-07
RB-88	2.68E-08	2.68E-06	1.34E-07	4.02E-08	2.68E-08
CS-138	2.34E-08	2.34E-06	1.17E-07	3.51E-08	2.34E-08
TOTALS:					
NG	1.65E-05	1.65E-03	8.24E-05	2.47E-05	1.65E-05
IOD	4.65E-12	4.65E-10	2.33E-11	6.98E-12	4.65E-12
PART	1.67E-07	1.67E-05	8.37E-07	2.51E-07	1.67E-07
%MPC:					
NG	1.65E+03	1.65E+05	8.24E+03	2.47E+03	1.65E+03
IOD	5.17E-02	5.17E+00	2.59E-01	7.76E-02	5.17E-02
PART	1.67E+01	1.67E+03	8.37E+01	2.51E+01	1.67E+01

AUX. BLDG. HALLWAY AIRBORNE RESULTS

(5% FF)(AFTER 9:00)

LOWEST ISOTOPE MPC LIMIT VALUE USED
FOR EACH CLASSIFICATION OF NUCLIDE.
a. Noble gases = 1 E-6 uci/ml
b. Iodines = 9 E-9 uci/ml
c. Particulates = 1 E-6 uci/ml

DURING 1st HR AFTER SECOND RCS SAMPLE

RESULTS IN (uCi/ml) UNLESS OTHERWISE INDICATED

	155 FT	139 FT	121 FT	100 FT	83 FT
KR-85	1.30E-06	1.30E-04	6.52E-06	1.96E-06	1.30E-06
KR-85M	5.63E-05	5.63E-03	2.81E-04	8.44E-05	5.63E-05
KR-87	1.10E-04	1.10E-02	5.50E-04	1.65E-04	1.10E-04
KR-88	1.59E-04	1.59E-02	7.93E-04	2.38E-04	1.59E-04
XE-131M	4.25E-10	4.25E-08	2.12E-09	6.37E-10	4.25E-10
XE-133	6.20E-07	6.20E-05	3.10E-06	9.31E-07	6.20E-07
XE-133M	1.64E-08	1.64E-06	8.21E-08	2.46E-08	1.64E-08
XE-135	1.68E-06	1.68E-04	8.42E-06	2.53E-06	1.68E-06
XE-135M	4.26E-07	4.26E-05	2.13E-06	6.39E-07	4.26E-07
XE-138	3.30E-06	3.30E-04	1.65E-05	4.95E-06	3.30E-06
I-131	1.12E-11	1.12E-09	5.58E-11	1.67E-11	1.12E-11
I-132	1.59E-11	1.59E-09	7.97E-11	2.39E-11	1.59E-11
I-133	2.17E-11	2.17E-09	1.09E-10	3.26E-11	2.17E-11
I-134	2.46E-11	2.46E-09	1.23E-10	3.70E-11	2.46E-11
I-135	2.03E-11	2.03E-09	1.01E-10	3.04E-11	2.03E-11
RB-87	2.32E-08	2.32E-06	1.16E-07	3.49E-08	2.32E-08
RB-88	5.31E-09	5.31E-07	2.66E-08	7.97E-09	5.31E-09
CS-138	4.65E-09	4.65E-07	2.32E-08	6.97E-09	4.65E-09
TOTALS:					
NG	3.32E-04	3.32E-02	1.66E-03	4.98E-04	3.32E-04
IOD	9.38E-11	9.38E-09	4.69E-10	1.41E-10	9.38E-11
PART	3.32E-08	3.32E-06	1.66E-07	4.98E-08	3.32E-08
%MPC:					
NG	3.32E+04	3.32E+06	1.66E+05	4.98E+04	3.32E+04
IOD	1.04E+00	1.04E+02	5.21E+00	1.56E+00	1.04E+00
PART	3.32E+00	3.32E+02	1.66E+01	4.98E+00	3.32E+00

AUX. BLDG. HALLWAY AIRBORNE RESULTS

(5% FF)(AFTER 9:00)

LOWEST ISOTOPE MPC LIMIT VALUE USED
FOR EACH CLASSIFICATION OF NUCLIDE.
a. Noble gases = 1 E-6 uci/ml
b. Iodines = 9 E-9 uci/ml
c. Particulates = 1 E-6 uci/ml

DURING 2nd HR AFTER SECOND RCS SAMPLE

RESULTS IN (uCi/ml) UNLESS OTHERWISE INDICATED

	155 FT	139 FT	121 FT	100 FT	83 FT
KR-85	1.29E-07	1.29E-05	6.47E-07	1.94E-07	1.29E-07
KR-85M	5.58E-06	5.58E-04	2.79E-05	8.38E-06	5.58E-06
KR-87	1.09E-05	1.09E-03	5.46E-05	1.64E-05	1.09E-05
KR-88	1.57E-05	1.57E-03	7.87E-05	2.36E-05	1.57E-05
XE-131M	4.21E-11	4.21E-09	2.11E-10	6.32E-11	4.21E-11
XE-133	6.16E-08	6.16E-06	3.08E-07	9.24E-08	6.16E-08
XE-133M	1.63E-09	1.63E-07	8.15E-09	2.45E-09	1.63E-09
XE-135	1.67E-07	1.67E-05	8.36E-07	2.51E-07	1.67E-07
XE-135M	4.23E-08	4.23E-06	2.11E-07	6.34E-08	4.23E-08
XE-138	3.28E-07	3.28E-05	1.64E-06	4.92E-07	3.28E-07
I-131	1.11E-12	1.11E-10	5.54E-12	1.66E-12	1.11E-12
I-132	1.58E-12	1.58E-10	7.91E-12	2.37E-12	1.58E-12
I-133	2.16E-12	2.16E-10	1.08E-11	3.24E-12	2.16E-12
I-134	2.45E-12	2.45E-10	1.22E-11	3.67E-12	2.45E-12
I-135	2.01E-12	2.01E-10	1.01E-11	3.02E-12	2.01E-12
RB-87	2.34E-07	2.34E-05	1.17E-06	3.51E-07	2.34E-07
RB-88	5.35E-08	5.35E-06	2.68E-07	8.03E-08	5.35E-08
CS-138	4.68E-08	4.68E-06	2.34E-07	7.03E-08	4.68E-08
TOTALS:					
NG	3.30E-05	3.30E-03	1.65E-04	4.95E-05	3.30E-05
IOD	9.31E-12	9.31E-10	4.65E-11	1.40E-11	9.31E-12
PART	3.35E-07	3.35E-05	1.67E-06	5.02E-07	3.35E-07
%MPC:					
NG	3.30E+03	3.30E+05	1.65E+04	4.95E+03	3.30E+03
IOD	1.03E-01	1.03E+01	5.17E-01	1.55E-01	1.03E-01
PART	3.35E+01	3.35E+03	1.67E+02	5.02E+01	3.35E+01

RCS SAMPLE DOSERATES (R/hr)

(1% FF)	C.W.	O.W.
CONTACT	23.000	237.000
1'	0.639	6.583
3'	0.071	0.731
6'	0.018	0.183

(5% FF)	C.W.	O.W.
CONTACT	56.000	630.000
1'	1.556	17.500
3'	0.173	1.944
6'	0.043	0.486

PLUME MAPS

PLUME MAPS

The attached plume maps provide dose rates in the simulated effluent plume. Maps are provided covering the time of release in 15 minute intervals, and one onsite map with table shows onsite field dose rates. The plume simulates a ground release.

The average dose rates provided are very close to the value which will be calculated by a ground release dose assessment model. For realism, values provided to monitoring teams should be randomly varied between 1/10 and 10 times the average values shown with the average of the values provided to the player being roughly equal to 60% of the average value shown on the plot.

Field iodine and particulate concentrations are non-detectable using portable sampling equipment. If a request is made for an iodine or particulate reading, then what the player actually reads is the value.

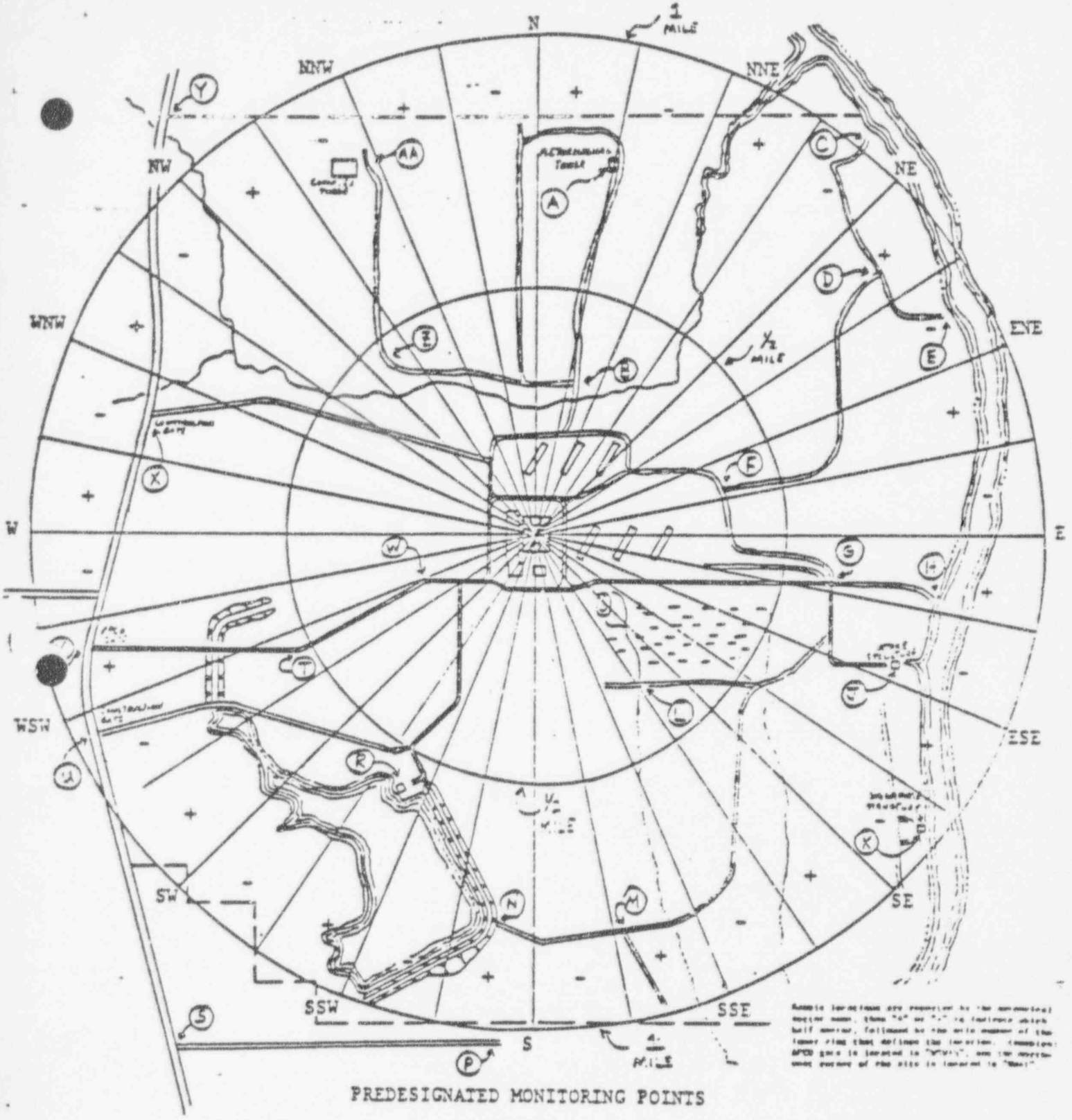
All field values for times before the plume maps begin are normal background values.

Onsite Field Dose Rates

Below are values corresponding to onsite predesignated monitoring points (see map next page). These values should be multiplied by the realistic site boundary dose rate as determined from the plume maps. This will provide a dose rate for each monitoring point. If a point is not listed, then the dose rate is background.

Field iodine and particulate concentrations are non-detectable using portable sampling equipment. If a request is made for an iodine or particulate reading, then what a player actually reads is the value.

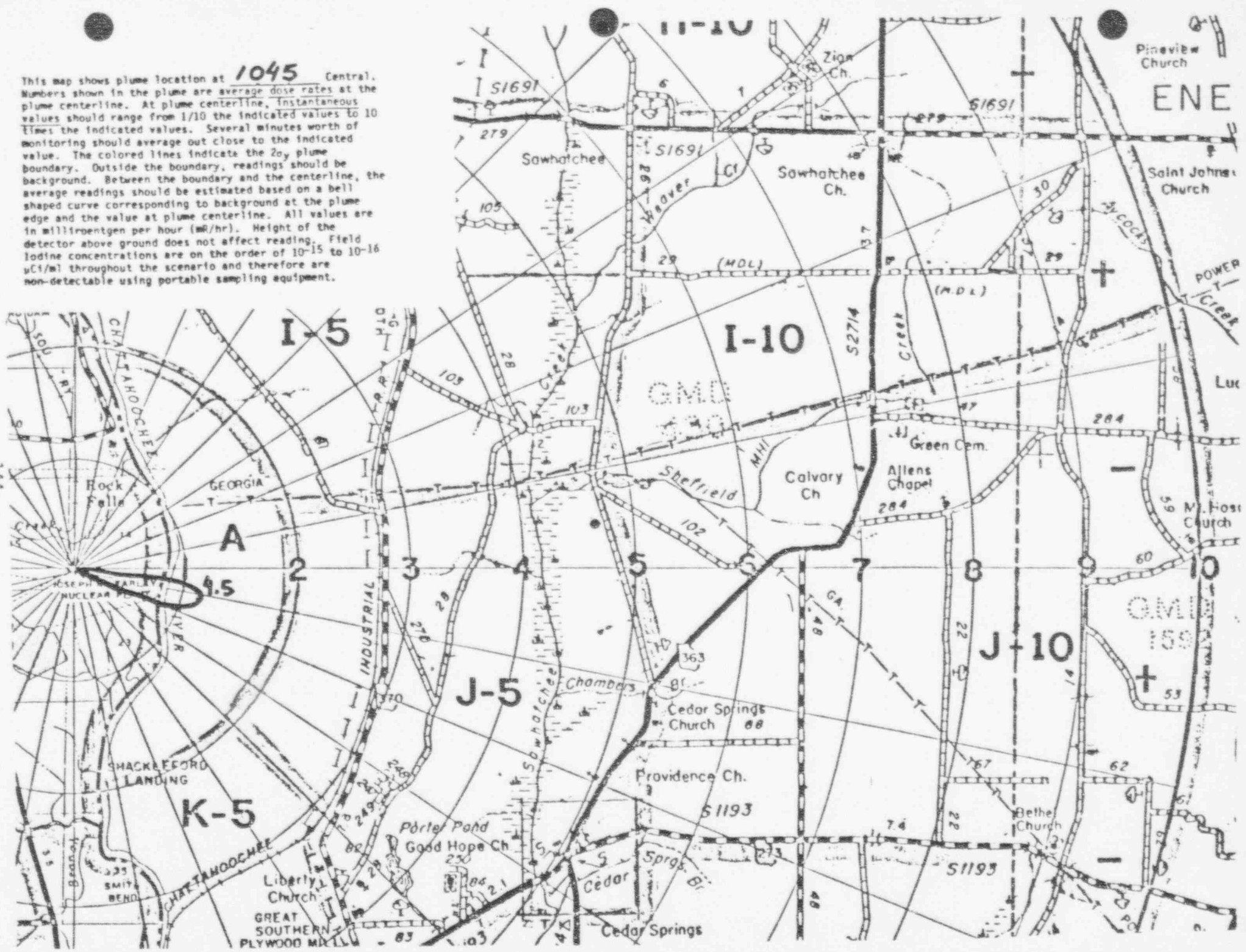
TIME	F	G	H	J	E
1045	0	1.0	1.0	1.0	0
1100	0	1.0	1.0	1.0	0
1115	0	1.0	1.0	.90	0
1130	0	1.0	1.0	.90	0
1145	.20	1.0	1.0	.90	0
1200	.50	1.0	1.0	.80	.20
1215	.80	1.0	1.0	.70	.50
1230	.80	1.0	1.0	.60	.80
1245	.80	.90	1.0	.40	.80
1300	.90	.90	.90	0	.80
1315	1.0	.90	.90	0	.90
1330	1.0	.80	.80	0	.90
1345	1.0	.70	.70	0	1.0
1400	1.0	.60	.60	0	1.0



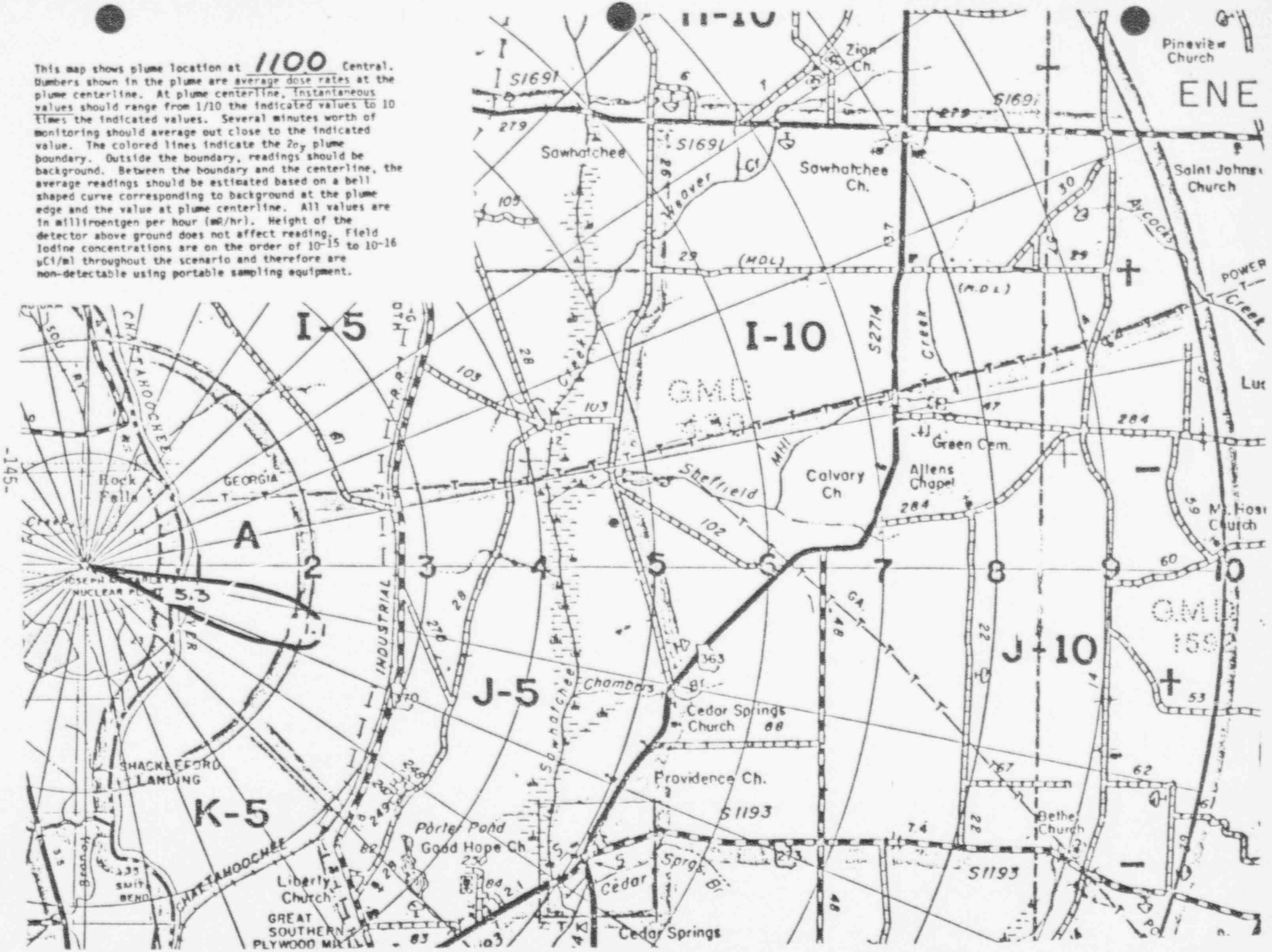
PREDESIGNATED MONITORING POINTS

Point	Location	Description	Point	Location	Description	Point	Location	Description
A	[illegible]	Met tower	J	ESE-½	Intake Structure	T	WSW-½	Bend of road
B	[illegible]	Road intersection	K	SE-½	Discharge Structure	U	WSW-½	Gate at AL95
C	NE-1	TLD station	L	SE+0	Stream crossing	V	WSW+½	Gate at AL95
D	NE+½	Road intersection	N	SSE+½	Road intersection	W	WSW-0	Bend of road
E	ENE-½	End of road	M	S+½	Pond dam	X	WNW-½	Gate at AL95
F	ENE+0	Road intersection	P	S+1	End of field road	Y	NNW-1	North side at AL95
G	S++	Road intersection	R	SSW+½	Serv. water struct.	Z	NNW-0	Bend of road
H	S+½	Barge slip	S	SW-1	Road intersection	AA	NNW-½	Complex Three

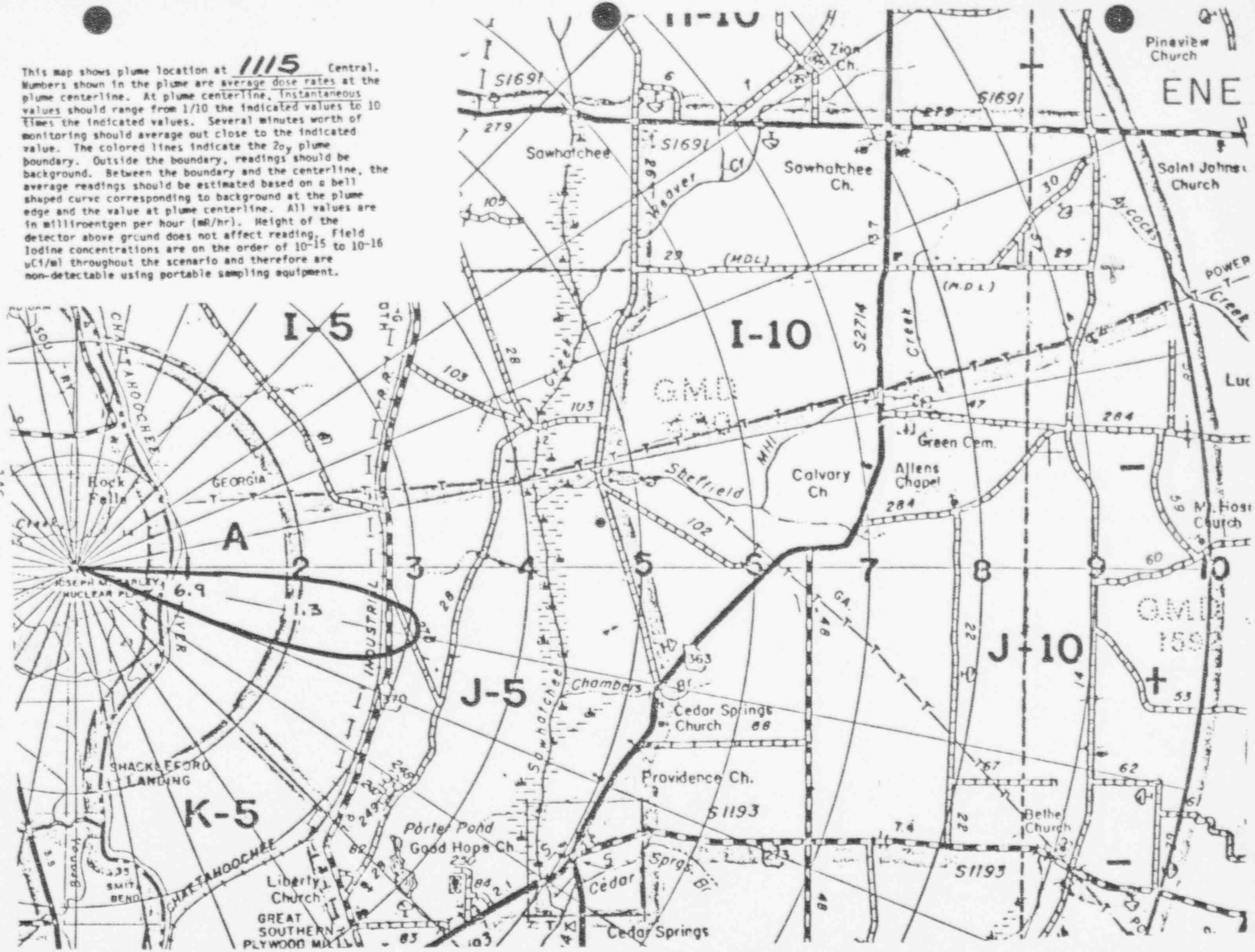
This map shows plume location at 1045 Central. Numbers shown in the plume are average dose rates at the plume centerline. At plume centerline, instantaneous values should range from 1/10 the indicated values to 10 times the indicated values. Several minutes worth of monitoring should average out close to the indicated value. The colored lines indicate the $2\sigma_y$ plume boundary. Outside the boundary, readings should be background. Between the boundary and the centerline, the average readings should be estimated based on a bell shaped curve corresponding to background at the plume edge and the value at plume centerline. All values are in milliroentgen per hour (mR/hr). Height of the detector above ground does not affect reading. Field Iodine concentrations are on the order of 10^{-15} to 10^{-16} μCi/ml throughout the scenario and therefore are non-detectable using portable sampling equipment.



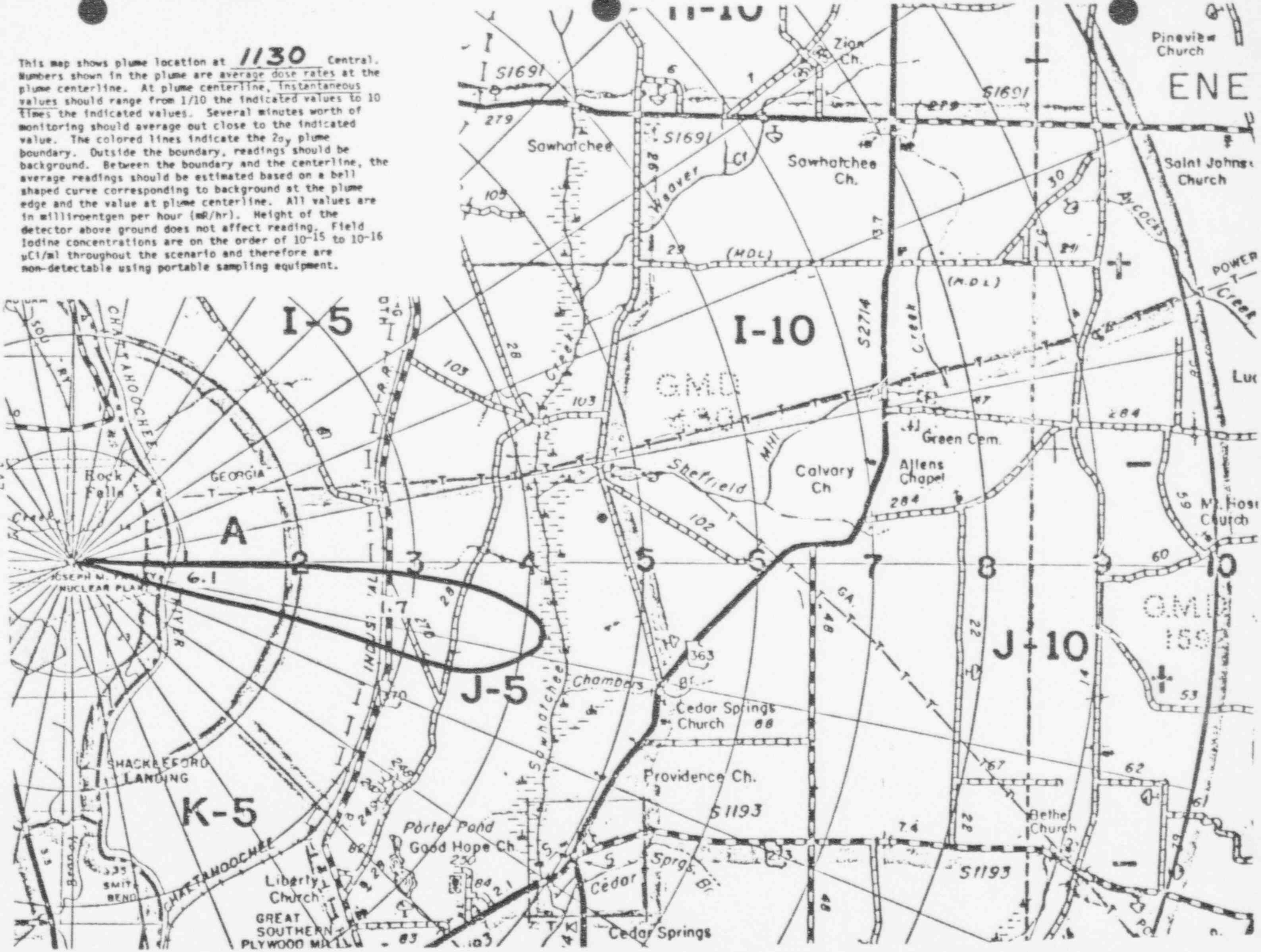
This map shows plume location at 1100 Central. Numbers shown in the plume are average dose rates at the plume centerline. At plume centerline, instantaneous values should range from 1/10 the indicated values to 10 times the indicated values. Several minutes worth of monitoring should average out close to the indicated value. The colored lines indicate the $2\sigma_y$ plume boundary. Outside the boundary, readings should be background. Between the boundary and the centerline, the average readings should be estimated based on a bell shaped curve corresponding to background at the plume edge and the value at plume centerline. All values are in milliroentgen per hour (mR/hr). Height of the detector above ground does not affect reading. Field Iodine concentrations are on the order of 10^{-15} to 10^{-16} μCi/ml throughout the scenario and therefore are non-detectable using portable sampling equipment.



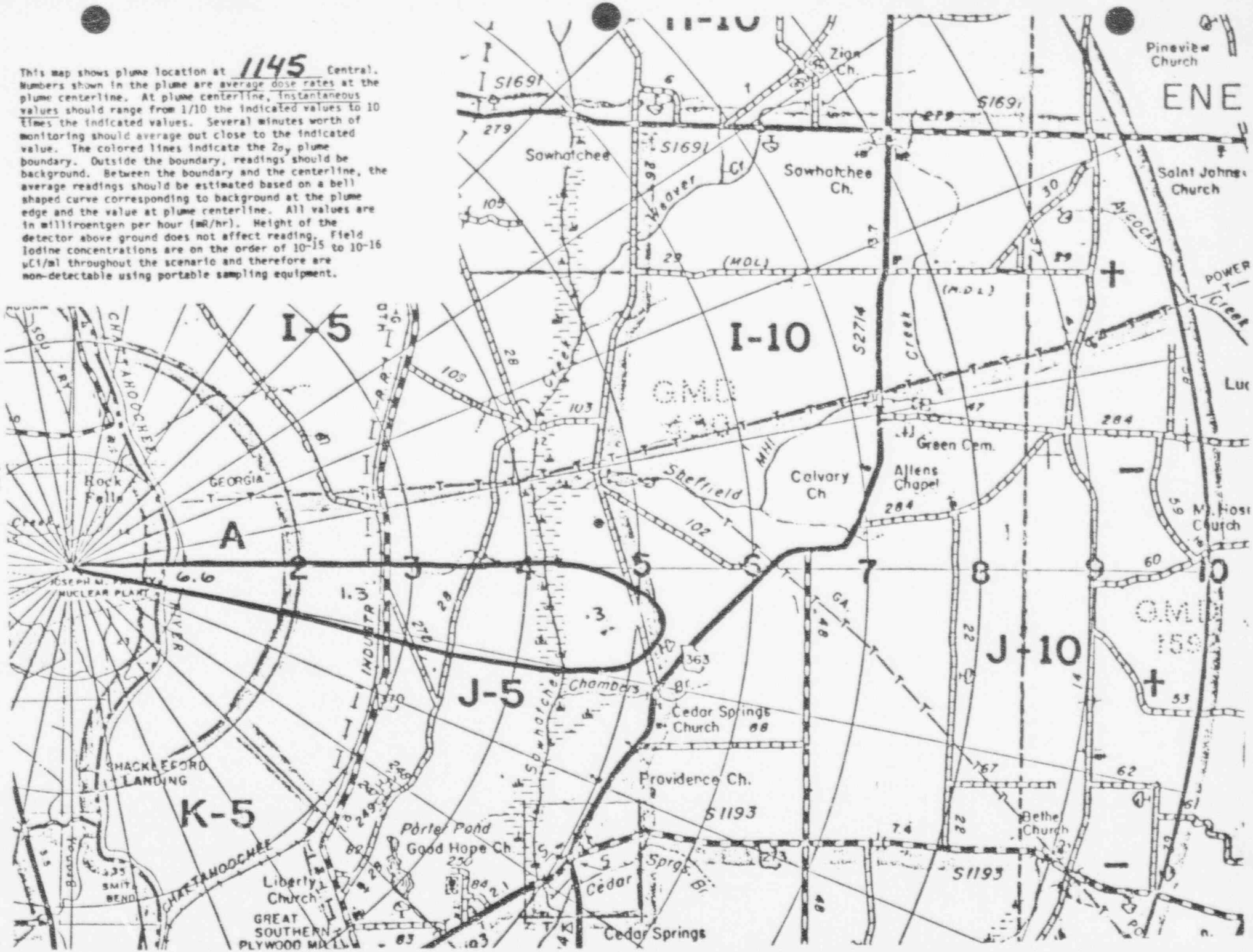
This map shows plume location at 1115 Central. Numbers shown in the plume are average dose rates at the plume centerline. At plume centerline, instantaneous values should range from 1/10 the indicated values to 10 times the indicated values. Several minutes worth of monitoring should average out close to the indicated value. The colored lines indicate the $2\sigma_y$ plume boundary. Outside the boundary, readings should be background. Between the boundary and the centerline, the average readings should be estimated based on a bell shaped curve corresponding to background at the plume edge and the value at plume centerline. All values are in milliroentgen per hour (mR/hr). Height of the detector above ground does not affect reading. Field Iodine concentrations are on the order of 10^{-15} to 10^{-16} uCi/ml throughout the scenario and therefore are non-detectable using portable sampling equipment.



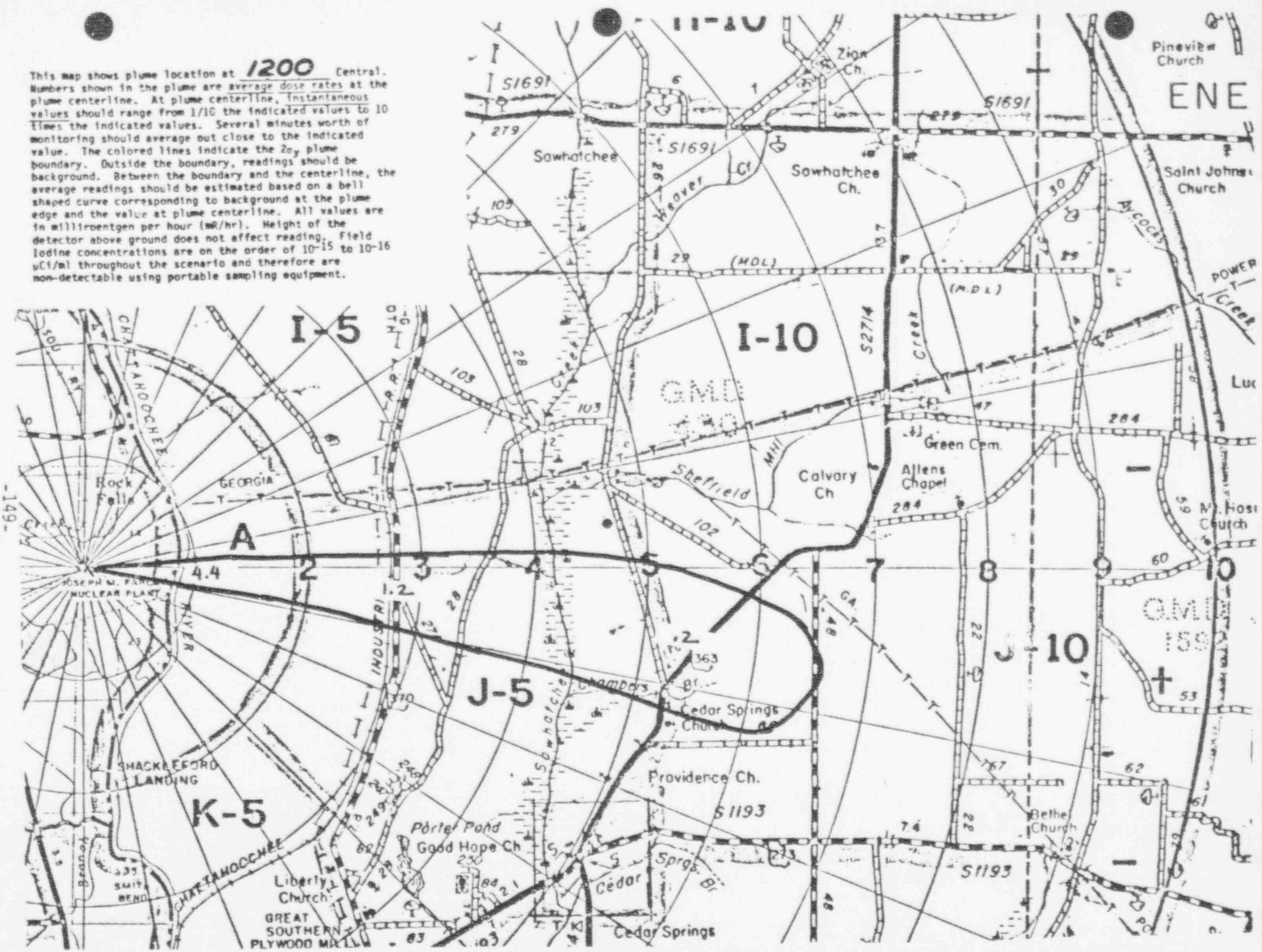
This map shows plume location at *1130* Central. Numbers shown in the plume are average dose rates at the plume centerline. At plume centerline, instantaneous values should range from 1/10 the indicated values to 10 times the indicated values. Several minutes worth of monitoring should average out close to the indicated value. The colored lines indicate the $2\sigma_y$ plume boundary. Outside the boundary, readings should be background. Between the boundary and the centerline, the average readings should be estimated based on a bell shaped curve corresponding to background at the plume edge and the value at plume centerline. All values are in milliroentgen per hour (mR/hr). Height of the detector above ground does not affect reading. Field Iodine concentrations are on the order of 10^{-15} to 10^{-16} µCi/ml throughout the scenario and therefore are non-detectable using portable sampling equipment.



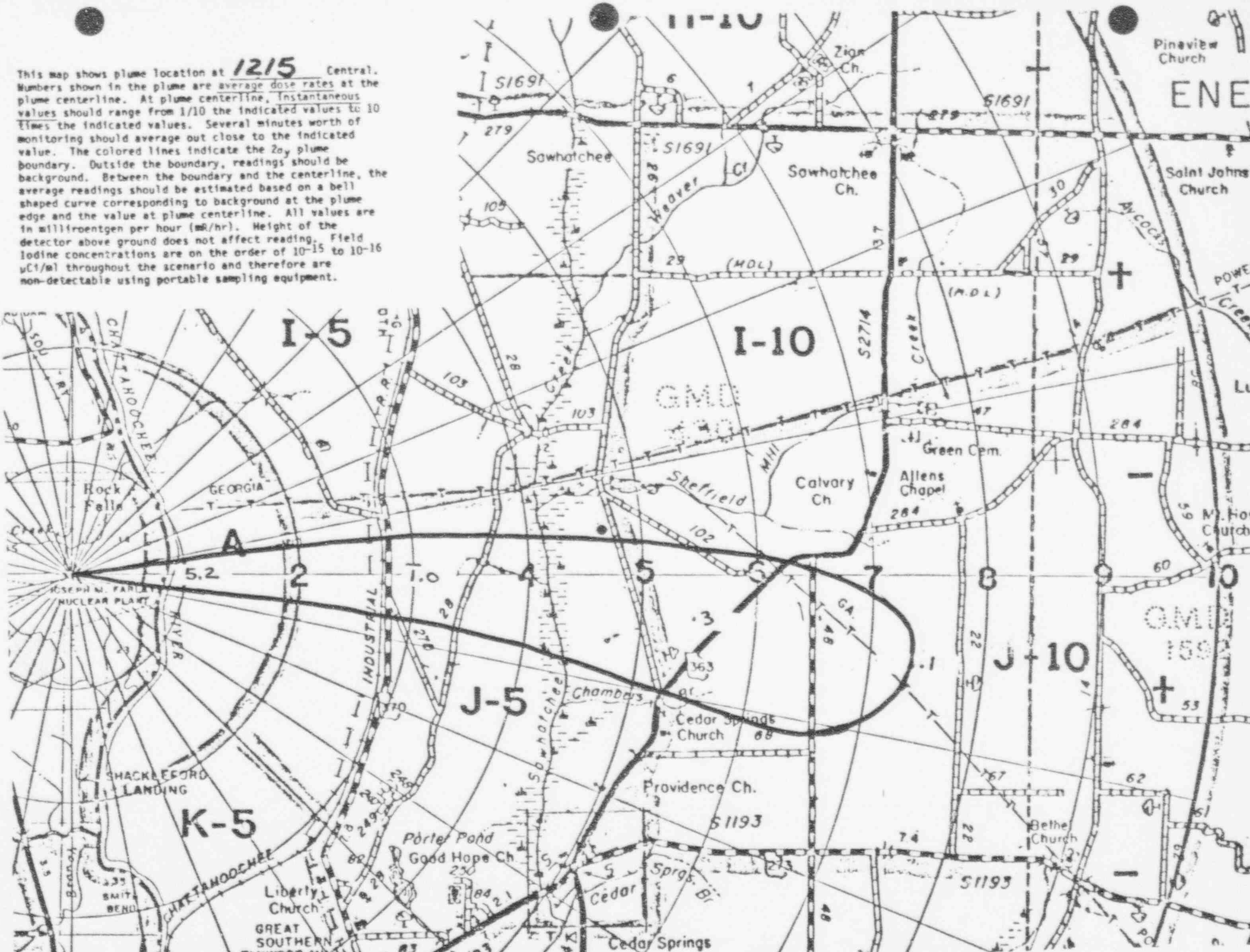
This map shows plume location at 1145 Central. Numbers shown in the plume are average dose rates at the plume centerline. At plume centerline, instantaneous values should range from 1/10 the indicated values to 10 times the indicated values. Several minutes worth of monitoring should average out close to the indicated value. The colored lines indicate the $2\sigma_y$ plume boundary. Outside the boundary, readings should be background. Between the boundary and the centerline, the average readings should be estimated based on a bell shaped curve corresponding to background at the plume edge and the value at plume centerline. All values are in milliroentgen per hour (mR/hr). Height of the detector above ground does not affect reading. Field Iodine concentrations are on the order of 10^{-15} to 10^{-16} μCi/ml throughout the scenario and therefore are non-detectable using portable sampling equipment.



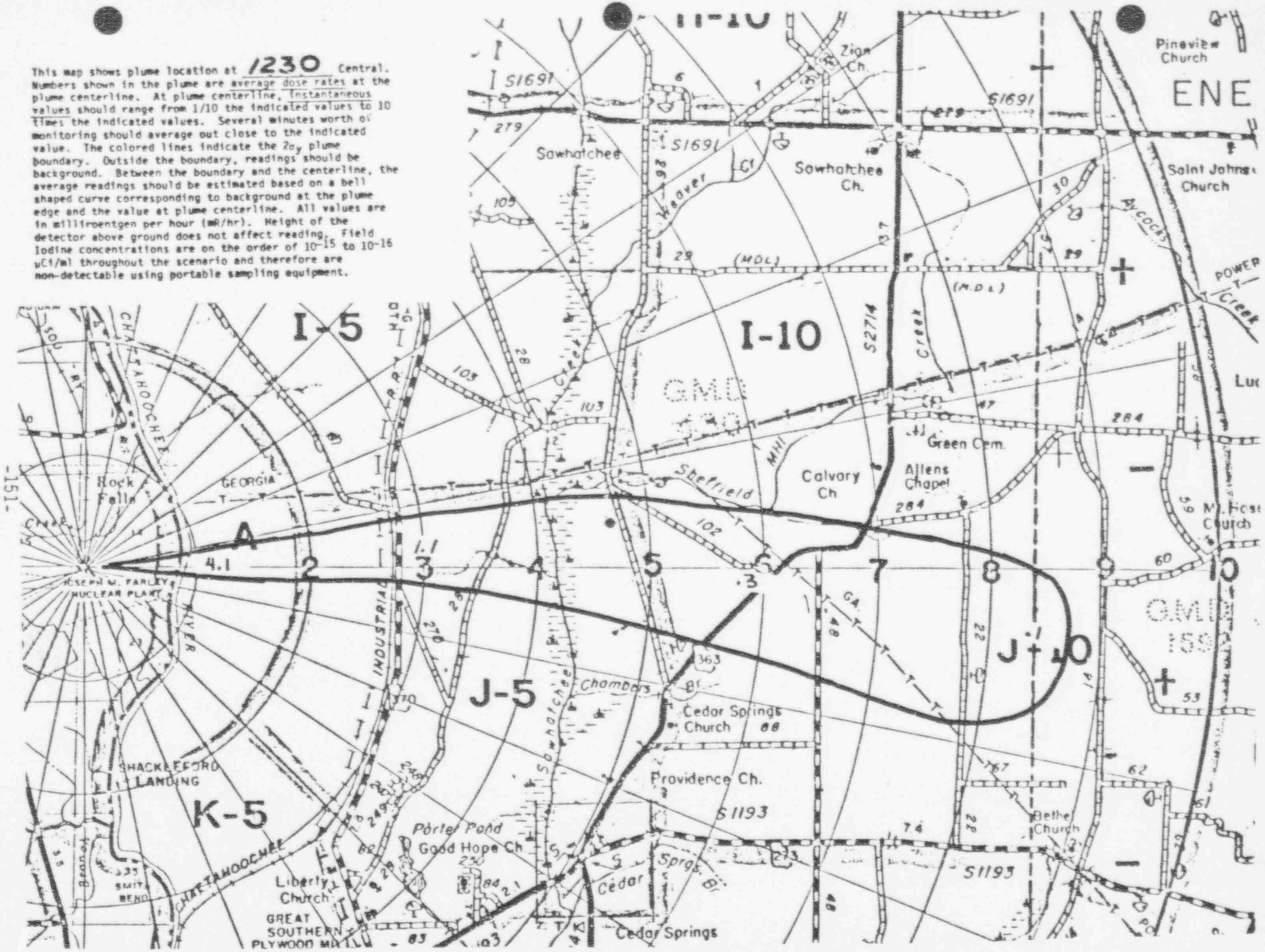
This map shows plume location at **1200** Central. Numbers shown in the plume are average dose rates at the plume centerline. At plume centerline, instantaneous values should range from 1/10 the indicated values to 10 times the indicated values. Several minutes worth of monitoring should average out close to the indicated value. The colored lines indicate the $2\sigma_y$ plume boundary. Outside the boundary, readings should be background. Between the boundary and the centerline, the average readings should be estimated based on a bell shaped curve corresponding to background at the plume edge and the value at plume centerline. All values are in milliroentgen per hour (mR/hr). Height of the detector above ground does not affect reading. Field Iodine concentrations are on the order of 10^{-15} to 10^{-16} μCi/ml throughout the scenario and therefore are non-detectable using portable sampling equipment.



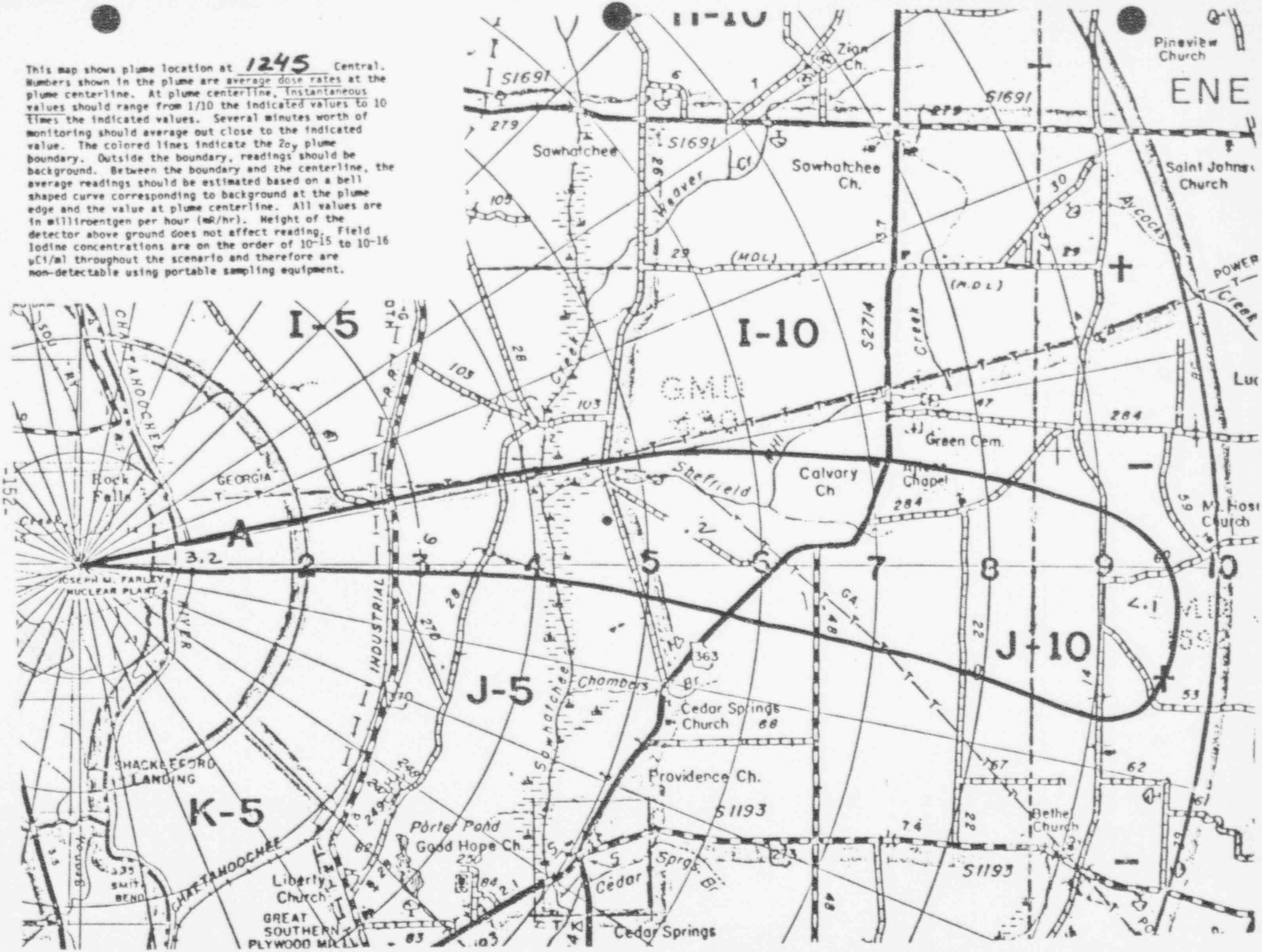
This map shows plume location at 1215 Central. Numbers shown in the plume are average dose rates at the plume centerline. At plume centerline, instantaneous values should range from 1/10 the indicated values to 10 times the indicated values. Several minutes worth of monitoring should average out close to the indicated value. The colored lines indicate the $2\sigma_y$ plume boundary. Outside the boundary, readings should be background. Between the boundary and the centerline, the average readings should be estimated based on a bell shaped curve corresponding to background at the plume edge and the value at plume centerline. All values are in milliroentgen per hour (mR/hr). Height of the detector above ground does not affect reading. Field Iodine concentrations are on the order of 10^{-15} to 10^{-16} µCi/ml throughout the scenario and therefore are non-detectable using portable sampling equipment.



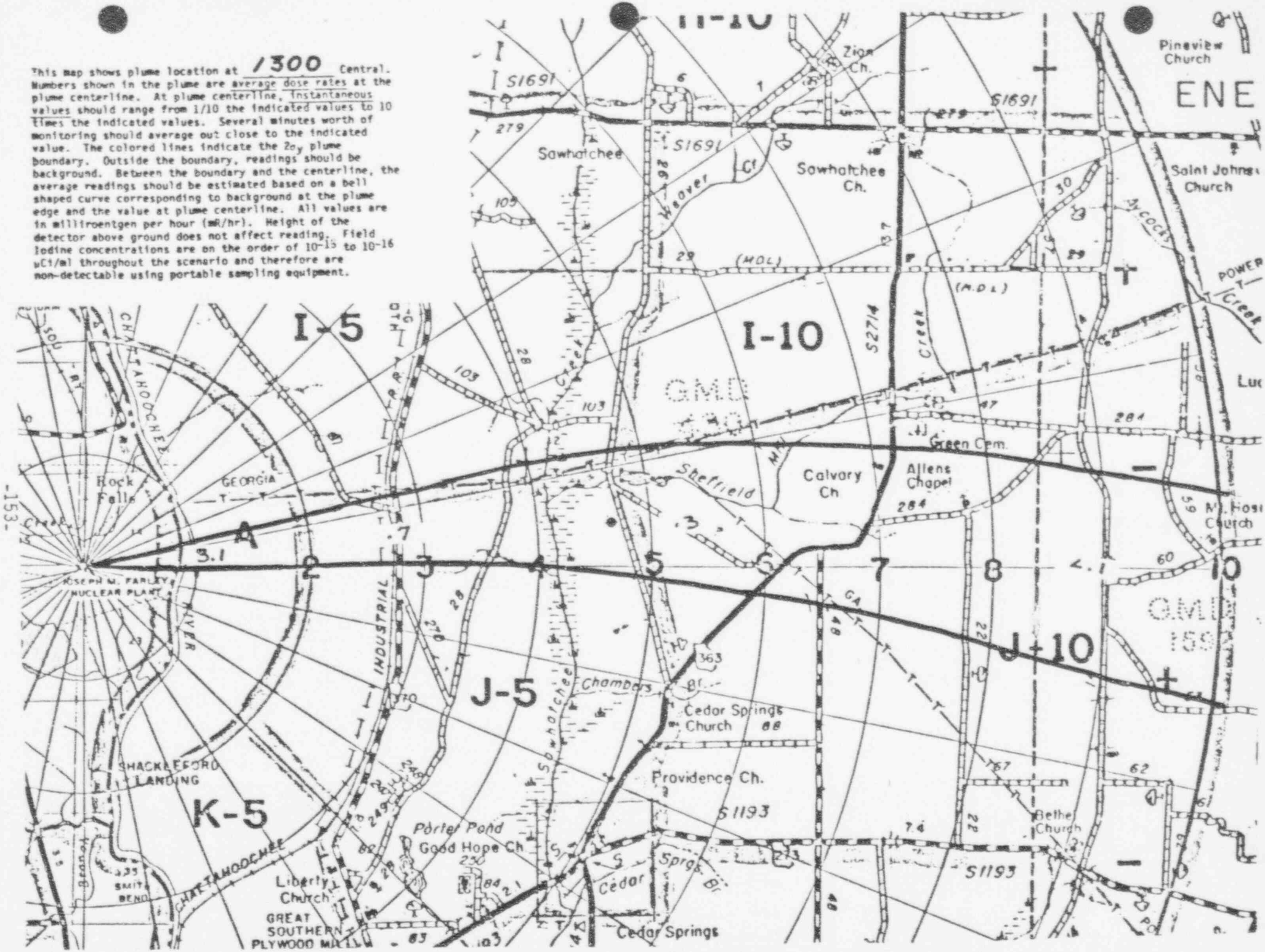
This map shows plume location at 1230 Central. Numbers shown in the plume are average dose rates at the plume centerline. At plume centerline, instantaneous values should range from 1/10 the indicated values to 10 times the indicated values. Several minutes worth of monitoring should average out close to the indicated value. The colored lines indicate the $2\sigma_y$ plume boundary. Outside the boundary, readings should be background. Between the boundary and the centerline, the average readings should be estimated based on a bell shaped curve corresponding to background at the plume edge and the value at plume centerline. All values are in milliroentgen per hour (mR/hr). Height of the detector above ground does not affect reading. Field Iodine concentrations are on the order of 10^{-15} to 10^{-16} μCi/ml throughout the scenario and therefore are non-detectable using portable sampling equipment.



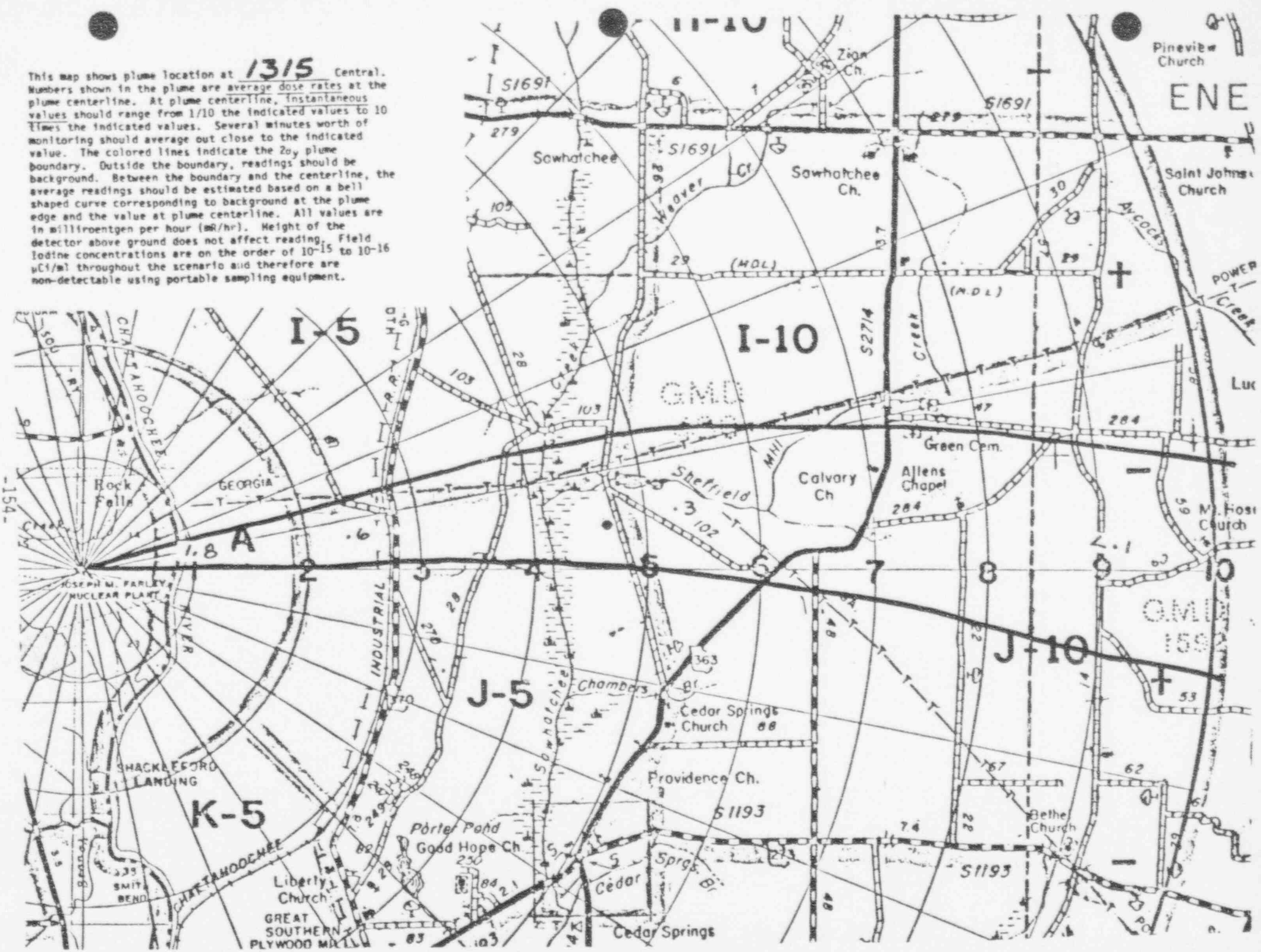
This map shows plume location at 1245 Central. Numbers shown in the plume are average dose rates at the plume centerline. At plume centerline, instantaneous values should range from 1/10 the indicated values to 10 times the indicated values. Several minutes worth of monitoring should average out close to the indicated value. The colored lines indicate the Zoy plume boundary. Outside the boundary, readings should be background. Between the boundary and the centerline, the average readings should be estimated based on a bell shaped curve corresponding to background at the plume edge and the value at plume centerline. All values are in milliroentgen per hour (mR/hr). Height of the detector above ground does not affect reading. Field Iodine concentrations are on the order of 10^{-15} to 10^{-16} µCi/ml throughout the scenario and therefore are non-detectable using portable sampling equipment.



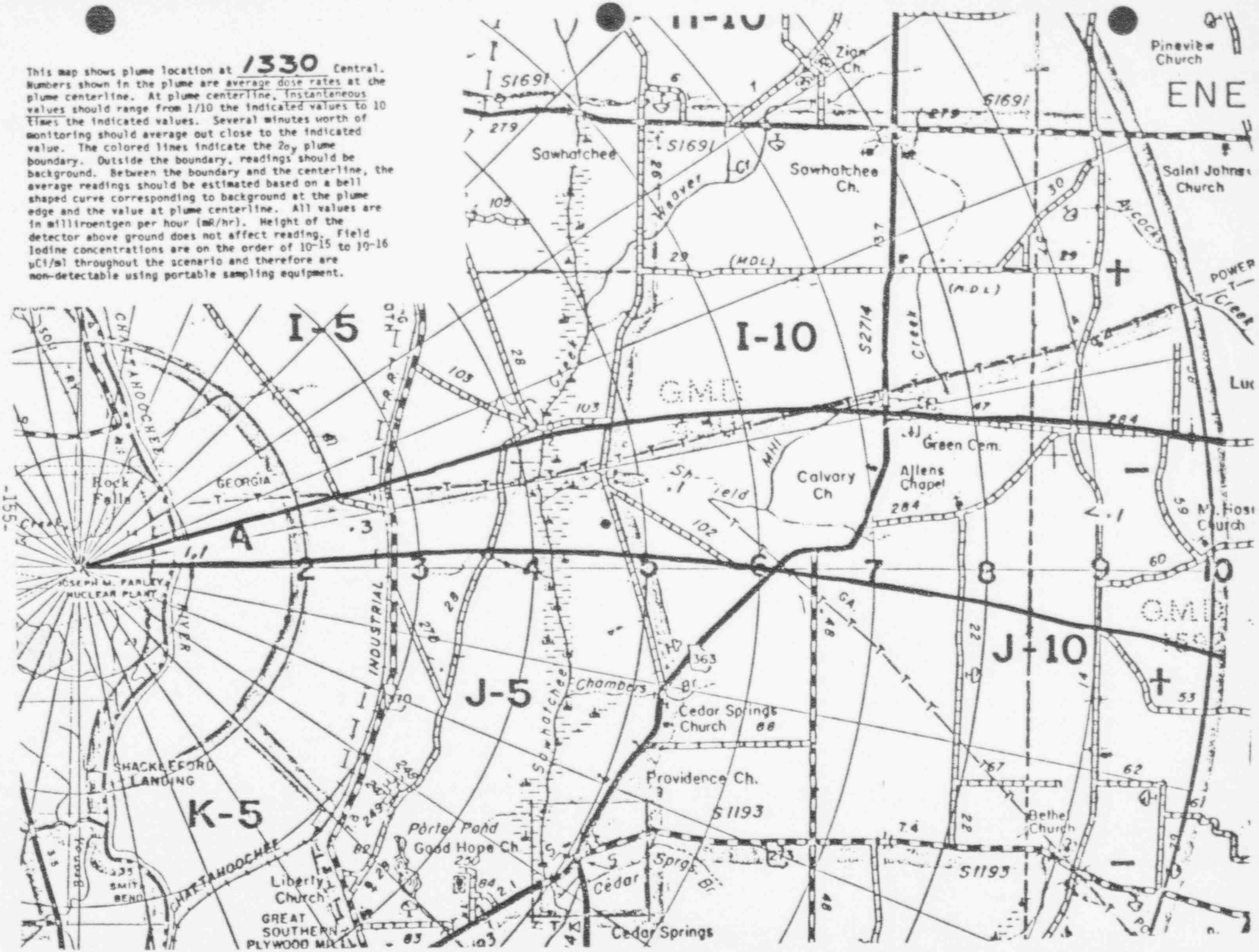
This map shows plume location at 1300 Central. Numbers shown in the plume are average dose rates at the plume centerline. At plume centerline, instantaneous values should range from 1/10 the indicated values to 10 times the indicated values. Several minutes worth of monitoring should average out close to the indicated value. The colored lines indicate the Zo_y plume boundary. Outside the boundary, readings should be background. Between the boundary and the centerline, the average readings should be estimated based on a bell shaped curve corresponding to background at the plume edge and the value at plume centerline. All values are in milliroentgen per hour (mR/hr). Height of the detector above ground does not affect reading. Field Iodine concentrations are on the order of 10^{-15} to 10^{-16} µCi/ml throughout the scenario and therefore are non-detectable using portable sampling equipment.



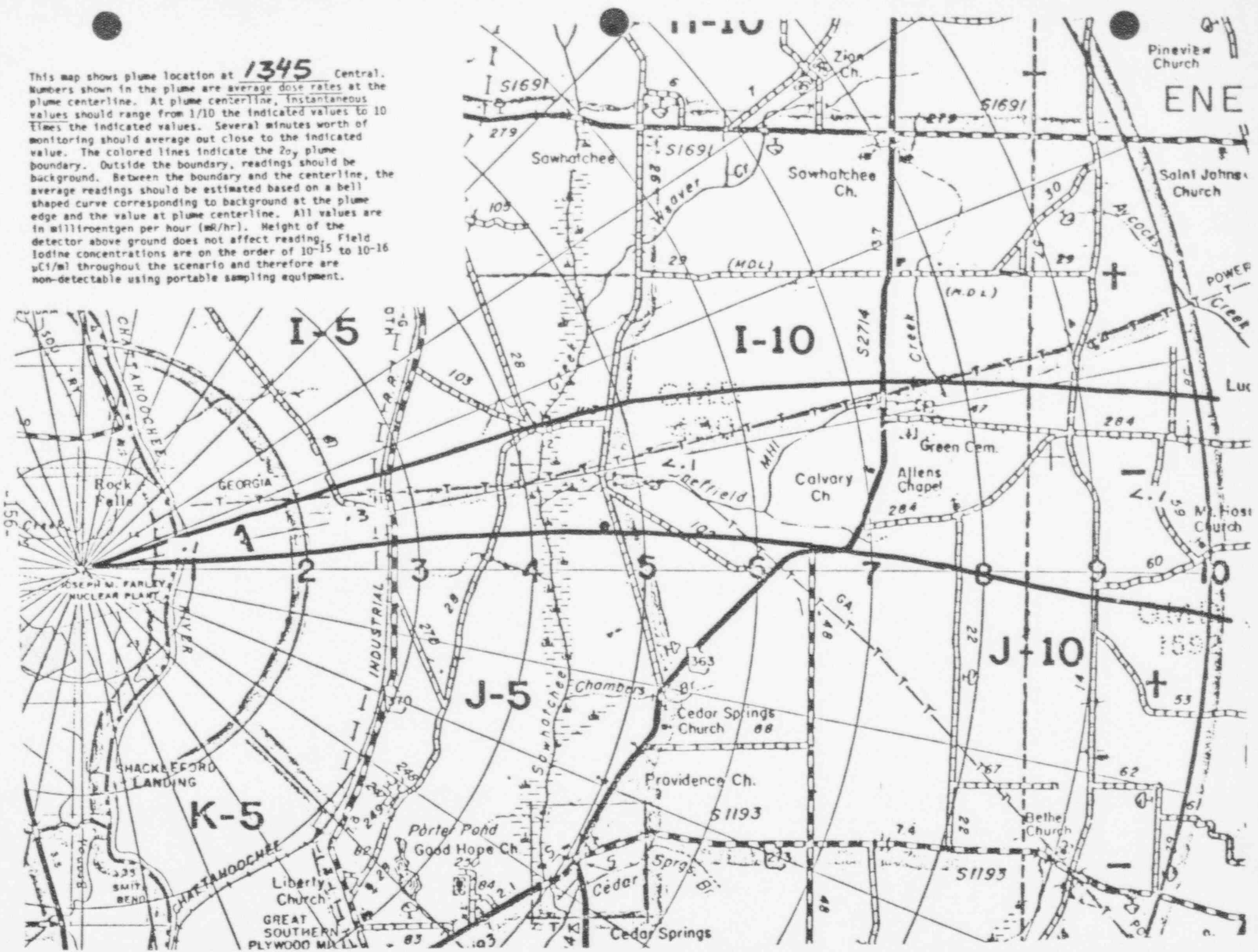
This map shows plume location at 1315 Central. Numbers shown in the plume are average dose rates at the plume centerline. At plume centerline, instantaneous values should range from 1/10 the indicated values to 10 times the indicated values. Several minutes worth of monitoring should average out close to the indicated value. The colored lines indicate the Zo_y plume boundary. Outside the boundary, readings should be background. Between the boundary and the centerline, the average readings should be estimated based on a bell shaped curve corresponding to background at the plume edge and the value at plume centerline. All values are in milliroentgen per hour (mR/hr). Height of the detector above ground does not affect reading. Field Iodine concentrations are on the order of 10^{-15} to 10^{-16} μCi/ml throughout the scenario and therefore are non-detectable using portable sampling equipment.



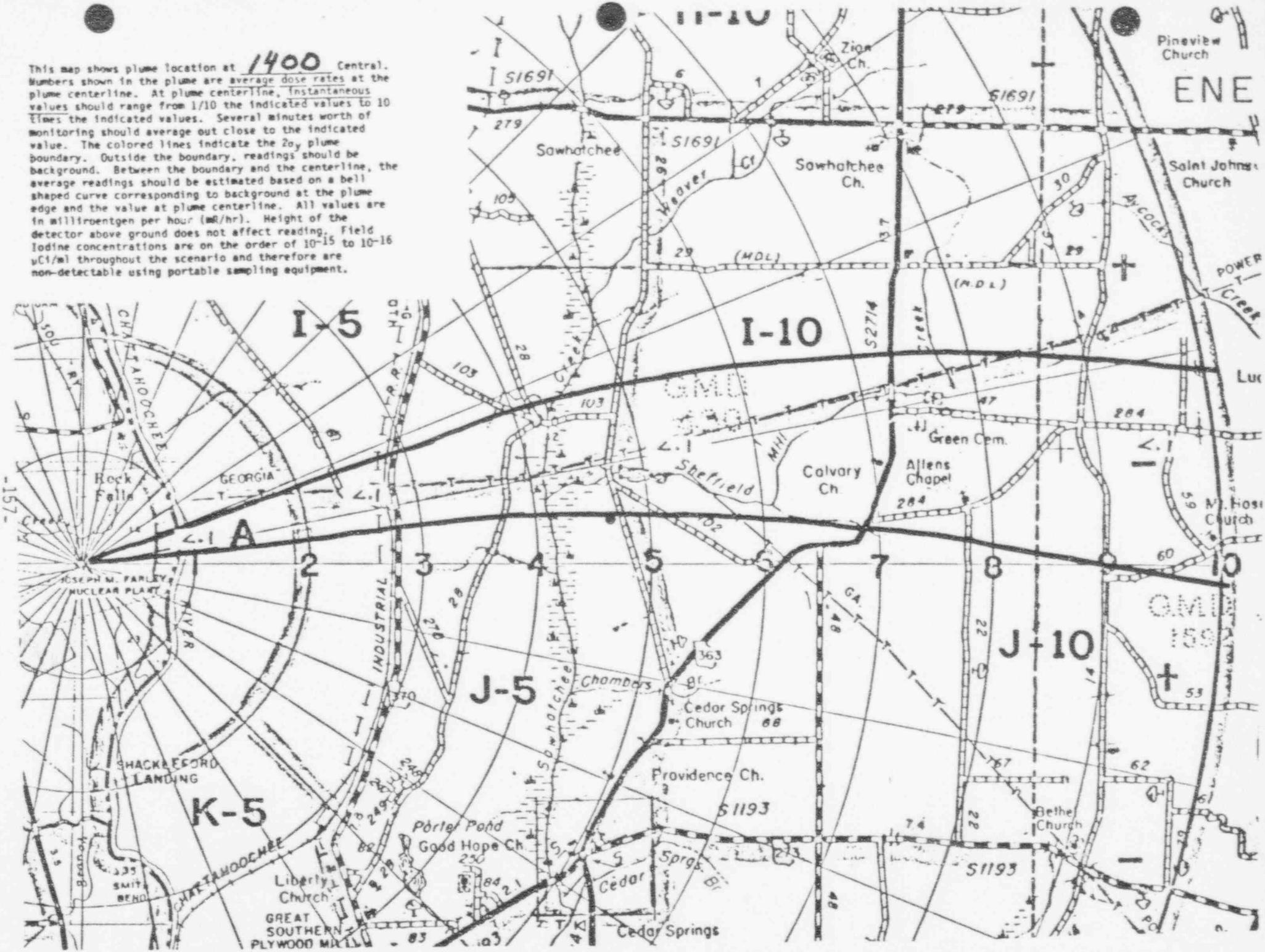
This map shows plume location at 1330 Central. Numbers shown in the plume are average dose rates at the plume centerline. At plume centerline, instantaneous values should range from 1/10 the indicated values to 10 times the indicated values. Several minutes worth of monitoring should average out close to the indicated value. The colored lines indicate the $2\sigma_y$ plume boundary. Outside the boundary, readings should be background. Between the boundary and the centerline, the average readings should be estimated based on a bell shaped curve corresponding to background at the plume edge and the value at plume centerline. All values are in milliroentgen per hour (mR/hr). Height of the detector above ground does not affect reading. Field Iodine concentrations are on the order of 10^{-15} to 10^{-16} μCi/ml throughout the scenario and therefore are non-detectable using portable sampling equipment.



This map shows plume location at 1345 Central. Numbers shown in the plume are average dose rates at the plume centerline. At plume centerline, instantaneous values should range from 1/10 the indicated values to 10 times the indicated values. Several minutes worth of monitoring should average out close to the indicated value. The colored lines indicate the $2\sigma_y$ plume boundary. Outside the boundary, readings should be background. Between the boundary and the centerline, the average readings should be estimated based on a bell shaped curve corresponding to background at the plume edge and the value at plume centerline. All values are in milliroentgen per hour (mR/hr). Height of the detector above ground does not affect reading. Field Iodine concentrations are on the order of 10^{-15} to 10^{-16} µCi/ml throughout the scenario and therefore are non-detectable using portable sampling equipment.



This map shows plume location at 1400 Central. Numbers shown in the plume are average dose rates at the plume centerline. At plume centerline, instantaneous values should range from 1/10 the indicated values to 10 times the indicated values. Several minutes worth of monitoring should average out close to the indicated value. The colored lines indicate the $2\sigma_y$ plume boundary. Outside the boundary, readings should be background. Between the boundary and the centerline, the average readings should be estimated based on a bell shaped curve corresponding to background at the plume edge and the value at plume centerline. All values are in milliroentgen per hour (mR/hr). Height of the detector above ground does not affect reading. Field Iodine concentrations are on the order of 10^{-15} to 10^{-16} μCi/ml throughout the scenario and therefore are non-detectable using portable sampling equipment.



METEOROLOGICAL INFORMATION

15 Minute Average Release Concentration and 15 Minute Average Meteorological DATA
STACK FLOW RATE = 75,000 cfm

	uCi/ml		MPH		FROM DEGREES		°F/165'
TIME	SPING NG AVG	SPING I2 AVG	35' WIND SPEED	150' WIND SPEED	35' DIRECTION	150' DIRECTION	ΔT
6:30	1.34 E-6	7.58 E-11	3.0	3.8	315	318	-0.75
6:45	1.35 E-6	7.59 E-11	3.2	3.6	313	315	-0.75
7:00	1.34 E-6	7.58 E-11	3.1	3.2	312	313	-0.75
7:15	1.34 E-6	7.58 E-11	3.3	3.2	310	310	-0.75
7.30	1.35 E-6	7.58 E-11	3.1	3.6	308	306	-0.75
7.45	8.38 E-6	9.22 E-11	3.3	3.8	305	304	-0.79
8.00	1.37 E-7	7.60 E-12	3.0	4.0	304	307	-0.80
8.15	1.57 E-8	2.22 E-14	2.3	3.6	302	304	-0.85
8.30	4.21 E-8	5.96 E-14	3.0	4.1	300	302	-0.91
8.45	6.54 E-8	9.25 E-14	3.2	4.2	299	301	-0.95
9.00	8.54 E-8	1.21 E-13	3.8	4.7	297	299	-1.01
9.15	5.30 E-7	7.50 E-13	4.1	5.2	296	295	-1.06
9.30	8.76 E-7	1.28 E-12	2.6	3.8	294	296	-1.10
9.45	9.39 E-7	1.42 E-12	3.3	4.5	291	293	-1.22
10.00	9.41 E-7	1.47 E-12	2.8	3.5	289	291	-1.28
10.15	9.23 E-7	1.48 E-12	2.3	3.6	287	288	-1.35
10.30	9.01 E-7	1.49 E-12	3.0	4.1	286	285	-1.39
10.45	1.75 E-2	2.97 E-8	3.2	4.2	283	284	-1.42
11.00	3.41 E-2	5.93 E-8	2.8	3.7	280	281	-1.44
11.15	3.32 E-2	5.91 E-8	3.5	4.5	278	276	-1.46

15 Minute Average Release Concentrations and 15 Minute Average Meteorological DATA
STACK FLOW RATE = 75,000 cfm

	uCi/ml		MPH		FROM DEGREES		°F/165'
TIME	SPING NG AVG	SPING I2 AVG	35' WIND SPEED	150' WIND SPEED	35' DIRECTION	150' DIRECTION	ΔT
11.30	3.24 E-2	5.89 E-8	3.7	4.6	275	277	-1.48
11.45	3.16 E-2	5.87 E-8	3.2	4.4	273	272	-1.49
12.00	2.32 E-2	4.38 E-8	3.0	4.1	271	270	-1.50
12.15	2.27 E-2	4.37 E-8	2.6	3.5	270	268	-1.51
12.30	2.22 E-2	4.36 E-8	3.2	4.4	267	268	-1.52
12.45	2.18 E-2	4.34 E-8	3.0	4.1	265	266	-1.54
13.00	2.14 E-2	4.33 E-8	3.5	4.4	263	262	-1.52
13.15	1.74 E-3	3.75 E-9	3.8	4.5	261	259	-1.51
13.30	6.86 E-4	1.50 E-9	4.1	5.0	258	257	-1.52
13.45	6.78 E-6	1.50 E-11	3.8	4.7	257	255	-1.51
14.00	6.70 E-7	1.43 E-12	3.2	4.3	255	256	-1.48
14.15	6.61 E-7	1.43 E-12	3.0	4.1	252	254	-1.47
14.30	6.53 E-7	1.43 E-12	2.3	3.4	251	253	-1.46
14.45	6.46 E-7	1.43 E-12	2.8	3.9	250	251	-1.42

Zone 18 Aviation Weather Forecast

From 8:30 to 12:30 use the forecasts below:

6 hour forecast
- Overcast at 5,000
- Slight chance of rain
- Winds - 275 at 3 (240 is "from" wind direction in degrees and 3 is windspeed in knots)

12 hour forecast (valid after 14:00)
- Scattered at 8,000
- Winds - 260 at 3

From 12:30 to end of exercise

6 hour forecast
- Scattered at 8,000
- Winds - 240 at 3

12 hour forecast (valid after 18:30)
- Clear
- Winds - 240 at 5

Public Weather Forecast

Current conditions (valid until 10:00)
- Cloudy with 20% chance of rain
- Temperature - 75°F
- Barometric Pressure - 30.10 and rising
- Winds - from west between 2 and 5 mph

Predicted
- Clearing during the afternoon
- High temperature in the low-70s
- Winds - from the west between 3 and 6 mph

SAMPLE DATA

REACTOR COOLANT SYSTEM SAMPLES

The attached tables provide simulated isotopic concentrations (uCi/ml) for noble gases and iodines for the reactor. Values are provided at 15 minute intervals in Central time. On the following page, isotopic values are provided that typically change only for fuel melt or overheat conditions. Since there are no fuel melt or overheat conditions, provide the given constant values with each sample provided.

In utilizing the tables, take the following information into account:

1. Prior to the 9:15 sample, the data is intended to represent 1% failed fuel RCS coolant diluted by makeup. At 9:15 the data shows 5% failed fuel.
2. Beginning with the 9:15 sample, the data is intended to represent the activity from 5% failed fuel RCS diluted by safety injection flow from the RWST.
3. The code calculating the concentrations did not have the ability to recognize concentrations below MDC values. Unreasonably low values should be treated as MDC.
4. If inquiries are made regarding isotopes not provided, indicate that that information is not available. DO NOT attempt to estimate other isotopic concentrations. Contact the lead controller if this presents a problem.

High levels of the below isotopes are indicative of fuel overheat or fuel melt conditions. Since only cladding damage occurs during this scenario, the following concentrations will be sufficient for RCS or Containment Sump samples any time during the exercise.

ISOTOPE	CONCENTRATION (uCi/ml)
Cs-134	1.48E-3
Cs-137	1.86E-3
Te-129	non-detectable
Te-132	non-detectable
Sr-89	7.42E-3
Sr-90	1.32E-4
Ba-140	1.73E-2
La-140	3.03E-1
La-142	non-detectable
Pr-144	non-detectable

RCS CONCENTRATIONS (uCi/ML)

ISOTOPE	815	830	845
KR-85	4.896E-1	4.255E-1	3.698E-1
KR-85M	2.112E+1	1.836E+1	1.595E+1
KR-87	4.128E+1	3.588E+1	3.118E+1
KR-88	5.953E+1	3.173E+1	4.495E+1
XE-131M	0.000E-0	0.000E-0	0.000E-0
XE-133	1.448E+2	1.252E+2	1.088E+2
XE-133M	0.000E-0	0.000E-0	0.000E-0
XE-135	2.976E+1	2.586E+1	2.248E+1
XE-135M	0.000E-0	0.000E-0	8.000E-8
XE-138	2.132E+3	1.13E+3	8.73E+2
I-131	4.189E+1	3.641E+1	3.164E+1
I-132	5.985E+1	5.201E+1	4.520E+1
I-133	8.161E+1	7.092E+1	6.163E+1
I-134	9.249E+1	8.037E+1	6.985E+1
I-135	7.617E+1	6.619E+1	5.752E+1

RCS CONCENTRATIONS (uCi/ML)

ISOTOPE	900	915	930	945	1000
KR-85	3.214E-01	6.521E-01	2.138E-01	7.865E-02	2.894E-02
KR-85M	1.386E+01	2.813E+01	8.866E+00	3.136E+00	1.109E+00
KR-87	2.709E+01	5.498E+01	1.571E+01	5.037E+00	1.615E+00
KR-88	3.907E+01	7.928E+01	2.443E+01	8.448E+00	2.922E+00
XE-131M	1.123E-04	2.123E-04	9.846E-05	4.239E-05	3.992E-05
XE-133	3.000E-01	3.102E-01	2.954E-01	2.163E-01	1.188E-01
XE-133M	7.912E-03	8.213E-03	7.257E-03	5.309E-03	2.912E-03
XE-135	6.723E-01	8.418E-01	6.593E-01	5.073E-01	2.859E-01
XE-135M	2.021E-01	2.129E-01	1.862E-01	1.019E-01	4.319E-02
XE-138	1.873E+00	7.831E-1	1.438E-1	5.832E-2	9.832E-3
I-131	2.749E+01	5.579E+01	1.827E+01	6.717E+00	2.469E+00
I-132	3.928E+01	7.970E+01	2.420E+01	8.246E+00	2.810E+00
I-133	5.356E+01	1.087E+02	3.533E+01	1.289E+01	4.701E+00
I-134	6.070E+01	1.232E+02	3.306E+01	9.957E+00	2.999E+00
I-135	4.999E+01	1.014E+02	3.240E+01	1.162E+01	4.164E+00

RCS CONCENTRATIONS (uCi/ML)

ISOTOPE	1015	1030	1045
KR-85	1.065E-2	3.917E-3	1.616E-3
KR-85M	3.923E-1	1.388E-1	5.503E-2
KR-87	5.178E-1	1.660E-1	5.969E-2
KR-88	1.010E-0	3.494E-1	1.355E-1
XE-131M	1.957E-5	8.992E-6	4.448E-6
XE-133	5.798E-2	2.653E-2	1.307E-2
XE-133M	1.420E-3	6.494E-4	3.196E-4
XE-135	1.412E-1	6.484E-2	3.186E-2
XE-135M	1.674E-2	6.238E-3	2.557E-3
XE-138	1.831E-3	4.382E-4	3.853E-5
I-131	9.076E-1	3.336E-1	1.375E-1
I-132	9.575E-1	3.263E-1	1.247E-1
I-133	1.715E-0	6.255E-1	2.558E-1
I-134	9.032E-1	2.720E-1	9.187E-2
I-135	1.493E-0	5.351E-1	2.151E-1

RCS CONCENTRATIONS (uCi/ML)

ISOTOPE	1100	1115	1130	1145
KR-85	6.665E-4	3.088E-4	1.423E-4	6.578E-5
KR-85M	2.182E-2	9.696E-3	4.308E-3	1.914E-3
KR-87	2.146E-2	8.643E-3	3.481E-3	1.402E-3
KR-88	5.254E-2	2.282E-2	9.915E-3	4.307E-3
XE-131M	2.139E-6	1.129E-6	5.865E-7	3.009E-7
XE-133	6.260E-3	3.290E-3	1.702E-3	8.699E-4
XE-133M	1.529E-4	8.029E-5	4.150E-5	2.119E-5
XE-135	1.516E-2	7.899E-3	4.043E-3	2.041E-3
XE-135M	1.039E-3	4.702E-4	2.123E-4	9.576E-5
XE-138	4.538E-6	5.181E-7	8.981E-8	9.913E-8
I-131	5.667E-2	2.616E-2	1.208E-2	5.578E-3
I-132	4.763E-2	2.039E-2	8.726E-3	3.735E-3
I-133	1.046E-1	4.795E-2	2.197E-2	1.007E-2
I-134	3.102E-2	1.174E-2	4.441E-3	1.680E-3
I-135	8.646E-2	3.893E-2	1.753E-2	7.895E-3

RCS CONCENTRATIONS (uCi/ML)

ISOTOPE	1200	1215	1230	1245
KR-85	3.806E-5	2.202E-5	1.274E-5	7.369E-6
KR-85M	1.065E-3	5.921E-4	3.293E-4	1.832E-4
KR-87	7.069E-4	3.564E-4	1.797E-4	9.060E-5
KR-88	2.342E-3	1.274E-3	6.927E-4	3.767E-4
XE-131M	1.914E-7	1.207E-7	7.558E-8	4.705E-8
XE-133	5.509E-4	3.460E-4	2.158E-4	1.338E-4
XE-133M	1.340E-5	8.410E-6	5.240E-6	3.246E-6
XE-135	1.276E-3	7.904E-4	4.860E-4	2.969E-4
XE-135M	5.482E-5	3.047E-5	1.718E-5	9.685E-6
XE-138	2.378E-9	7.327E-10	1.135E-10	8.853E-11
I-131	3.224E-3	1.864E-3	1.077E-3	6.226E-4
I-132	2.001E-3	1.072E-3	5.746E-4	3.079E-4
I-133	5.775E-3	3.312E-3	1.908E-3	1.090E-3
I-134	7.957E-4	3.768E-4	1.785E-4	8.453E-5
I-135	4.451E-3	2.509E-3	1.414E-3	7.972E-4

RCS CONCENTRATIONS (uCi/ML)

ISOTOPE	1300	1315	1330	1345
KR-85	4.263E-6	2.466E-6	1.427E-6	8.255E-7
KR-85M	1.019E-4	5.666E-5	3.151E-5	1.753E-5
KR-87	4.568E-5	2.303E-5	1.161E-5	5.855E-6
KR-88	2.048E-4	1.114E-4	6.058E-5	3.294E-5
XE-131M	2.914E-8	1.797E-8	1.104E-8	6.756E-9
XE-133	8.253E-5	5.069E-5	3.101E-5	1.890E-5
XE-133M	2.000E-6	1.227E-6	7.499E-7	4.567E-7
XE-135	1.804E-4	1.091E-4	6.567E-5	3.940E-5
XE-135M	5.460E-6	3.078E-6	1.735E-6	9.781E-7
XE-138	2.456E-11	8.432E-11	1.100E-11	7.684E-12
I-131	3.599E-4	2.088E-4	1.202E-4	6.950E-5
I-132	1.650E-4	8.840E-5	4.736E-5	2.538E-5
I-133	6.252E-4	3.586E-4	2.057E-4	1.180E-4
I-134	4.083E-5	1.896E-5	8.980E-6	4.253E-6
I-135	4.494E-4	2.533E-4	1.428E-4	8.051E-5

RCS DATA

(SAMPLE POINT RCS/PASS)

TIME	pH @ 25°C	BORON (ppm)	Cl (ppm)
0700	6.10	750	<0.01
0715	6.10	750	<0.01
0730	6.10	750	<0.01
0745	6.07	760	<0.01
0800	6.04	775	<0.01
0815	6.03	800	<0.01
0830	6.03	800	<0.01
0845	6.01	825	<0.01
0900	5.98	875	<0.01
0915	5.93	1000	<0.01
0930	5.75	1250	<0.01
0945	5.55	1500	<0.01
1000	5.15	1800	<0.01
1015	4.82	2250	<0.01
1030	4.82	2250	<0.01
1045	4.82	2250	<0.01
1100	4.82	2250	<0.01

NOTE: NUMBERS BASED ON INITIAL RWST OF 2300 ppm BORON.

CONTAINMENT SUMP SAMPLES

The attached tables, are to be used in the exercise to provide Containment Sump Samples, if required. Containment Sump Sample Data is to be calculated based on an assumption that 1% of the containment noble gases inventory is in solution and 99% of the containment I_2 inventory is in solution.

ISOTOPE	900	915	930	945	1000	1015	1030	1045	1100	1115
KR-85	0.000E+00	4.584E-02	3.693E-02	3.333E-02	3.394E-02	2.990E-02	2.997E-02	2.658E-02	2.652E-02	2.644E-02
KR-85M	0.000E+00	1.978E+00	1.531E+00	1.329E+00	1.301E+00	1.102E+00	1.062E+00	9.055E-01	8.683E-01	8.323E-01
KR-87	0.000E+00	3.865E+00	2.713E+00	2.134E+00	1.895E+00	1.454E+00	1.271E+00	9.823E-01	8.538E-01	7.420E-01
KR-88	0.000E+00	5.571E+00	4.220E+00	3.580E+00	3.428E+00	2.839E+00	2.675E+00	2.229E+00	2.090E+00	1.961E+00
XE-131M	0.000E+00	9.364E-06	1.701E-05	3.068E-05	4.683E-05	5.495E-05	6.881E-05	7.320E-05	8.511E-05	9.690E-05
XE-133	0.000E+00	4.475E-02	5.102E-02	9.165E-02	1.393E-01	1.610E-01	2.031E-01	2.151E-01	2.490E-01	2.825E-01
XE-133M	0.000E+00	4.184E-04	1.253E-03	2.250E-03	3.417E-03	3.990E-03	4.969E-03	5.259E-03	6.084E-03	6.893E-03
XE-135	0.000E+00	4.817E-02	1.138E-01	2.150E-01	3.354E-01	3.967E-01	4.962E-01	5.242E-01	6.033E-01	6.781E-01
XE-135M	0.000E+00	2.493E-02	3.215E-02	4.318E-02	5.067E-02	4.702E-02	4.774E-02	4.225E-02	4.133E-02	4.037E-02
XE-138	0.000E+00	1.718E-04	5.479E-05	2.247E-05	1.075E-05	4.503E-06	2.154E-06	9.159E-07	4.382E-07	2.574E-07
TOTAL NG	0.000E+00	1.158E+01	8.699E+00	7.429E+00	7.187E+00	6.033E+00	5.790E+00	4.930E+00	4.738E+00	4.570E+00
I-131	0.000E+00	5.231E+01	4.208E+01	3.796E+01	3.861E+01	3.399E+01	3.404E+01	3.018E+01	3.005E+01	2.995E+01
I-132	0.000E+00	7.470E+01	5.571E+01	4.660E+01	4.395E+01	3.585E+01	3.330E+01	2.736E+01	2.527E+01	2.333E+01
I-133	0.000E+00	1.019E+02	8.136E+01	7.281E+01	7.352E+01	6.422E+01	6.383E+01	5.614E+01	5.551E+01	5.488E+01
I-134	0.000E+00	1.154E+02	7.612E+01	5.626E+01	4.481E+01	3.383E+01	2.776E+01	1.852E+01	1.646E+01	1.343E+01
I-135	0.000E+00	9.506E+01	7.462E+01	6.564E+01	6.514E+01	5.590E+01	5.461E+01	4.719E+01	4.587E+01	4.456E+01
TOTAL IOD.	0.000E+00	4.394E+02	3.299E+02	2.793E+02	2.660E+02	2.238E+02	2.135E+02	1.794E+02	1.732E+02	1.661E+02
CS-134	0.000E+00	1.194E-03	7.957E-04	6.820E-04	6.820E-04	5.968E-04	5.968E-04	5.305E-04	5.305E-04	5.305E-04
CS-137	0.000E+00	1.500E-03	1.000E-03	8.571E-04	8.571E-04	7.500E-04	7.500E-04	6.667E-04	6.667E-04	6.667E-04
SR-89	0.000E+00	5.984E-03	3.989E-03	3.419E-03	3.419E-03	2.992E-03	2.992E-03	2.659E-03	2.659E-03	2.659E-03
SR-90	0.000E+00	1.065E-04	7.097E-05	6.083E-05	6.083E-05	5.323E-05	5.323E-05	4.731E-05	4.731E-05	4.731E-05
BA-140	0.000E+00	1.395E-02	9.301E-03	7.972E-03	7.972E-03	6.976E-03	6.976E-03	6.201E-03	6.201E-03	6.201E-03
LA-140	0.000E+00	2.444E-01	1.629E-01	1.396E-01	1.396E-01	1.222E-01	1.222E-01	1.086E-01	1.086E-01	1.086E-01
TOTAL	0.000E+00	2.671E-01	1.781E-01	1.526E-01	1.526E-01	1.335E-01	1.335E-01	1.187E-01	1.187E-01	1.187E-01

Note: Due to the initial small RCS Leak, CTMT 105' sump level does not indicate a level until 9:15.

ISOTOPE	1130	1145	1200	1215	1230	1245	1300	1315	1330	1345
KR-85	2.635E-02	2.366E-02	2.361E-02	2.355E-02	2.350E-02	2.344E-02	2.339E-02	2.123E-02	1.457E-02	1.108E-02
KR-85M	7.978E-01	6.882E-01	6.603E-01	6.333E-01	6.075E-01	5.827E-01	5.590E-01	4.878E-01	3.218E-01	2.354E-01
KR-87	6.448E-01	5.042E-01	4.383E-01	3.812E-01	3.315E-01	2.883E-01	2.506E-01	1.982E-01	1.186E-01	7.864E-02
KR-88	1.836E+00	1.549E+00	1.453E+00	1.362E+00	1.278E+00	1.198E+00	1.124E+00	9.590E-01	6.187E-01	4.424E-01
XE-131M	1.086E-04	1.082E-04	1.187E-04	1.291E-04	1.394E-04	1.497E-04	1.599E-04	1.547E-04	1.127E-04	9.078E-05
XE-133	3.152E-01	3.128E-01	3.416E-01	3.701E-01	3.981E-01	4.257E-01	4.529E-01	4.364E-01	3.167E-01	2.539E-01
XE-133M	7.686E-03	7.618E-03	8.313E-03	8.995E-03	9.666E-03	1.033E-02	1.098E-02	1.056E-02	7.659E-03	6.134E-03
XE-135	7.488E-01	7.340E-01	7.914E-01	8.454E-01	8.966E-01	9.445E-01	9.896E-01	9.389E-01	6.708E-01	5.992E-01
XE-135M	3.933E-02	3.444E-02	3.350E-02	3.258E-02	3.168E-02	3.082E-02	2.995E-02	2.649E-02	1.772E-02	1.314E-02
XE-138	1.003E-07	4.319E-08	2.067E-08	9.887E-09	4.729E-09	2.263E-09	1.083E-09	4.709E-10	1.549E-10	5.646E-11
TOTAL NG	4.416E+00	3.854E+00	3.750E+00	3.658E+00	3.576E+00	3.504E+00	3.441E+00	3.079E+00	2.087E+00	1.640E+00
I-131	2.999E+01	2.675E+01	2.666E+01	2.657E+01	2.650E+01	2.640E+01	2.633E+01	2.387E+01	1.637E+01	1.245E+01
I-132	2.155E+01	1.791E+01	1.655E+01	1.529E+01	1.413E+01	1.306E+01	1.207E+01	1.015E+01	6.450E+00	4.545E+00
I-133	5.426E+01	4.827E+01	4.775E+01	4.724E+01	4.674E+01	4.623E+01	4.573E+01	4.117E+01	2.801E+01	2.113E+01
I-134	1.096E+01	8.055E+00	6.579E+00	5.375E+00	4.389E+00	3.585E+00	2.929E+00	2.176E+00	1.222E+00	7.616E-01
I-135	4.329E+01	3.786E+01	3.681E+01	3.578E+01	3.479E+01	3.381E+01	3.288E+01	2.909E+01	1.915E+01	1.442E+01
TOTAL IOD.	1.601E+02	1.388E+02	1.344E+02	1.303E+02	1.265E+02	1.231E+02	1.199E+02	1.064E+02	7.151E+01	5.331E+01
CS-134	5.305E-04	4.774E-04	4.774E-04	4.774E-04	4.774E-04	4.774E-04	4.774E-04	4.340E-04	2.983E-04	2.273E-04
CS-137	6.667E-04	6.000E-04	6.000E-04	6.000E-04	6.000E-04	6.000E-04	6.000E-04	5.455E-04	3.749E-04	2.857E-04
SR-89	2.659E-03	2.394E-03	2.394E-03	2.394E-03	2.394E-03	2.394E-03	2.394E-03	2.176E-03	1.496E-03	1.140E-03
SR-90	4.731E-05	4.258E-05	4.258E-05	4.258E-05	4.258E-05	4.258E-05	4.258E-05	3.871E-05	2.661E-05	2.027E-05
BA-140	6.201E-03	5.581E-03	5.581E-03	5.581E-03	5.581E-03	5.581E-03	5.581E-03	5.073E-03	3.487E-03	2.657E-03
LA-140	1.086E-01	9.774E-02	9.774E-02	9.774E-02	9.774E-02	9.774E-02	9.774E-02	8.886E-02	6.108E-02	4.654E-02
TOTAL	1.187E-01	1.068E-01	1.068E-01	1.068E-01	1.068E-01	1.068E-01	1.068E-01	9.712E-02	6.676E-02	5.087E-02

ISOTOPE	1400	1415	1430	1445
KR-85	8.952E-03	7.509E-03	6.466E-03	5.678E-03
KR-85M	1.828E-01	1.474E-01	1.220E-01	1.030E-01
KR-87	5.536E-02	4.047E-02	3.037E-02	2.324E-02
KR-88	3.359E-01	2.649E-01	2.144E-01	1.770E-01
XE-131M	7.729E-05	6.868E-05	6.165E-05	5.664E-05
XE-133	2.154E-01	1.893E-01	1.703E-01	1.559E-01
XE-133M	5.199E-03	4.564E-03	4.103E-03	3.752E-03
XE-135	4.419E-01	3.820E-01	3.381E-01	3.045E-01
XE-135M	1.034E-02	8.452E-03	7.089E-03	6.068E-03
XE-138	2.181E-11	8.755E-12	3.607E-12	1.515E-12
TOTAL NG	1.256E+00	1.045E+00	8.929E-01	7.791E-01
I-131	1.004E+01	8.417E+00	7.242E+00	6.355E+00
I-132	3.400E+00	2.642E+00	2.107E+00	1.713E+00
I-133	1.692E+01	1.408E+01	1.202E+01	1.046E+01
I-134	5.036E-01	3.459E-01	2.438E-01	1.788E-01
I-135	1.135E+01	9.277E+00	7.784E+00	6.660E+00
TOTAL IOD.	4.222E+01	3.476E+01	2.939E+01	2.537E+01
CS-134	1.836E-04	1.540E-04	1.326E-04	1.164E-04
CS-137	2.307E-04	1.935E-04	1.667E-04	1.463E-04
SR-89	9.205E-04	7.721E-04	6.649E-04	5.838E-04
SR-90	1.638E-05	1.374E-05	1.183E-05	1.039E-05
BA-140	2.146E-03	1.800E-03	1.550E-03	1.361E-03
LA-140	3.759E-02	3.153E-02	2.715E-02	2.384E-02
TOTAL	4.109E-02	3.446E-02	2.968E-02	2.606E-02

Containment Sump Level and Volume

TIME	900	915	930	945	1000	1015	1030	1045	1100	1115
CTMT LVL(FT)	0.0	0.4	0.6	0.7	0.7	0.8	0.8	0.9	0.9	0.9
VOLUME(ML)	0.000E+00	1.240E+08	1.860E+08	2.170E+08	2.170E+08	2.480E+08	2.480E+08	2.790E+08	2.790E+08	2.790E+08

TIME	1130	1145	1200	1215	1230	1245	1300	1315	1330	1345
CTMT LVL(FT)	0.9	1.0	1.0	1.0	1.0	1.0	1.0	1.1	1.6	2.1
VOLUME(ML)	2.790E+08	3.100E+08	3.100E+08	3.100E+08	3.100E+08	3.100E+08	3.100E+08	3.410E+08	4.961E+08	6.511E+08

TIME	1400	1415	1430	1445
CTMT LVL(FT)	2.6	3.1	3.6	4.1
VOLUME(ML)	8.061E+08	9.610E+08	1.116E+09	1.271E+09

Note: Due to the initial small RCS Leak, CTMT 105' sump level does not indicate a level until 9:15.

CONTAINMENT SUMP

TIME	BORON (ppm)	Cl (ppm)
0900	100	0.150
0915	400	0.150
0930	750	0.170
0945	810	0.175
1000	860	0.159
1015	905	0.219
1030	960	0.300
1045	1005	0.327
1100	1045	0.509
1115	1085	0.419
1130	1125	0.471
1145	1185	0.519
1200	1245	0.319
1215	1300	0.216
1230	1375	0.150
1245	1435	0.298
1300	1500	0.300
1315	1500	0.327
1330	2000	0.491

STACK SAMPLES

The attached tables provide stack sample data. Data is provided at 15 minute intervals. Instantaneous readings for stack monitors (R-14, R-22, R-21, SPING NG and SPING I-131) can be obtained from the PROCESS MONITOR READING TABLE. Monitor readings should not be provided unless specifically requested.

NOTE: The isotopic concentrations do not take into account MDC values. Unreasonably low values should be stated as MDC.

STACK SAMPLES (uCi/ml)

CENTRAL TIME

	8:15	8:30	8:45
STACK SAMPLE			
AR-41	0.000E0	0.000E0	0.000E0
KR-85	4.896E-11	8.973E-11	1.252E-10
KR-85M	2.112E-9	3.871E-9	5.399E-9
KR-87	4.128E-9	7.565E-9	1.055E-8
KR-88	5.952E-9	1.091E-8	1.522E-8
KR-89	0.000E0	0.000E0	0.000E0
KR-90	0.000E0	0.000E0	0.000E0
XE-131M	0.000E0	0.000E0	0.000E0
XE-133	1.440E-8	2.639E-8	3.681E-8
XE-133M	0.000E0	0.000E0	0.000E0
XE-135	2.976E-9	5.454E-9	7.608E-9
XE-135M	0.000E0	0.000E0	0.000E0
I-131	4.189E-14	7.677E-14	1.071E-13
I-132	5.984E-14	1.097E-13	1.530E-13
I-133	8.161E-14	1.495E-13	2.086E-13
I-134	9.249E-14	1.695E-13	2.364E-13
I-135	7.616E-14	1.396E-13	1.947E-13

STACK SAMPLES (uCi/ml)

CENTRAL TIME

9:00		9:15		9:30		9:45	
STACK SAMPLE		STACK SAMPLE		STACK SAMPLE		STACK SAMPLE	
AR-41	0.000E0	AR-41	0.000E0	AR-41	0.000E0	AR-41	0.000E0
KR-85	1.559E-10	KR-85	1.338E-9	KR-85	1.617E-9	KR-85	1.703E-9
KR-85M	6.727E-9	KR-85M	5.773E-8	KR-85M	6.705E-8	KR-85M	6.789E-8
KR-87	1.315E-8	KR-87	1.128E-7	KR-87	1.188E-7	KR-87	1.090E-7
KR-88	1.896E-8	KR-88	1.627E-7	KR-88	1.848E-7	KR-88	1.829E-7
KR-89	0.000E0	KR-89	0.000E0	KR-89	0.000E0	KR-89	0.000E0
KR-90	0.000E0	KR-90	0.000E0	KR-90	0.000E0	KR-90	0.000E0
XE-131M	0.000E0	XE-131M	0.000E0	XE-131M	3.723E-16	XE-131M	7.836E-16
XE-133	4.587E-8	XE-133	3.936E-7	XE-133	4.749E-7	XE-133	4.995E-7
XE-133M	0.000E0	XE-133M	0.000E0	XE-133M	2.744E-14	XE-133M	5.746E-14
XE-135	9.479E-9	XE-135	8.134E-8	XE-135	9.644E-8	XE-135	9.966E-8
XE-135M	0.000E0	XE-135M	0.000E0	XE-135M	7.042E-13	XE-135M	1.103E-12
I-131	1.334E-13	I-131	1.145E-12	I-131	1.382E-12	I-131	1.454E-12
I-132	1.906E-13	I-132	1.636E-12	I-132	1.830E-12	I-132	1.785E-12
I-133	2.599E-13	I-133	2.230E-12	I-133	2.672E-12	I-133	2.790E-12
I-134	2.946E-13	I-134	2.528E-12	I-134	2.500E-12	I-134	2.156E-12
I-135	2.426E-13	I-135	2.082E-12	I-135	2.451E-12	I-135	2.515E-12

STACK SAMPLES (uCi/ml)

CENTRAL TIME

10:00		10:15		10:30		10:45	
STACK SAMPLE		STACK SAMPLE		STACK SAMPLE		STACK SAMPLE	
AR-41	0.000E0	AR-41	0.000E0	AR-41	0.000E0	AR-41	0.000E0
KR-85	1.734E-9	KR-85	1.746E-9	KR-85	1.750E-9	KR-85	6.987E-5
KR-85M	6.648E-8	KR-85M	6.434E-8	KR-85M	6.201E-8	KR-85M	2.380E-3
KR-87	9.680E-8	KR-87	8.492E-8	KR-87	7.419E-8	KR-87	2.581E-3
KR-88	1.751E-7	KR-88	1.657E-7	KR-88	1.561E-7	KR-88	5.859E-3
KR-89	0.000E0	KR-89	0.000E0	KR-89	0.000E0	KR-89	0.000E0
KR-90	0.000E0	KR-90	0.000E0	KR-90	0.000E0	KR-90	0.000E0
XE-131M	1.196E-15	XE-131M	1.605E-15	XE-131M	2.009E-15	XE-131M	9.617E-11
XE-133	5.080E-7	XE-133	5.107E-7	XE-133	5.113E-7	XE-133	2.038E-2
XE-133M	8.728E-14	XE-133M	1.165E-13	XE-133M	1.451E-13	XE-133M	6.910E-9
XE-135	9.960E-8	XE-135	9.839E-8	XE-135	9.678E-8	XE-135	3.791E-3
XE-135M	1.294E-12	XE-135M	1.373E-12	XE-135M	1.394E-12	XE-135M	5.529E-8
I-131	1.480E-12	I-131	1.488E-12	I-131	1.491E-12	I-131	5.945E-8
I-132	1.684E-12	I-132	1.570E-12	I-132	1.458E-12	I-132	5.390E-8
I-133	2.818E-12	I-133	2.812E-12	I-133	2.795E-12	I-133	1.106E-7
I-134	1.797E-12	I-134	1.481E-12	I-134	1.216E-12	I-134	3.972E-8
I-135	2.496E-12	I-135	2.448E-12	I-135	2.391E-12	I-135	9.382E-8

STACK SAMPLES (uCi/ml)

CENTRAL TIME

11:00		11:15		11:30		11:45	
STACK SAMPLE		STACK SAMPLE		STACK SAMPLE		STACK SAMPLE	
AR-41	0.000E0	AR-41	0.000E0	AR-41	0.000E0	AR-41	0.000E0
KR-85	6.960E-5	KR-85	6.948E-5	KR-85	6.928E-5	KR-85	6.907E-5
KR-85M	2.282E-3	KR-85M	2.187E-3	KR-85M	2.097E-3	KR-85M	2.010E-3
KR-87	2.243E-3	KR-87	1.950E-3	KR-87	1.694E-3	KR-87	1.472E-3
KR-88	5.493E-3	KR-88	5.148E-3	KR-88	4.825E-3	KR-88	4.522E-3
KR-89	0.000E0	KR-89	0.000E0	KR-89	0.000E0	KR-89	0.000E0
KR-90	0.000E0	KR-90	0.000E0	KR-90	0.000E0	KR-90	0.000E0
XE-131M	1.118E-10	XE-131M	1.273E-10	XE-131M	1.427E-10	XE-131M	1.580E-10
XE-133	2.030E-2	XE-133	2.021E-2	XE-133	2.013E-2	XE-133	2.004E-2
XE-133M	7.993E-9	XE-133M	9.055E-9	XE-133M	1.010E-8	XE-133M	1.112E-8
XE-135	3.710E-3	XE-135	3.630E-3	XE-135	3.551E-3	XE-135	3.474E-3
XE-135M	5.429E-8	XE-135M	5.304E-8	XE-135M	5.167E-8	XE-135M	5.027E-8
I-131	5.924E-8	I-131	5.902E-8	I-131	5.879E-8	I-131	5.857E-8
I-132	4.979E-8	I-132	4.599E-8	I-132	4.247E-8	I-132	3.922E-8
I-133	1.094E-7	I-133	1.082E-7	I-133	1.069E-7	I-133	1.057E-7
I-134	3.243E-8	I-134	2.648E-8	I-134	2.161E-8	I-134	1.764E-8
I-135	9.039E-8	I-135	8.783E-8	I-135	8.533E-8	I-135	8.290E-8

STACK SAMPLES (uCi/ml)

CENTRAL TIME

12:00		12:15		12:30		12:45	
STACK SAMPLE		STACK SAMPLE		STACK SAMPLE		STACK SAMPLE	
AR-41	0.000E0	AR-41	0.000E0	AR-41	0.000E0	AR-41	0.000E0
KR-85	5.169E-5	KR-85	5.157E-5	KR-85	5.145E-5	KR-85	5.134E-5
KR-85M	1.446E-3	KR-85M	1.387E-3	KR-85M	1.330E-3	KR-85M	1.276E-3
KR-87	9.600E-4	KR-87	8.348E-4	KR-87	7.259E-4	KR-87	6.312E-4
KR-88	3.181E-3	KR-88	2.983E-3	KR-88	2.798E-3	KR-88	2.624E-3
KR-89	0.000E0	KR-89	0.000E0	KR-89	0.000E0	KR-89	0.000E0
KR-90	0.000E0	KR-90	0.000E0	KR-90	0.000E0	KR-90	0.000E0
XE-131M	1.299E-10	XE-131M	1.413E-10	XE-131M	1.526E-10	XE-131M	1.639E-10
XE-133	1.498E-2	XE-133	1.492E-2	XE-133	1.487E-2	XE-133	1.481E-2
XE-133M	9.181E-9	XE-133M	9.849E-9	XE-133M	1.058E-8	XE-133M	1.131E-8
XE-135	2.551E-3	XE-135	2.498E-3	XE-135	2.445E-3	XE-135	2.394E-3
XE-135M	3.669E-8	XE-135M	3.568E-8	XE-135M	3.470E-8	XE-135M	3.374E-8
I-131	4.379E-8	I-131	4.365E-8	I-131	4.351E-8	I-131	4.338E-8
I-132	2.718E-8	I-132	2.512E-8	I-132	2.321E-8	I-132	2.145E-8
I-133	7.842E-8	I-133	7.758E-8	I-133	7.675E-8	I-133	7.593E-8
I-134	1.081E-8	I-134	8.826E-9	I-134	7.210E-9	I-134	5.889E-9
I-135	6.044E-8	I-135	5.876E-8	I-135	5.713E-8	I-135	5.554E-8

STACK SAMPLES (uCi/ml)

CENTRAL TIME

13:00		13:15		13:30		13:45	
STACK SAMPLE		STACK SAMPLE		STACK SAMPLE		STACK SAMPLE	
AR-41	0.000E0	AR-41	0.000E0	AR-41	0.000E0	AR-41	0.000E0
KR-85	5.122E-5	KR-85	3.410E-5	KR-85	3.405E-5	KR-85	3.399E-5
KR-85M	1.224E-3	KR-85M	7.833E-4	KR-85M	7.519E-4	KR-85M	7.218E-4
KR-87	5.489E-4	KR-87	3.184E-4	KR-87	2.771E-4	KR-87	2.411E-4
KR-88	2.461E-3	KR-88	1.540E-3	KR-88	1.445E-3	KR-88	1.357E-3
KR-89	0.000E0	KR-89	0.000E0	KR-89	0.000E0	KR-89	0.000E0
KR-90	0.000E0	KR-90	0.000E0	KR-90	0.000E0	KR-90	0.000E0
XE-131M	1.751E-10	XE-131M	1.242E-10	XE-131M	1.317E-10	XE-131M	1.391E-10
XE-133	1.476E-2	XE-133	9.813E-3	XE-133	9.784E-3	XE-133	9.756E-3
XE-133M	1.282E-9	XE-133M	8.482E-9	XE-133M	8.947E-9	XE-133M	9.404E-9
XE-135	2.344E-3	XE-135	1.531E-3	XE-135	1.500E-3	XE-135	1.470E-3
XE-135M	3.280E-8	XE-135M	2.127E-8	XE-135M	2.070E-8	XE-135M	2.014E-8
I-131	4.324E-8	I-131	2.876E-8	I-131	2.869E-8	I-131	2.862E-8
I-132	1.982E-8	I-132	1.222E-8	I-132	1.130E-8	I-132	1.045E-8
I-133	7.511E-8	I-133	4.957E-8	I-133	4.908E-8	I-133	4.859E-8
I-134	4.810E-9	I-134	2.621E-9	I-134	2.143E-9	I-134	1.751E-9
I-135	5.400E-8	I-135	3.502E-8	I-135	3.407E-8	I-135	3.315E-8

STACK SAMPLES (uCi/ml)

CENTRAL TIME

14:00		14:15		14:30		14:45	
STACK SAMPLE		STACK SAMPLE		STACK SAMPLE		STACK SAMPLE	
AR-41	0.000E0	AR-41	0.000E0	AR-41	0.000E0	AR-41	0.000E0
KR-85	1.700E-9	KR-85	1.700E-9	KR-85	1.700E-9	KR-85	1.700E-9
KR-85M	3.469E-8	KR-85M	3.335E-8	KR-85M	3.207E-8	KR-85M	3.083E-8
KR-87	1.051E-8	KR-87	9.156E-9	KR-87	7.980E-9	KR-87	6.954E-9
KR-88	6.376E-8	KR-88	5.993E-8	KR-88	5.633E-8	KR-88	5.295E-8
KR-89	0.000E0	KR-89	0.000E0	KR-89	0.000E0	KR-89	0.000E0
KR-90	0.000E0	KR-90	0.000E0	KR-90	0.000E0	KR-90	0.000E0
XE-131M	7.336E-15	XE-131M	7.716E-15	XE-131M	8.096E-15	XE-131M	8.475E-15
XE-133	4.871E-7	XE-133	4.865E-7	XE-133	4.858E-7	XE-133	4.851E-7
XE-133M	4.934E-13	XE-133M	5.164E-13	XE-133M	5.390E-13	XE-133M	5.614E-13
XE-135	7.211E-8	XE-135	7.075E-8	XE-135	6.943E-8	XE-135	6.813E-8
XE-135M	9.811E-13	XE-135M	9.568E-13	XE-135M	9.315E-13	XE-135M	9.077E-13
I-131	1.430E-12	I-131	1.428E-12	I-131	1.427E-12	I-131	1.426E-12
I-132	4.840E-13	I-132	4.483E-13	I-132	4.152E-13	I-132	3.845E-13
I-133	2.409E-12	I-133	2.388E-12	I-133	2.368E-12	I-133	2.348E-12
I-134	7.169E-14	I-134	5.869E-14	I-134	4.804E-14	I-134	3.933E-14
I-135	1.615E-12	I-135	1.574E-12	I-135	1.533E-12	I-135	1.494E-12

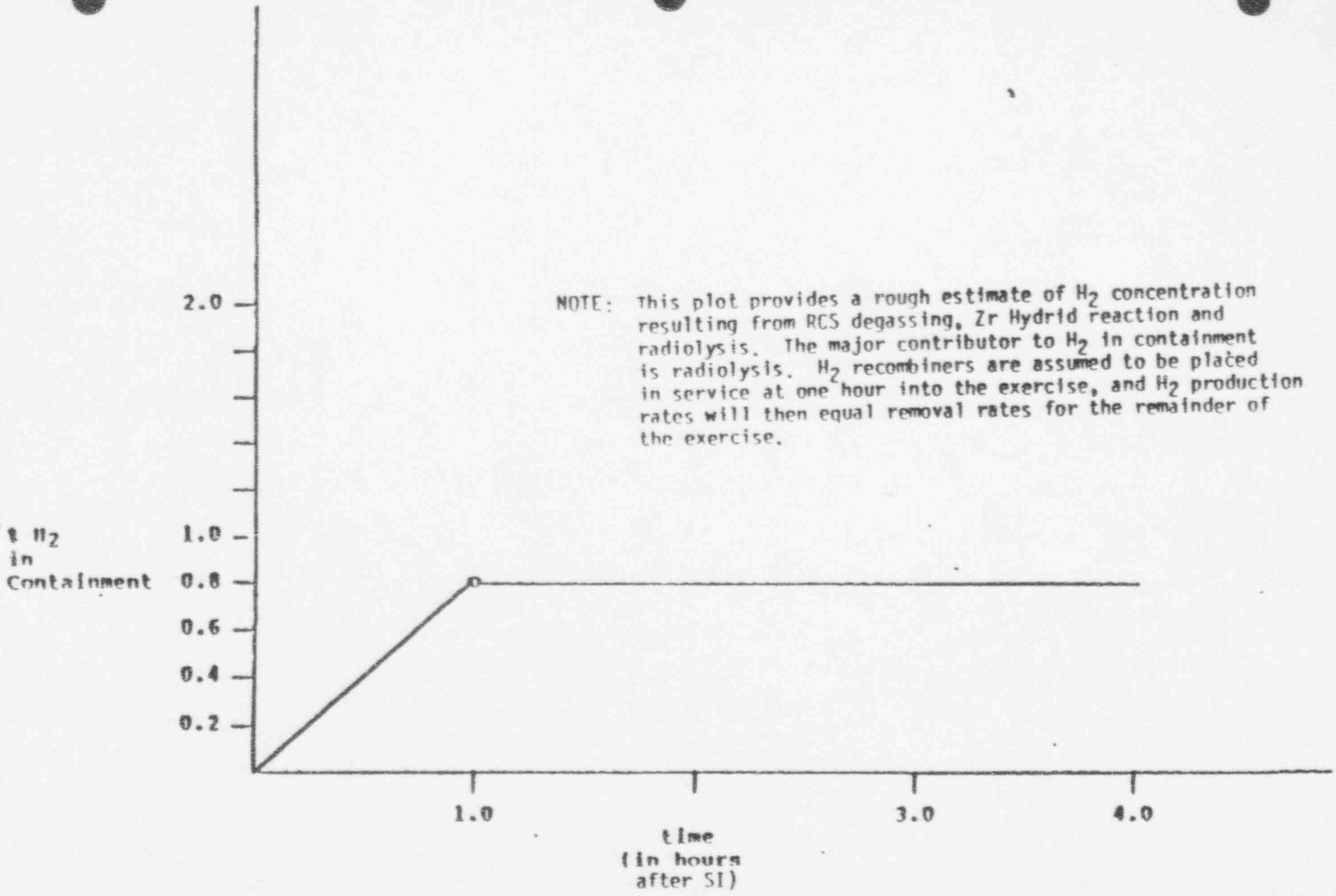
CONTAINMENT ATMOSPHERE SAMPLES

The attached tables provide simulated containment atmosphere concentrations. Values are based on the assumption that essentially all noble gases released from the RCS are in gaseous form and 1% of the iodines are airborne. Decay is taken into account, as well as containment and RCS leakage. Values are provided every 15 minutes.

ISOTOPE	900	915	930	945	1000	1015	1030	1045	1100	1115
KR-85	1.162E-03	9.972E-03	1.205E-02	1.269E-02	1.292E-02	1.301E-02	1.304E-02	1.301E-02	1.298E-02	1.294E-02
KR-85M	5.013E-02	4.302E-01	4.997E-01	5.059E-01	4.954E-01	4.794E-01	4.620E-01	4.432E-01	4.250E-01	4.074E-01
KR-87	9.797E-02	8.408E-01	8.853E-01	8.125E-01	7.213E-01	6.328E-01	5.529E-01	4.808E-01	4.179E-01	3.632E-01
KR-88	1.413E-01	1.212E+00	1.377E+00	1.363E+00	1.305E+00	1.235E+00	1.164E+00	1.091E+00	1.023E+00	9.598E-01
XE-131M	7.103E-07	2.037E-06	5.549E-06	1.168E-05	1.783E-05	2.391E-05	2.994E-05	3.583E-05	4.166E-05	4.743E-05
XE-133	3.418E-03	9.736E-03	1.665E-02	3.489E-02	5.305E-02	7.006E-02	8.836E-02	1.053E-01	1.219E-01	1.383E-01
XE-133M	4.501E-05	9.103E-05	4.090E-04	8.564E-04	1.301E-03	1.736E-03	2.162E-03	2.574E-03	2.978E-03	3.374E-03
XE-135	9.063E-03	1.048E-02	3.715E-02	8.184E-02	1.277E-01	1.726E-01	2.159E-01	2.566E-01	2.953E-01	3.319E-01
XE-135M	8.432E-04	5.423E-03	1.049E-02	1.644E-02	1.929E-02	2.046E-02	2.077E-02	2.068E-02	2.023E-02	1.976E-02
XE-138	7.813E-05	3.738E-05	1.788E-05	8.556E-06	4.094E-06	1.959E-06	9.370E-07	4.483E-07	2.145E-07	1.260E-07
TOTAL NG	3.040E-01	2.519E+00	2.839E+00	2.828E+00	2.736E+00	2.625E+00	2.519E+00	2.413E+00	2.319E+00	2.237E+00
I-131	1.326E-04	1.138E-03	1.373E-03	1.445E-03	1.470E-03	1.479E-03	1.481E-03	1.477E-03	1.471E-03	1.466E-03
I-132	1.894E-04	1.625E-03	1.818E-03	1.774E-03	1.673E-03	1.560E-03	1.449E-03	1.339E-03	1.237E-03	1.142E-03
I-133	2.582E-04	2.216E-03	2.655E-03	2.772E-03	2.799E-03	2.794E-03	2.777E-03	2.748E-03	2.717E-03	2.686E-03
I-134	2.927E-04	2.511E-03	2.484E-03	2.142E-03	1.706E-03	1.472E-03	1.208E-03	9.066E-04	8.055E-04	6.576E-04
I-135	2.410E-04	2.068E-03	2.435E-03	2.499E-03	2.480E-03	2.432E-03	2.376E-03	2.310E-03	2.245E-03	2.181E-03
TOTAL IOD.	1.114E-03	9.558E-03	1.077E-02	1.063E-02	1.013E-02	9.737E-03	9.291E-03	8.781E-03	8.476E-03	8.133E-03
RB-88	1.201E-01	1.030E+00	1.170E+00	1.159E+00	1.109E+00	1.050E+00	9.894E-01	9.273E-01	8.695E-01	8.158E-01
CS-138	6.641E-05	3.177E-05	1.520E-05	7.273E-06	3.480E-06	1.665E-06	7.965E-07	3.811E-07	1.823E-07	1.071E-07
TOTAL PART	1.202E-01	1.030E+00	1.170E+00	1.159E+00	1.109E+00	1.050E+00	9.894E-01	9.274E-01	8.696E-01	8.158E-01

ISOTOPE	1130	1145	1200	1215	1230	1245	1300	1315	1330	1345
KR-85	1.290E-02	1.287E-02	1.284E-02	1.281E-02	1.278E-02	1.275E-02	1.272E-02	1.270E-02	1.268E-02	1.266E-02
KR-85M	3.905E-01	3.743E-01	3.591E-01	3.444E-01	3.304E-01	3.169E-01	3.040E-01	2.918E-01	2.801E-01	2.689E-01
KR-87	3.156E-01	2.742E-01	2.384E-01	2.073E-01	1.803E-01	1.568E-01	1.363E-01	1.186E-01	1.032E-01	8.983E-02
KR-88	8.988E-01	8.424E-01	7.900E-01	7.410E-01	6.949E-01	6.518E-01	6.113E-01	5.737E-01	5.385E-01	5.054E-01
XE-131M	5.317E-05	5.885E-05	6.455E-05	7.020E-05	7.583E-05	8.141E-05	8.697E-05	9.256E-05	9.812E-05	1.037E-04
XE-133	1.543E-01	1.701E-01	1.858E-01	2.013E-01	2.165E-01	2.315E-01	2.463E-01	2.611E-01	2.756E-01	2.900E-01
XE-133M	3.762E-03	4.143E-03	4.521E-03	4.892E-03	5.257E-03	5.616E-03	5.969E-03	6.320E-03	6.666E-03	7.007E-03
XE-135	3.665E-01	3.992E-01	4.304E-01	4.598E-01	4.876E-01	5.137E-01	5.382E-01	5.617E-01	5.838E-01	6.845E-01
XE-135M	1.925E-02	1.873E-02	1.822E-02	1.772E-02	1.723E-02	1.676E-02	1.629E-02	1.585E-02	1.542E-02	1.501E-02
XE-138	4.910E-08	2.349E-08	1.124E-08	5.377E-09	2.572E-09	1.231E-09	5.888E-10	2.817E-10	1.348E-10	6.449E-11
TOTAL NG	2.162E+00	2.096E+00	2.039E+00	1.989E+00	1.945E+00	1.906E+00	1.871E+00	1.842E+00	1.816E+00	1.873E+00
I-131	1.468E-03	1.455E-03	1.450E-03	1.445E-03	1.441E-03	1.436E-03	1.432E-03	1.428E-03	1.425E-03	1.422E-03
I-132	1.055E-03	9.740E-04	9.001E-04	8.318E-04	7.686E-04	7.103E-04	6.564E-04	6.070E-04	5.614E-04	5.192E-04
I-133	2.656E-03	2.625E-03	2.597E-03	2.569E-03	2.542E-03	2.514E-03	2.487E-03	2.463E-03	2.438E-03	2.414E-03
I-134	5.367E-04	4.381E-04	3.578E-04	2.923E-04	2.387E-04	1.950E-04	1.593E-04	1.302E-04	1.064E-04	8.700E-05
I-135	2.119E-03	2.059E-03	2.002E-03	1.946E-03	1.892E-03	1.839E-03	1.788E-03	1.740E-03	1.693E-03	1.647E-03
TOTAL IOD.	7.835E-03	7.551E-03	7.307E-03	7.084E-03	6.882E-03	6.694E-03	6.523E-03	6.368E-03	6.224E-03	6.089E-03
RB-88	7.640E-01	7.160E-01	6.715E-01	6.299E-01	5.907E-01	5.540E-01	5.196E-01	4.876E-01	4.577E-01	4.296E-01
CS-138	4.174E-08	1.997E-08	9.554E-09	4.570E-09	2.186E-09	1.046E-09	5.005E-10	2.394E-10	1.146E-10	5.482E-11
TOTAL PART	7.640E-01	7.160E-01	6.715E-01	6.299E-01	5.907E-01	5.540E-01	5.196E-01	4.876E-01	4.577E-01	4.296E-01

ISOTOPE	1400	1415	1430	1445
KR-85	1.266E-02	1.266E-02	1.266E-02	1.266E-02
KR-85M	2.585E-01	2.485E-01	2.389E-01	2.297E-01
KR-87	7.829E-02	6.823E-02	5.946E-02	5.182E-02
KR-88	4.751E-01	4.466E-01	4.198E-01	3.946E-01
XE-131M	1.093E-04	1.158E-04	1.207E-04	1.263E-04
XE-133	3.046E-01	3.191E-01	3.334E-01	3.476E-01
XE-133M	7.353E-03	7.695E-03	8.033E-03	8.367E-03
XE-135	6.249E-01	6.440E-01	6.620E-01	6.789E-01
XE-135M	1.462E-02	1.425E-02	1.388E-02	1.353E-02
XE-138	3.085E-11	1.476E-11	7.062E-12	3.379E-12
TOTAL NG	1.776E+00	1.761E+00	1.748E+00	1.737E+00
I-131	1.420E-03	1.419E-03	1.418E-03	1.417E-03
I-132	4.809E-04	4.454E-04	4.125E-04	3.820E-04
I-133	2.393E-03	2.373E-03	2.353E-03	2.333E-03
I-134	7.122E-05	5.831E-05	4.773E-05	3.988E-05
I-135	1.605E-03	1.564E-03	1.524E-03	1.485E-03
TOTAL IOD.	5.970E-03	5.860E-03	5.755E-03	5.657E-03
RB-88	4.038E-01	3.796E-01	3.568E-01	3.354E-01
CS-138	2.622E-11	1.255E-11	6.003E-12	2.872E-12
TOTAL PART	4.038E-01	3.796E-01	3.568E-01	3.354E-01


NOTE: This plot provides a rough estimate of H_2 concentration resulting from RCS degassing, Zr Hydrid reaction and radiolysis. The major contributor to H_2 in containment is radiolysis. H_2 recombiners are assumed to be placed in service at one hour into the exercise, and H_2 production rates will then equal removal rates for the remainder of the exercise.
2.0
1.0
0.8
0.6
0.4
0.2
% H_2 in Containment
1.0
3.0
4.0
time (in hours after SI)

CONTROL ROOM DRILL GUIDE

CONTROL ROOM CONTROLLER CARD

TIME	EVENT
0600	Initial Plant Status

- Control room players review:
  1. Initial plant conditions
  2. Equipment and system status
  3. Maintenance items

- MCB Annunciators in Alarm

A-21	CCW Hx 1A SW or CCW Flow Lo
C-61	RHR Pump 1A or 1B CCW Flow Lo
E-04	Charging Pump 1A, 1B, or 1C CCW Flow Lo
F-03	Source Range Loss of Detector Voltage
F-35	Bank D Full Rod Withdrawal Auto Rod Stop
W-21	Diesel Gen 1-2A Out of Service or on Local Control
W-35	Battery Charger 1C Fault
Z-35	Battery Charger 2C Fault

- RMS Alarms (Note 3)

NOTES:
1. Provide operators with a copy of the MCB annunicator panels for reference
2. Provide operators with a copy of TSLBs for reference
3. R-4 and R-6 are in alarm

CONTROL ROOM CONTROLLER CARD

TIME	EVENT
0630	The following annunciators alarm:
	E-02 Charging Header Flow Hi-Lo
	H-04 Pressurizer Safety Valve Temperature Hi
	H-05 Pressurizer Power Operated Relief Valve Temperature High
	H-21 Pressurizer Pressure Hi-Lo
	H-31 Pressurizer Pressure Relief Valve 445A or Backup Heaters On
	H-42 Safety Valve 8010A, B, or C Open
	H-43 Pressurizer Relief Tank Temperature Hi
	H-44 Pressurizer Relief Tank Level Hi-Lo
	H-45 Pressurizer Relief Tank Pressure Hi

NOTES:

1. Give operators a copy of annunciator panel H (alarms indicated)
2. As operator scans pressurizer safety valve position indications point out valve 8010A has red light, valves 8010B, C are green and that PORVs indicate closed
3. As operator observes PORV/Safety valve tail piece temperature indications, point out that all are trending up with TI-469 (8010A indication) reading approximately 100°F higher than the other indications

MAIN CONTROL BOARD
ANNUNCIATOR PANEL H

H01 PRESSURIZER LEVEL HI REACTOR TRIP ALERT	H11 PRESSURIZER WATER LEVEL HI	H21 PRESSURIZER PRESSURE HI-LO	H31 PRESSURIZER PRESSURE RELIEF VALVE 445A & OR BACKUP HEATERS ON	H41 SECURITY BUILDING ALERT	H51 REACTOR COOLANT LOOPS T-AVG DEVIATION HI-LO	H61 RCP 1A BEARING UPPER/LOWER OIL RES HI LEVEL	H71 RCP 1A BEARING UPPER/LOWER OIL RES LO LEVEL
H02 PRESSURIZER LEVEL DEVIATION HI BACKUP HEATERS ON	H12 PRESSURIZER LEVEL DEVIATION LO	H22 PRESSURIZER HI/LO PRESS ALERT	H32 PRESSURIZER PRESSURE SI & POWER OPERATED RELIEF BLOCK P-11	H42 SAFETY VALVE 8010A,B, OR C OPEN	H52 REACTOR COOLANT LOOPS ΔT DEVIATION HI-LO	H62 RCP 1B BEARING UPPER/LOWER OIL RES HI LEVEL	H72 RCP 1B BEARING UPPER/LOWER OIL RES LO LEVEL
H03 PRESSURIZER LEVEL DEVIATION LO BACKUP HTRS OFF & LTDN SECURED	H13	H23 PRESSURIZER PRESSURE LO SAFETY INJ ALERT	H33 PRESSURIZER CONTROL PRESSURE OUTPUT HI	H43 PRESSURIZER RELIEF TANK TEMPERATURE HI	H53 T-AVG / T-REF DEVIATION	H63 RCP 1C BEARING UPPER/LOWER OIL RES HI LEVEL	H73 RCP 1C BEARING UPPER/LOWER OIL RES LO LEVEL
H04 PRESSURIZER SAFETY VALVE TEMPERATURE HI	H14 PRESSURIZER SPRAY LINE LOOP 1A OR 1B TEMPERATURE LO	H24 PRESSURIZER HEATERS ON LOCAL CONTROL	H34 PRESSURIZER HEATER CONTROLLER TROUBLE	H44 PRESSURIZER RELIEF TANK LEVEL HI-LO	H54 REACTOR COOLANT LOOP 1A,1B OR 1C T-AVG LO-LO	H64 OMS RELIEF VALVE PATH CLOSED AT LOW TEMP	H74 RELIEF VALVE 445B OR 445A OPEN
H05 PRESSURIZER POWER OPERATED RELIEF VALVE TEMPERATURE HI	H15 PRESSURIZER SURGE LINE TEMPERATURE LO	H25 PRESSURIZER VAPOR OR LIQUID TEMPERATURE HI	H35 PRESSURIZER HEATER BREAKER TRIPPED	H45 PRESSURIZER RELIEF TANK PRESSURE HI	H55 REACTOR COOLANT LOOPS T-AVG HI	H65 SOLID RCS PRESSURE HI	H75 REACTOR VESSEL FLANGE LEAKOFF TEMPERATURE HI

CONTROL ROOM CONTROLLER CARD

TIME	EVENT
0633	Annunciator E-02 Charging Header Flow Hi-Lo Clears
0701	Annunciator C-01 Containment Spray Pump 1A Overload Trip Alarms (NOTE 2)
0718	Annunciator H-21 Pressurizer Pressure Hi-Lo Clears

NOTES:

1. Bank D < 200 steps due to ramp down, Annunciator F-35 clears
2. Provide operator indications that 1A CTMT spray pump has stopped and breaker is tripped. Report to control room indicates burned motor windings, no fire.

TIME	EVENT
0729	Annunciator H-45 Pressurizer Relief Tank Pressure Hi Clears (NOTE 1)
0730	• Annunciator F-71 Radiation Monitor System Hi Radiation Alarms • RMS Alarm Sounds (NOTE 2) • Annunicator E-02 Charging Header Flow Hi-Lo Alarms
0735	• RMS Alarm Sounds (NOTE 3)
0740	• Annunciator F-71 Radiation Monitor System Hi Radiation Alarms • RMS Alarm Sounds (NOTE 4)
0747	Annunciator E-02 Charging Header Flow Hi-Lo Clears

NOTES:

1. PRT Rupture Disk blows
2. As operator scans RMS panel, R-2, R-7, and R-14 are alarming. R-11 and R-12 are trending up
3. R-14 alarm clears
4. As operator scans RMS panel, R-11 and R-12 are in alarm

CONTROL ROOM CONTROLLER CARD

TIME	EVENT
0802	• Annunciator F-65 Gross Failed Fuel Detector System Trouble Alarms (NOTE 1) • DELETED.
0846	Annunciator F-14 and F-15 Power Range Upper/Lower Detector Hi Flux Deviation or Auto Defeat Alarm (NOTE 3)
0855±	Annunciator K-12 or K-11 SGFP Turbine 1A or 1B Misc. Alarms Alarm (NOTE 4)
0857	Annunciator D-43 LTDN Orifice Isolation Valve Relief Line Temperature Hi Alarms (NOTE 5)

NOTES:

1. As operator scans GFFD panel, provide a reading of 6×10^5 cps - slowly trending up
2. DELETED.
3. Power reduction to below 50% RTP
4. Provide annunciator associated with SGFP as it is secured during rampdown
5. Alarm due to increase in CTMT temperature

CONTROL ROOM CONTROLLER CARD

TIME	EVENT
0900	Safety Injection Horn Sounds

- MCB annunicators in alarm per attached annunicator panel drawings

NOTE: Annunciator G-51 is "First-Out"

- RMS Alarm Sounds (NOTE 1)
- TSLB-1 Bistables Lit

  1-2

  1-3

  1-4

- TSLB-2 Bistables Lit

9-1	10-1	12-1	13-1	14-1
9-2	10-2	12-2	13-2	14-2
9-3	10-3	12-3	13-3	14-3
		12-4		14-4

- TSLB 3 Bistables Lit

3-1	7-1
3-2	7-2
	7-3

- TSLB 4 Bistables Lit

1-1	2-1	3-1	5-1	6-1
1-2	2-2	3-2	5-2	6-2
			5-3	6-3

NOTES:

1. As operator scans RMS panel, indicate R-2, R-7, R-11, R-12 still in alarm AND R-15, R-19, R23A & B and R-27A & B are now alarming
2. DG 1B, 1C, & 2C show normal auto start indications, sequencer indications occur per design

TRIP STATUS LIGHT BOX 1

	1	2	3	4	5	6	7	8	9	10
1			CNTMT HI 3 PRESS PC 950 A	CAB 1 POWER FAILURE	CAB 5 POWER FAILURE		PROT 1 DOOR OPEN	RC LP1 OT ΔT TC-412 C_2	RC LP1 OP ΔT TB-412 B_2	RC 1 BYP LOW FLOW FIS-490
2	CNTMT HI 1 PRESS PC 951 B_1	CNTMT HI 2 PRESS PC 951 B_2	CNTMT HI 3 PRESS PC 951 A	CAB 2 POWER FAILURE	CAB 6 POWER FAILURE		PROT 2 DOOR OPEN	RC LP2 OT ΔT TC-422 C_2	RC LP2 OP ΔT TB-422 B_2	RC 2 BYP LOW FLOW FIS-491
3	CNTMT HI 1 PRESS PC 952 B_1	CNTMT HI 2 PRESS PC 952 B_2	CNTMT HI 3 PRESS PC 952 A	CAB 3 POWER FAILURE	CAB 7 POWER FAILURE		PROT 3 DOOR OPEN	RC LP3 OT ΔT TC-432 C_2	RC LP3 OP ΔT TB-432 B_2	RC 3 BYP LOW FLOW FIS-492
4	CNTMT HI 1 PRESS PC 953 B_1	CNTMT HI 2 PRESS PC 953 B_2	CNTMT HI 3 PRESS PC 953 A	CAB 4 POWER FAILURE	CAB 8 POWER FAILURE		PROT 4 DOOR OPEN			
5	LAMP TEST									LAMP TEST

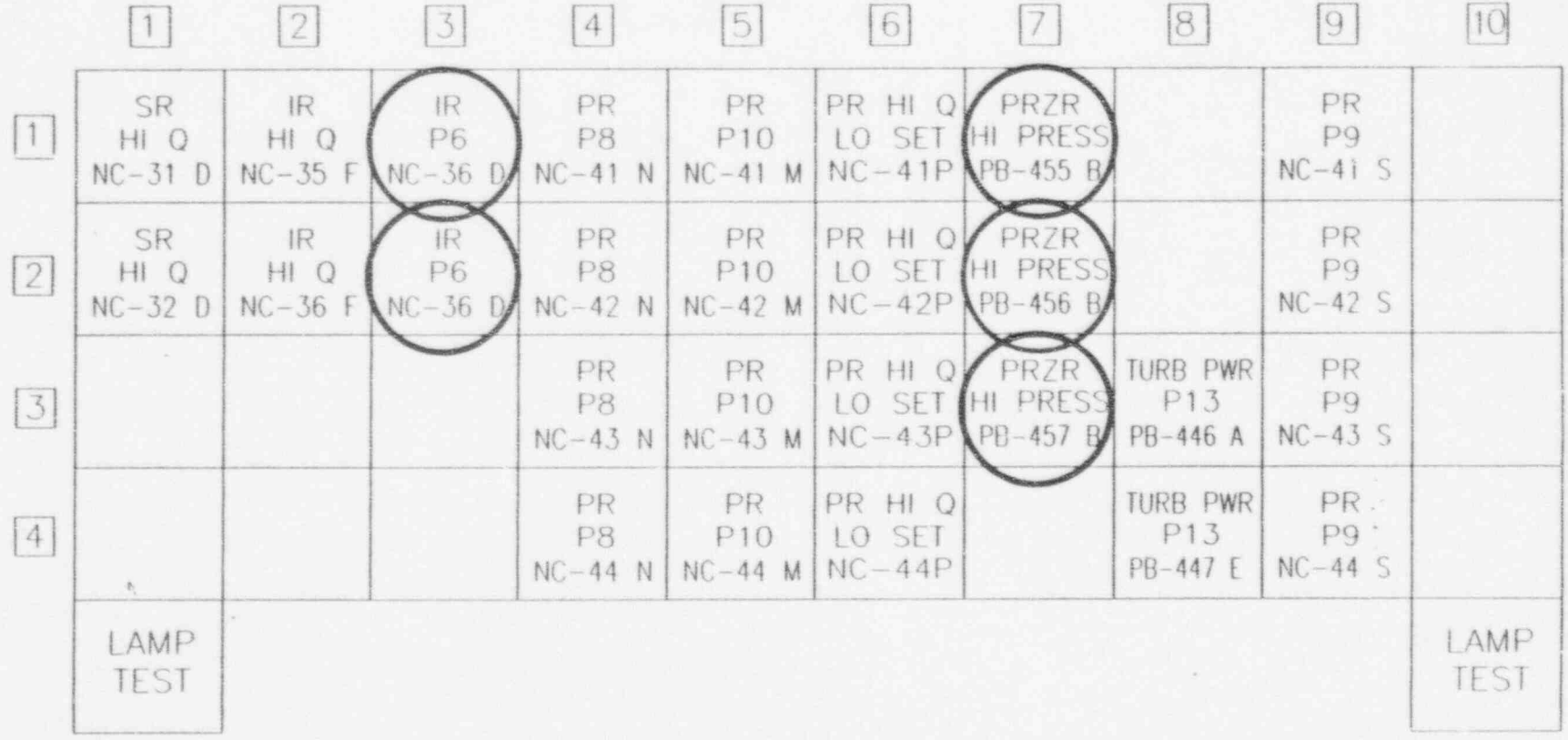
TRIP STATUS LIGHT BOX 2
(SHEET 1)

	1	2	3	4	5	6	7	8	9	10
1	RCP BUS A UNDERVOLT	RCP BUS A UNDERFREQ	RCP1 BKR OPEN	RC LP1 LO FLOW FB-414A	RC LP2 LO FLOW FB-424A	RC LP3 LO FLOW FB-434A	RC LP1 OT ΔT TB-412 C_1	RC LP1 OP ΔT TB-412 B_1	RC LP1 LO T AVG TB-412 D_1	RC LP1 LOLO TAVG TB-412 E
2	RCP BUS B UNDERVOLT	RCP BUS B UNDERFREQ	RCP2 BKR OPEN	RC LP1 LO FLOW FB-415A	RC LP2 LO FLOW FB-425A	RC LP3 LO FLOW FB-435A	RC LP2 OT ΔT TB-422 C_1	RC LP2 OP ΔT TB-422 B_1	RC LP2 LO T AVG TB-422 D_1	RC LP2 LOLO TAVG TB-422 E
3	RCP BUS C UNDERVOLT	RCP BUS C UNDERFREQ	RCP3 BKR OPEN	RC LP1 LO FLOW FB-416A	RC LP2 LO FLOW FB-426A	RC LP3 LO FLOW FB-436A	RC LP3 OT ΔT TB-432 C_1	RC LP3 OP ΔT TB-432 B_1	RC LP3 LO T AVG TB-432 D_1	RC LP3 LOLO TAVG TB-432 E
4										
5	LAMP TEST									

TRIP STATUS LIGHT BOX 2
(SHEET 2)

11	12	13	14	15	16	17	18	19	20	
PR HI Q HI SET NC-41R	PR HI Q RATE NC-41U/K	TURB AUTO STOP 63-1	TURB. STOP VLV 1 CLOSED			PRZR LO PRESS PB-455 D	PRZR HI LVL LB-459 A_1	PRZR LO PRESS PB-455 C	PRZR HI PRESS PB-455 A	1
PR HI Q HI SET NC-42R	PR HI Q RATE NC-42U/K	TURB AUTO STOP 63-2	TURB. STOP VLV 2 CLOSED			PRZR LO PRESS PB-456 D	PRZR HI LVL LB-460 A_1	PRZR LO PRESS PB-456 C	PRZR HI PRESS PB-456 A	2
PR HI Q HI SET NC-43R	PR HI Q RATE NC-43U/K	TURB AUTO STOP 63-3	TURB. STOP VLV 3 CLOSED			PRZR LO PRESS PB-457 D	PRZR HI LVL LB-461 A_1	PRZR LO PRESS PB-457 C	PRZR HI PRESS PB-457 A	3
PR HI Q HI SET NC-44R	PR HI Q RATE NC-44U/K		TURB. STOP VLV 4 CLOSED							4
									LAMP TEST	5

TRIP STATUS LIGHT BOX 3



	1	2	3	4	5	6	7	8	9	10
1	SR HI Q NC-31 D	IR HI Q NC-35 F	IR P6 NC-36 D	PR P8 NC-41 N	PR P10 NC-41 M	PR HI Q LO SET NC-41P	PRZR HI PRESS PB-455 B		PR P9 NC-41 S	
2	SR HI Q NC-32 D	IR HI Q NC-36 F	IR P6 NC-36 D	PR P8 NC-42 N	PR P10 NC-42 M	PR HI Q LO SET NC-42P	PRZR HI PRESS PB-456 B		PR P9 NC-42 S	
3				PR P8 NC-43 N	PR P10 NC-43 M	PR HI Q LO SET NC-43P	PRZR HI PRESS PB-457 B	TURB PWR P13 PB-446 A	PR P9 NC-43 S	
4				PR P8 NC-44 N	PR P10 NC-44 M	PR HI Q LO SET NC-44P		TURB PWR P13 PB-447 E	PR P9 NC-44 S	
	LAMP TEST									LAMP TEST

TRIP STATUS LIGHT BOX 4 (SHEET 1)

	1	2	3	4	5	6	7	8	9	10
1	SG1 LO LVL LB-474B	SG2 LO LVL LB-484B	SG3 LO LVL LA-494B	SG1 LOLO LVL LA-474A	SG2 LOLO LVL LA-484A	SG3 LOLO LVL LB-494A	SG1 HIHI LVL LC-474C	SG2 HIHI LVL LC-484C	SG3 HIHI LVL LC-494C	
2	SG1 LO LVL LB-475B	SG2 LO LVL LB-485B	SG3 LO LVL LA-495B	SG1 LOLO LVL LA-475A	SG2 LOLO LVL LA-485A	SG3 LOLO LVL LB-495A	SG1 HIHI LVL LC-475C	SG2 HIHI LVL LC-485C	SG3 HIHI LVL LC-495C	STM LP1 P1<P2 PB-474B$_2$
3	SG1 FW<STM FB-478B	SG2 FW<STM FB-488B	SG3 FW<STM FB-498A	SG1 LOLO LVL LB-476A	SG2 LOLO LVL LB-486A	SG3 LOLO LVL LB-496A	SG1 HIHI LVL LB-476C	SG2 HIHI LVL LB-486C	SG3 HIHI LVL LB-496C	STM LP1 P1<P2 PB-475B$_2$
4	SG1 FW<STM FB-478A	SG2 FW<STM FB-488A	SG3 FW<STM FB-498A							STM LP1 P1<P2 PB-476B$_2$
5	LAMP TEST									

TRIP STATUS LIGHT BOX 4
(SHEET 2)

11	12	13	14	15	16	17	18	19	20	
										1
STM LP1 P1<P3 PB-494B_2	STM LP2 P2<P1 PB-474B_1	STM LP2 P2<P3 PB-484B_1	STM LP3 P3<P2 PB-484B_1	STM LP3 P3<P1 PB-494B_1				STM LP1 LO PRESS PB-474A		2
STM LP1 P1<P3 PB-495B_2	STM LP2 P2<P1 PB-475B_1	STM LP2 P2<P3 PB-485B_1	STM LP3 P3<P2 PB-485B_1	STM LP3 P3<P1 PB-495B_1	STM LP1 HI FLOW FB-474A	STM LP2 HI FLOW FB-484A	STM LP3 HI FLOW FB-494A	STM LP2 LO PRESS PB-485A		3
STM LP1 P1<P3 PB-496B_2	STM LP2 P2<P1 PB-476B_1	STM LP2 P2<P3 PB-486B_1	STM LP3 P3<P2 PB-486B_1	STM LP3 P3<P1 PB-496B_1	STM LP1 HI FLOW FB-475A	STM LP2 HI FLOW FB-485A	STM LP3 HI FLOW PB-495A	STM LP3 LO PRESS PB-496A		4
									LAMP TEST	5

MAIN CONTROL BOARD ANNUNCIATOR PANEL A

A01 CCW PUMP 1A OVERLOAD TRIP	A11 CCW ROOM COOLER 1A FAULT	A21 CCW HX 1A SW OR CCW FLOW LO	A31 RIVER WTR PUMP ROOM TRAIN A FLOODING	A41 RIVER WTR PUMP ROOM TRAIN B FLOODING	A51 SERVICE WTR STRUCTURE FLOODING	A61 RIVER LEVEL HI TRAIN A	A71 RIVER LEVEL HI TRAIN B
A02 CCW PUMP 1B OVERLOAD TRIP	A12 CCW ROOM COOLER 1B FAULT	A22 CCW HX 1B SW OR CCW FLOW LO	A32 RIVER WTR TRAIN A PRESSURE LO	A42 RIVER WTR PUMP TRIPPED	A52 RIVER WTR STRUCTURE ALARM	A62 RIVER LEVEL LO TRAIN A	A72 RIVER LEVEL LO TRAIN B
A03 CCW PUMP 1C OVERLOAD TRIP	A13 CCW PUMP 1A, 1B, OR 1C ON LOCAL CONTROL	A23 CCW HX 1C SW OR CCW FLOW LO	A33 RIVER WTR TRAIN B PRESSURE LO	A43 SELECTOR SWITCH IN LOCAL POSITION	A53 SERVICE WTR STRUCTURE ALARM	A63 SERVICE WTR POND LEVEL LO TRAIN A	A73 SERVICE WTR POND LEVEL LO TRAIN B
A04 CCW SURGE TANK 1A LEVEL HI-LO	A14 CCW SURGE TANK 1B LEVEL HI-LO	A24 CCW PUMP ROOM FLOODING LEVEL 10 INCHES	A34 SERVICE WTR TRAIN A PRESSURE LO	A44 SERVICE WTR PUMP TRIPPED	A54 CTMT COOLER SERVICE WTR FLOW	A64 SERVICE WTR WET PIT LEVEL LO TRAIN A	A74 SERVICE WTR WET PIT LEVEL LO TRAIN B
A05 CCW SURGE TANK 1A LEVEL LO-LO	A15 CCW SURGE TANK 1B LEVEL LO-LO	A25 CCW PUMP ROOM FLOODING LEVEL 18 INCHES	A35 SERVICE WTR TRAIN B PRESSURE LO	A45 SW TO AUX BLDG TRAIN A OR B HEADER PRESS LO	A55 SW TO TURB BLDG TRAIN A OR B FLOW HIGH	A65 DILUTION DISCHARGE TEMPERATURE HI	A75 METAL IMPACT MON SYSTEM ALARM

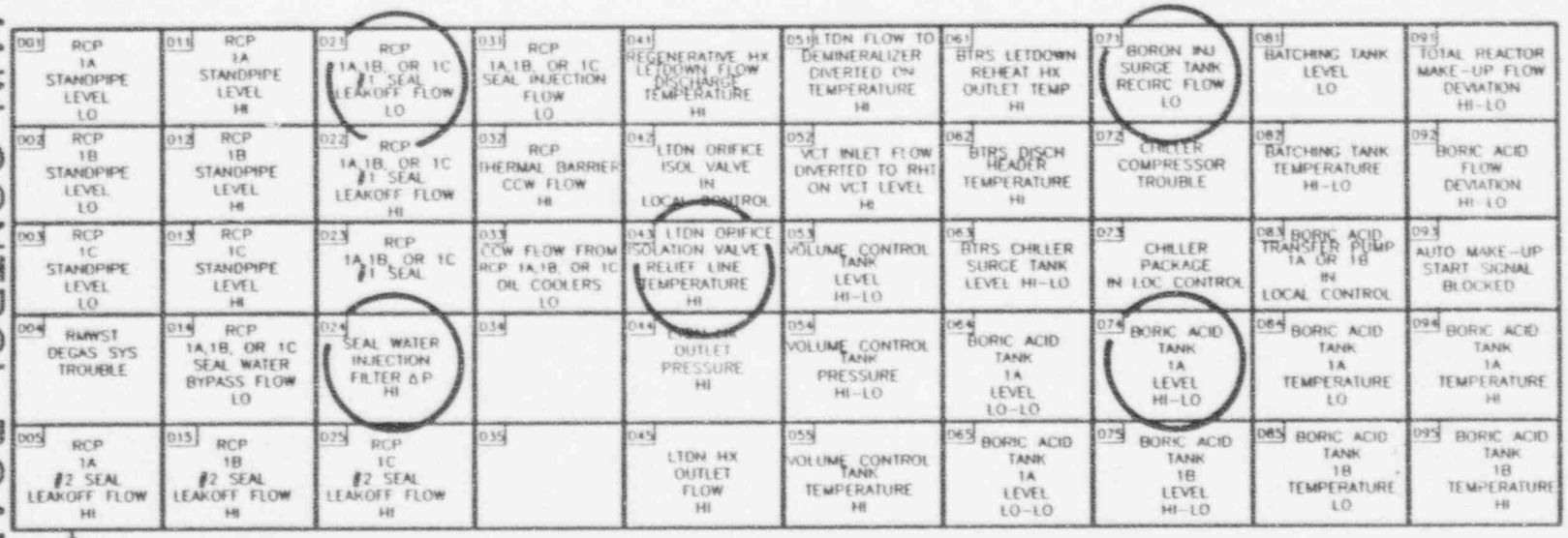
MAIN CONTROL BOARD
ANNUNCIATOR PANEL B

B01 CONTAINMENT COOLER 1A FAN FAULT	B11 CONTAINMENT COOLER 1A,1B,1C, OR 1D DRAIN LEVEL HI	B21 CRDM COOLER FAN 1B FAULT	B31 REACTOR CAVITY COOLING FAN 1A FAULT	B41 CONTAINMENT PREACCESS FAN 1A FAULT	B51 PENETRATION RM EXHAUST FAN 1A FAULT	B61 PENETRATION RM RECIRC FAN 1A FAULT	B71 PENETRATION RM CHARCOAL FILTER 1A ΔP HI OR TEMP HI	B81 PENETRATION RM ABSOLUTE FILTER 1A ΔP HI	B91 PENETRATION RM TO ATMOSPHERE 1A ΔP HI-LO
B02 CONTAINMENT COOLER 1B FAN FAULT	B12 CONTAINMENT COOLER 1A,1B,1C, OR 1D DRAIN LEVEL HI-HI	B22 CRDM COOLING FAN 1A FAULT	B32 REACTOR CAVITY COOLING FAN 1B FAULT	B42 CONTAINMENT PREACCESS FAN 1B FAULT	B52 PENETRATION RM EXHAUST FAN 1B FAULT	B62 PENETRATION RM RECIRC FAN 1B FAULT	B72 PENETRATION RM CHARCOAL FILTER 1B ΔP HI OR TEMP HI	B82 PENETRATION RM ABSOLUTE FILTER 1B ΔP HI	B92 PENETRATION RM TO ATMOSPHERE 1B ΔP HI-LO
B03 CONTAINMENT COOLER 1C FAN FAULT	B13 CONTAINMENT AIR TEMP HI	B23 BOTH CRDM FANS STOPPED	B33 BOTH REACTOR CAVITY FANS STOPPED	B43 CONTAINMENT PREACCESS FILTER 1A ΔP HI	B53 CONTAINMENT PURGE SUPPLY FAN FAULT	B63 CONTAINMENT PURGE EXHAUST FAN FAULT	B73 HOT SHUTDOWN PANEL SELECTOR SWITCH IN LOCAL	B83 ESS VALVES OFF NORMAL	B93 ANNUNCIATOR FAILURE
B04 CONTAINMENT COOLER 1D FAN FAULT	B14 CNMT COOLER SW DISCH VALVE 1A,1B,1C, OR 1D CLOSED	B24 CRDM COOLING FAN 1A OR 1B IN LOCAL CONTROL	B34 REACTOR CAVITY COOLING FAN 1A OR 1B IN LOCAL CONTROL	B44 CONTAINMENT PREACCESS FILTER 1B ΔP HI	B54 RECORDER POWER FAILURE	B64 CONTAINMENT PURGE INLET AIR TEMP LO	B74 ESS VALVES OFF NORMAL	B84 ESS VALVES OFF NORMAL	B94 ANNUNCIATOR SYSTEM DC SUPPLY FAILURE
B05 CONTAINMENT COOLER FAN 1A,1B,1C, OR 1D IN LOCAL CONTROL	B15 SG 1A,1B,1C TUBE LEAK ABOVE SETPT	B25 SG TUBE LEAK MONITOR SYSTEM TRBL	B35 RMW PUMPS DISCHARGE PRESS LO	B45 BALANCE OF PLANT PANELS ALARM	B55 CONTAINMENT AIR MOISTURE HI	B65 CONTAINMENT TO PENETRATION RM ΔP HI-LO	B75 ESS VALVES OFF NORMAL	B85 ESS VALVES OFF NORMAL	B95 ANNUNCIATOR SYSTEM DC GROUND

MAIN CONTROL BOARD ANNUNCIATOR PANEL C

C01 CONTAINMENT SPRAY PUMP 1A OVERLOAD TRIP	C11 ACCUMULATOR 1A OUTLET ISOL VALVE NOT FULLY OPEN	C21 ACCUMULATOR 1A LEVEL HI-LO	C31 ACCUMULATOR 1A PRESSURE HI-LO	C41 BORON INJECTION TANK TEMPERATURE LO	C51 RHR PUMP 1A DISCHARGE PRESSURE HI	C61 RHR PUMP 1A OR 1B CCW FLOW LO	C71 EXCESS LTDN HX OUTLET TEMPERATURE HI
C02 CONTAINMENT SPRAY PUMP 1B OVERLOAD TRIP	C12 ACCUMULATOR 1B OUTLET ISOL VALVE NOT FULLY OPEN	C22 ACCUMULATOR 1B LEVEL HI-LO	C32 ACCUMULATOR 1B PRESSURE HI-LO	C42 BORON INJECTION TANK TEMPERATURE HI	C52 RHR PUMP 1B DISCHARGE PRESSURE HI	C62 RHR HX 1A OR 1B CCW DISCHARGE FLOW HI	C72 RWST LEVEL LO TRAIN A
C03 CONTAINMENT SPRAY PUMP ROOM COOLER 1A FAULT	C13 ACCUMULATOR 1C OUTLET ISOL VALVE NOT FULLY OPEN	C23 ACCUMULATOR 1C LEVEL HI-LO	C33 ACCUMULATOR 1C PRESSURE HI-LO	C43 BORON INJECTION HEADER PRESSURE HI	C53 RHR PUMP 1A OR 1B OVERLOAD TRIP	C63 RHR PUMP ROOM COOLER 1A FAULT	C73 RWST LEVEL LO TRAIN B
C04 CONTAINMENT SPRAY PUMP ROOM COOLER 1B FAULT	C14 RMWST LEVEL LO	C24 RMWST LEVEL HI	C34	C44 BORON INJECTION SURGE TANK LEVEL HI-LO	C54 RHR HX 1A OUTLET FLOW LO	C64 RHR PUMP ROOM COOLER 1B FAULT	C74 RWST LEVEL LO-LO TRAIN A
C05 SPRAY ADDITIVE TANK LEVEL LO	C15 RMWST LEVEL LO-LO TRAIN A	C25 RMWST LEVEL LO-LO TRAIN B	C35	C45 BORON INJ SURGE TANK TEMPERATURE HI-LO	C55 RHR HX 1B OUTLET FLOW LO	C65 HYDRO TEST PUMP OVERLOAD TRIP	C75 RWST LEVEL LO-LO TRAIN B

MAIN CONTROL BOARD
ANNUNCIATOR PANEL D



001 RCP 1A STANDPIPE LEVEL LO	011 RCP 1A STANDPIPE LEVEL HI	021 RCP 1A,1B, OR 1C #1 SEAL LEAKOFF FLOW LO	031 RCP 1A,1B, OR 1C SEAL INJECTION FLOW LO	041 REGENERATIVE HX LETDOWN FLOW DISCHARGE TEMPERATURE HI	051 LTDN FLOW TO DEMINERALIZER DIVERTED ON TEMPERATURE HI	061 BTRS LETDOWN REHEAT HX OUTLET TEMP HI	071 BORON INJ SURGE TANK RECIRC FLOW LO	081 BATCHING TANK LEVEL LO	091 TOTAL REACTOR MAKE-UP FLOW DEVIATION HI-LO
002 RCP 1B STANDPIPE LEVEL LO	012 RCP 1B STANDPIPE LEVEL HI	022 RCP 1A,1B, OR 1C #1 SEAL LEAKOFF FLOW HI	032 RCP THERMAL BARRIER CCW FLOW HI	042 LTDN ORIFICE ISOL VALVE IN LOCAL CONTROL	052 VCT INLET FLOW DIVERTED TO RHT ON VCT LEVEL HI	062 BTRS DISCH HEADER TEMPERATURE HI	072 CHILLER COMPRESSOR TROUBLE	082 BATCHING TANK TEMPERATURE HI-LO	092 BORIC ACID FLOW DEVIATION HI-LO
003 RCP 1C STANDPIPE LEVEL LO	013 RCP 1C STANDPIPE LEVEL HI	023 RCP 1A,1B, OR 1C #1 SEAL	033 CCW FLOW FROM RCP 1A,1B, OR 1C OIL COOLERS LO	043 LTDN ORIFICE ISOLATION VALVE RELIEF LINE TEMPERATURE HI	053 VOLUME CONTROL TANK LEVEL HI-LO	063 BTRS CHILLER SURGE TANK LEVEL HI-LO	073 CHILLER PACKAGE IN LOC CONTROL	083 BORIC ACID TRANSFER PUMP 1A OR 1B IN LOCAL CONTROL	093 AUTO MAKE-UP START SIGNAL BLOCKED
004 RMWST DEGAS SYS TROUBLE	014 RCP 1A,1B, OR 1C SEAL WATER BYPASS FLOW LO	024 SEAL WATER INJECTION FILTER ΔP HI	034	044 LTDN HX OUTLET PRESSURE HI	054 VOLUME CONTROL TANK PRESSURE HI-LO	064 BORIC ACID TANK 1A LEVEL LO-LO	074 BORIC ACID TANK 1A LEVEL HI-LO	084 BORIC ACID TANK 1A TEMPERATURE LO	094 BORIC ACID TANK 1A TEMPERATURE HI
005 RCP 1A #2 SEAL LEAKOFF FLOW HI	015 RCP 1B #2 SEAL LEAKOFF FLOW HI	025 RCP 1C #2 SEAL LEAKOFF FLOW HI	035	045 LTDN HX OUTLET FLOW HI	055 VOLUME CONTROL TANK TEMPERATURE HI	065 BORIC ACID TANK 1A LEVEL LO-LO	075 BORIC ACID TANK 1B LEVEL HI-LO	085 BORIC ACID TANK 1B TEMPERATURE LO	095 BORIC ACID TANK 1B TEMPERATURE HI

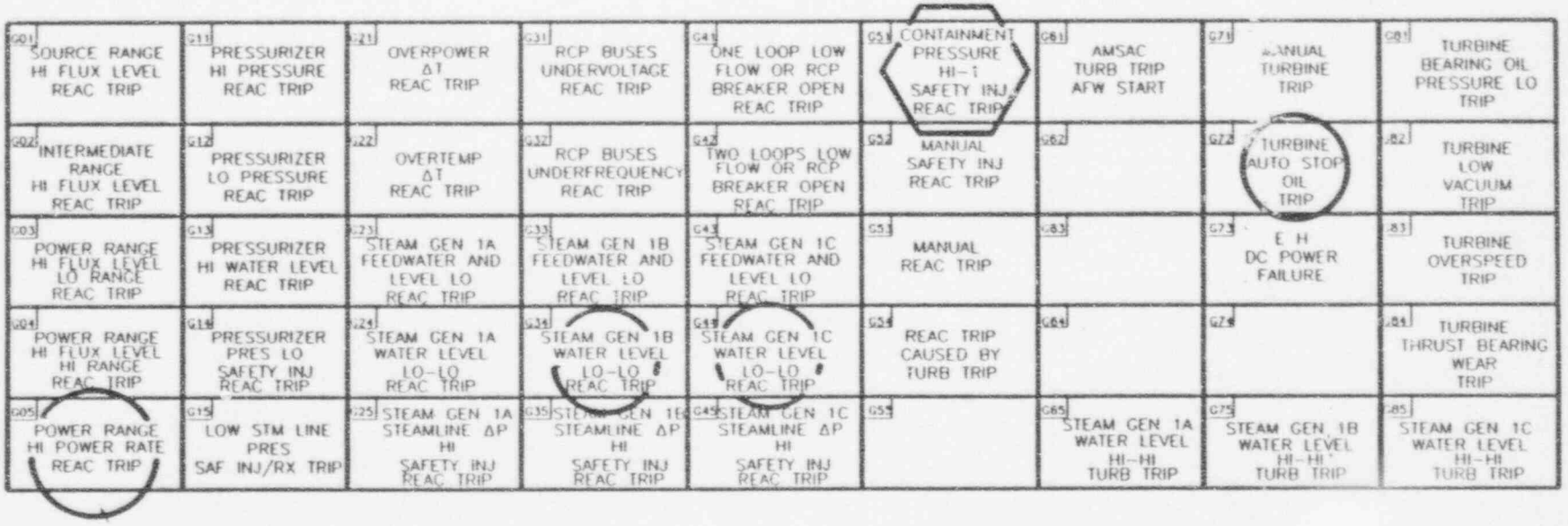
MAIN CONTROL BOARD ANNUNCIATOR PANEL E

E01 CHARGING OR SEAL INJECTION FLOW CONTROL VALVE IN LOCAL CONTROL	E11 CHG PUMP 1A,1B, OR 1C OVERLOAD TRIP	E21 PROCESS CABINET POWER SUPPLY FAILURE	E31 MULTIPLYING RELAY CAB TRAIN A LOSS OF POWER	E41 CONTAINMENT PRESSURE HI-1 ALERT	E51 RCS LOOP 1A FLOW LO OR RCP 1A BREAKER OPEN	E61 OVERTEMP ΔT SINGLE INPUT ALERT	E71 SPENT FUEL POOL TEMPERATURE HI
E02 CHARGING HEADER FLOW HI-LO	E12 CHARGING PUMP IN LOCAL CONTROL	E22 PROCESS PROTECTION RACKS >1 SET OF DOORS OPEN	E32 MULTIPLYING RELAY CAB TRAIN B LOSS OF POWER	E42 CONTAINMENT PRESSURE HI-2 ALERT	E52 RCS LOOP 1B FLOW LO OR RCP 1B BREAKER OPEN	E62 OVERPOWER ΔT SINGLE INPUT ALERT	E72 SPENT FUEL POOL LEVEL HI-LO
E03 CHG PUMP 1A,1B, OR 1C LUBE OIL HI TEMP	E13 CHG PUMP ROOM COOLER 1A OR 1B FAULT	E23 PROCESS CHANNEL SPRAY ACTUATION TEST SEQUENCE VIOLATION	E33 AUX BLDG HIGH ROOM PRESSURE	E43 CONTAINMENT PRESSURE HI-3 ALERT	E53 RCS LOOP 1C FLOW LO OR RCP 1C BREAKER OPEN	E63 RWST LEVEL HIGH TRAIN A	E73 RWST LEVEL HIGH TRAIN B
E04 CHG PUMP 1A,1B, OR 1C CCW FLOW LO	E14 CHG PUMP ROOM COOLER 1B OR 1C FAULT	E24 SOLID STATE PROTECTION SYS TRAIN A TROUBLE	E34	E44 CONTAINMENT SPRAY ACTUATION	E54 RCP BUS UNDERVOLTAGE SINGLE INPUT ALERT	E64 RWST TECH SPEC MIN LEVEL TRAIN A	E74 RWST TECH SPEC MIN LEVEL TRAIN B
E05 RCP VIBRATION TROUBLE	E15	E25 SOLID STATE PROTECTION SYS TRAIN B TROUBLE	E35 AMSAC SYS TRBL	E45 CONTAINMENT ISOLATION PHASE B	E55 RCP BUS UNDERFREQUENCY SINGLE INPUT ALERT	E65 RCS RTD MANIFOLD BYPASS LOOP FLOW 1A,1B, OR 1C LO	E75 SPDS PLT COMPUTER INV TRBL

MAIN CONTROL BOARD ANNUNCIATOR PANEL F

F01 SOURCE RANGE HI FLUX LEVEL AT SHUTDOWN	F11 INTERMEDIATE RANGE LOSS OF DETECTOR VOLTAGE	F21 POWER RANGE HIΦ – HI RANGE REACTOR TRIP SINGLE CHANNEL ALERT	F31 INTERMEDIATE RANGE HI FLUX LEVEL AUTO/MANUAL ROD STOP	F41 CONTROL ROD BANK POSITION LO	F51 ROD CONTROL SYS URGENT FAILURE	F61	F71 RADIATION MONITOR SYSTEM HI RADIATION
F02 SOURCE RANGE HI FLUX LEVEL AT SHUTDOWN ALARM BLOCKED	F12 INTERMEDIATE RANGE (N–35) LOSS OF COMPENSATING VOLTAGE	F22 POWER RANGE HIΦ – HI RANGE REACTOR TRIP SINGLE CHANNEL ALERT	F32 POWER RANGE OVERPOWER AUTO/MANUAL ROD STOP	F42 CONTROL ROD BANK POSITION LO–LO	F52 ROD CONTROL SYS NON–URGENT FAILURE	F62 DELTA FLUX DEVIATION ALERT	F72 RADIATION MONITOR SYSTEM CHANNEL FAILURE
F03 SOURCE RANGE LOSS OF DETECTOR VOLTAGE	F13 INTERMEDIATE RANGE (N–36) LOSS OF COMPENSATING VOLTAGE	F23 POWER RANGE HIGH FLUX RATE SINGLE CHANNEL ALERT	F33 OVERPOWER ΔT AUTO/MANUAL ROD STOP AND TURBINE RUNBACK	F43 ROD AT BOTTOM	F53 ROD POSITION INDICATION SYS URGENT FAILURE	F63 CORE CLG MONITOR CH A FAIL	F73 RADIATION MONITOR SYS CHANNEL TEST
F04 NUCLEAR INSTRUMENTATION SYSTEM CHANNEL IN TRIP BYPASS	F14 POWER RANGE UPPER DETECTOR HI FLUX DEVIATION OR AUTO DEFEAT	F24	F34 OVERTEMP ΔT AUTO/MANUAL ROD STOP AND TURBINE RUNBACK	F44 TWO OR MORE RODS AT BOTTOM	F54 ROD POSITION INDICATION SYS NON–URGENT FAILURE	F64 CORE CLG MONITOR CH B FAIL	F74 CONTAINMENT PURGE HI RADIATION RE–24A – RE–24B
F05 NUCLEAR INSTRUMENTATION SYSTEM CHANNEL IN TEST	F15 POWER RANGE LOWER DETECTOR HI FLUX DEVIATION OR AUTO DEFEAT	F25 POWER RANGE CHANNEL DEVIATION	F35 BANK D FULL ROD WITHDRAWAL AUTO ROD STOP	F45 ROD CONTROL MG SET 1A OR 1B TRIPPED	F55 COMPUTER ALARM ROD DEVIATION ROD SEQUENCE OR POWER RANGE FLUX TILT	F65 GROSS FAIL FUEL DETECTOR SYSTEM TROUBLE	F75 FUEL HANDLING AREA HI RADIATION RE–25A – RE–25B

MAIN CONTROL BOARD ANNUNCIATOR PANEL G



G01 SOURCE RANGE HI FLUX LEVEL REAC TRIP	G11 PRESSURIZER HI PRESSURE REAC TRIP	G21 OVERPOWER ΔT REAC TRIP	G31 RCP BUSES UNDERVOLTAGE REAC TRIP	G41 ONE LOOP LOW FLOW OR RCP BREAKER OPEN REAC TRIP	G51 CONTAINMENT PRESSURE HI-1 SAFETY INJ REAC TRIP	G61 AMSAC TURB TRIP AFW START	G71 MANUAL TURBINE TRIP	G81 TURBINE BEARING OIL PRESSURE LO TRIP
G02 INTERMEDIATE RANGE HI FLUX LEVEL REAC TRIP	G12 PRESSURIZER LO PRESSURE REAC TRIP	G22 OVERTEMP ΔT REAC TRIP	G32 RCP BUSES UNDERFREQUENCY REAC TRIP	G42 TWO LOOPS LOW FLOW OR RCP BREAKER OPEN REAC TRIP	G52 MANUAL SAFETY INJ REAC TRIP	G62	G72 TURBINE AUTO STOP OIL TRIP	G82 TURBINE LOW VACUUM TRIP
G03 POWER RANGE HI FLUX LEVEL LO RANGE REAC TRIP	G13 PRESSURIZER HI WATER LEVEL REAC TRIP	G23 STEAM GEN 1A FEEDWATER AND LEVEL LO REAC TRIP	G33 STEAM GEN 1B FEEDWATER AND LEVEL LO REAC TRIP	G43 STEAM GEN 1C FEEDWATER AND LEVEL LO REAC TRIP	G53 MANUAL REAC TRIP	G63	G73 E H DC POWER FAILURE	G83 TURBINE OVERSPEED TRIP
G04 POWER RANGE HI FLUX LEVEL HI RANGE REAC TRIP	G14 PRESSURIZER PRES LO SAFETY INJ REAC TRIP	G24 STEAM GEN 1A WATER LEVEL LO-LO REAC TRIP	G34 STEAM GEN 1B WATER LEVEL LO-LO REAC TRIP	G44 STEAM GEN 1C WATER LEVEL LO-LO REAC TRIP	G54 REAC TRIP CAUSED BY TURB TRIP	G64	G74	G84 TURBINE THRUST BEARING WEAR TRIP
G05 POWER RANGE HI POWER RATE REAC TRIP	G15 LOW STM LINE PRES SAF INJ/RX TRIP	G25 STEAM GEN 1A STEAMLINE ΔP HI SAFETY INJ REAC TRIP	G35 STEAM GEN 1B STEAMLINE ΔP HI SAFETY INJ REAC TRIP	G45 STEAM GEN 1C STEAMLINE ΔP HI SAFETY INJ REAC TRIP	G55	G65 STEAM GEN 1A WATER LEVEL HI-HI TURB TRIP	G75 STEAM GEN 1B WATER LEVEL HI-HI TURB TRIP	G85 STEAM GEN 1C WATER LEVEL HI-HI TURB TRIP

MAIN CONTROL BOARD ANNUNCIATOR PANEL H

H01 PRESSURIZER LEVEL HI REACTOR TRIP ALERT	H11 PRESSURIZER WATER LEVEL HI	H21 PRESSURIZER PRESSURE HI-LO	H31 PRESSURIZER PRESSURE RELIEF VALVE 445A OR BACKUP HEATERS ON	H41 SECURITY BUILDING ALERT	H51 REACTOR COOLANT LOOPS T-AVG DEVIATION HI-LO	H61 RCP 1A BEARING UPPER/LOWER OIL RES HI LEVEL	H71 RCP 1A BEARING UPPER/LOWER OIL RES LO LEVEL
H02 PRESSURIZER LEVEL DEVIATION HI BACKUP HEATERS ON	H12 PRESSURIZER LEVEL DEVIATION LO	H22 PRESSURIZER HI/LO PRESS ALERT	H32 PRESSURIZER PRESSURE SI & POWER OPERATED RELIEF BLOCK P-11	H42 SAFETY VALVE 8010A,B, OR C OPEN	H52 REACTOR COOLANT LOOPS ΔT DEVIATION HI-LO	H62 RCP 1B BEARING UPPER/LOWER OIL RES HI LEVEL	H72 RCP 1B BEARING UPPER/LOWER OIL RES LO LEVEL
H03 PRESSURIZER LEVEL DEVIATION LO BACKUP HTRS OFF & LTDN SECURED	H13	H23 PRESSURIZER PRESSURE LO SAFETY INJ ALERT	H33 PRESSURIZER CONTROL PRESSURE OUTPUT HI	H43 PRESSURIZER RELIEF TANK TEMPERATURE HI	H53 T-AVG / T-REF DEVIATION	H63 RCP 1C BEARING UPPER/LOWER OIL RES HI LEVEL	H73 RCP 1C BEARING UPPER/LOWER OIL RES LO LEVEL
H04 PRESSURIZER SAFETY VALVE TEMPERATURE HI	H14 PRESSURIZER SPRAY LINE LOOP 1A OR 1B TEMPERATURE LO	H24 PRESSURIZER HEATERS ON LOCAL CONTROL	H34 PRESSURIZER HEATER CONTROLLER TROUBLE	H44 PRESSURIZER RELIEF TANK LEVEL HI-LO	H54 REACTOR COOLANT LOOP 1A,1B OR 1C T-AVG LO-LO	H64 OMS RELIEF VALVE PATH CLOSED AT LOW TEMP	H74 RELIEF VALVE 445B OR 445A OPEN
H05 PRESSURIZER POWER OPERATED RELIEF VALVE TEMPERATURE HI	H15 PRESSURIZER SURGE LINE TEMPERATURE LO	H25 PRESSURIZER VAPOR OR LIQUID TEMPERATURE HI	H35 PRESSURIZER HEATER BREAKER TRIPPED	H45 PRESSURIZER RELIEF TANK PRESSURE HI	H55 REACTOR COOLANT LOOPS T-AVG HI	H65 SOLID RCS PRESSURE HI	H75 REACTOR VESSEL FLANGE LEAKOFF TEMPERATURE HI

MAIN CONTROL BOARD ANNUNCIATOR PANEL J

J01 STEAM GEN 1A WATER LEVEL LO ALERT	J11 STEAM GEN 1A STEAM FLOW > FEED FLOW	J21 STEAM GEN 1A WATER LEVEL LO-LO ALERT	J31 STEAM GEN 1A WATER LEVEL HI-HI ALERT	J41 STEAM GEN 1A STEAM LINE ΔP HI ALERT	J51 STEAM GEN 1A LEVEL DEVIATION	J61 STEAM GEN 1A FEED FLOW > STEAM FLOW	J71 STEAM GEN 1A MAIN STEAM ISOLATION CLOSED	J81 MDAFP 1A OVERCURRENT TRIP	J91 MDAFP 1A SUCTION PRESSURE LO
J02 STEAM GEN 1B WATER LEVEL LO ALERT	J12 STEAM GEN 1B STEAM FLOW > FEED FLOW	J22 STEAM GEN 1B WATER LEVEL LO-LO ALERT	J32 STEAM GEN 1B WATER LEVEL HI-HI ALERT	J42 STEAM GEN 1B STEAM LINE ΔP HI ALERT	J52 STEAM GEN 1B LEVEL DEVIATION	J62 STEAM GEN 1B FEED FLOW > STEAM FLOW	J72 STEAM GEN 1B MAIN STEAM ISOLATION CLOSED	J82 MDAFP 1B OVERCURRENT TRIP	J92 MDAFP 1B SUCTION PRESSURE LO
J03 STEAM GEN 1C WATER LEVEL LO ALERT	J13 STEAM GEN 1B STEAM FLOW > FEED FLOW	J23 STEAM GEN 1C WATER LEVEL LO-LO ALERT	J33 STEAM GEN 1C WATER LEVEL HI-HI ALERT	J43 STEAM GEN 1C STEAM LINE ΔP HI ALERT	J53 STEAM GEN 1C LEVEL DEVIATION	J63 STEAM GEN 1C FEED FLOW > STEAM FLOW	J73 STEAM GEN 1C MAIN STEAM ISOLATION CLOSED	J83 TDAFP TROUBLE	J93 TDAFP SUCTION PRESSURE LO
J04 MAIN STEAM LINE 1A,1B, OR 1C PRESSURE LOW ALERT	J14 MAIN STEAM LINE 1A,1B, OR 1C STEAM FLOW HI ALERT	J24 MAIN STEAM LINE 1A,1B, OR 1C ISOLATION VALVE AIR PRESSURE LO	J34 CONDENSATE STORAGE TANK LEVEL LO-LO TRAIN A	J44 CONDENSATE STORAGE TANK LEVEL LO-LO TRAIN B	J54 REACTOR TRIP AND T-AVG LO FEEDWATER CONTROL VALVE ISOLATION	J64 TDAFP TRIP/THROTTLE VALVE CLOSED	J74 TDAFP UNINTERRUPTIBLE POWER SUPPLY FAULT	J84 TDAFP 1A OR 1B TDAFP LOCAL CONTROL	J94 MDAFP 1A ROOM COOLER FAULT
J05 MAIN STEAM LINE POWER OPERATED RELIEF 1A,1B,1C IN LOCAL CONTROL	J15 STEAM GEN BLOWDOWN PROCESSING PNL TROUBLE	J25 TURB WATER INDUCTION PROT PNL ALARM	J35 HI STM FLOW AND LO-LO T-AVG OR LO STM PRESS STEAMLINE ISOL	J45 CONDENSATE STORAGE TANK LEVEL HI-LO	J55 TDAFW STEAM ISO VALVE AIR ACCUM PRESS LOW	J65 SW ISOLATION TO SUCTION MDAFP 1A OR 1B OR TDAFP OPEN	J75 MDAFP/TDAFP SUCTION FLOW HI-LO	J85 MDAFP OR TDAFP FLOW CONTROL VALVES IN LOCAL CONTROL	J95 MDAFP 1B ROOM COOLER FAULT

MAIN CONTROL BOARD
ANNUNCIATOR PANEL K

K01 SGFP TURBINE 1A AC OR DC OIL PUMP OVERLOAD	K11 SGFP TURBINE 1A MISC ALARMS	K21 LOSS 250VDC EMERGENCY OIL PUMP	K31 INSTRUMENT AIR TO PENE RM PRESSURE LO	K41 WELL WTR PMP 4160V BKR TRIP	K51 TURBINE BUILDING OIL OR WATER SUMP LEVEL HI	K61 E.H. FLUID SYSTEM TROUBLE	K71 TURBINE EXHAUST HOOD TEMPERATURE HI-HI	K81 TURBINE EXHAUST HOOD TEMPERATURE HI	K91 TURBINE CONDENSER VACUUM LO
K02 SGFP TURBINE 1B AC OR DC OIL PUMP OVERLOAD	K12 SGFP TURBINE 1B MISC ALARMS	K22 COOLING TOWERS 1A, 1B, OR 1C FAN BREAKER TRIPPED	K32 INSTRUMENT AIR PRESSURE LO	K42 AFW TEMP PANEL ALARM	K52 SGFP AND MAIN TURBINE OIL CONDITIONERS ALARM PANEL	K62 E.H. FLUID LEVEL LOW LOW	K72 TURBINE BEARING OIL PRESSURE LO	K82 TURBINE AC BRG OIL PUMP ON ALTERNATE POWER OR EOP RUNNING	K92 TURBINE SUPERVISORY INSTRUMENTS ALARM
K03 SGFP TURBINE 1A TURNING GEAR OVERLOAD	K13 SGFP TURBINES EH CONTROL POWER SUPPLY OFF	K23 SANITARY WATER PUMPS DISCH HEADER PRESSURE LO	K33 SERVICE AIR PRESSURE LO	K43 WATER ANALYSIS ALARM	K53 MAIN TURBINE LUBE OIL RESERVOIR LEVEL HI-LO	K63 TURBINE RELATCH FAILURE	K73 TURBINE EMERGENCY OIL PUMP (DC) OVERLOAD	K83 TURBINE OIL VAPOR EXTRACTOR TRIPPED	K93 BALANCE OF PLANT PANELS A THROUGH C POWER FAILURE
K04 SGFP TURBINE 1B TURNING GEAR OVERLOAD	K14 SGFP TURBINES SUCTION PRESSURE LOW	K24 FEEDWATER HEATER OR DRAIN TANK LEVEL HIGH	K34 CHLORINE LEAKAGE TRAIN A	K44 CST DEGAS SYSTEM TROUBLE	K54 COOLING TOWER TEMPERATURE LOW	K64 TURBINE THROTTLE VALVE SHUT SINGLE INPUT ALERT	K74 TURBINE AUTOMATIC TURNING GEAR ALARM	K84 TURBINE THRUST BEARING WEAR ALARM	K94 BEARING MONITOR PANEL ALARM
K05 SGFP TURBINE VIBRATION THRUST BRG WEAR SUPERVISORY ALARM	K15 HOTWELL LEVEL HI-LO	K25 STANDBY CONDENSATE PUMP RUNNING	K35 CHLORINE LEAKAGE TRAIN B	K45 CIRC WATER CANAL LEVEL LO	K55 CONDENSER TUBE CLEANING SYSTEM TROUBLE	K65 INTERCEPT VALVE OR REHEAT STOP VALVE CLOSED	K75 TURBINE AUTO-STOP OIL PRESSURE LO SINGLE INPUT ALERT	K85 TURBINE GLAND SEAL SYSTEM EXHAUSTER CONDENSER TROUBLE	K95 MOTOR STATOR TEMP PANEL ALARM

MAIN CONTROL BOARD ANNUNCIATOR PANEL L

L01 HEATER DRAIN PUMP 1A OR 1B TRIPPED	L11 DEH TROUBLE	L21	L31 STATION SERVICE XFMER 1I DIFFERENTIAL PROTECTION	L41	L51 STATION SERVICE XFMER 1N DIFFERENTIAL PROTECTION	L61 STATION SERVICE XFMER 1P OR 1Q DIFFERENTIAL PROTECTION	L71 STATION SERVICE XFMER 1U OR 1V SUDDEN PRESS	L81 HYDROGEN PURITY HI-LO	L91 GENERATOR EXCITER SWITCHGEAR ALARM
L02 600V LC 1A EA02 OR EA07 OVERCURRENT TRIP	L12 600V LC 1B EB02 OR EB07 OVERCURRENT TRIP	L22 600V LC 1C EC02 OR EC07 OVERCURRENT TRIP	L32 600V LC 1I EI02 OR EI05 OVERCURRENT TRIP	L42 600V LC 1M EM02 OR EM07 OVERCURRENT TRIP	L52 600V LC 1N EN02 OR EN04 OVERCURRENT TRIP	L62 600V LC 1P,1Q,1U,1V,1W 1X,1Y OR 1Z UNDERVOLTAGE ALARM	L72 STATION SERVICE XFMER 1W OR 1X SUDDEN PRESS	L82 HYDROGEN PRESSURE HI-LO	L92 VOLT REG TRIP/PSS OFF
L03 480V LTG XFMER 1A OR 1B 600V FEEDER BKR OVERCURRENT TRIP	L13 600V LC 1B BUS GROUNDED	L23 600V MCC 1C,1D OR 1E FEEDER BKR OVERCURRENT TRIP	L33 600V LC 1I BUS GROUNDED	L43 600V LC 1M BUS GROUNDED	L53 600V LC 1N BUS GROUNDED	L63 600 VOLT BREAKER TRIPPED	L73 STATION SERVICE XFMER 1Y OR 1Z SUDDEN PRESS	L83 HYDROGEN TEMPERATURE HI	L93
L04 480V LTG XFMER 1C,1D,1E OR 1F 600V FEEDER BKR OVERCURRENT TRIP	L14 208/120 MISC POWER XFMER ALARM	L24 480/277V MISC POWER XFMER ALARM	L34 STATION SERVICE XFMER 1I SUPPLY BKR TRIPPED	L44 TURBINE SEAL OIL BACKUP PRESSURE LO	L54 AIR SIDE SEAL OIL PUMP OFF	L64 SEAL OIL BACKUP PUMP RUNNING	L74 HYDROGEN SIDE SEAL OIL LEVEL LO	L84	L94 PERM MAGNET & GENERATOR FIELD BREAKER TRIPPED
L05 480/277 TURBINE BLDG LIGHTING ON ALTERNATE SUPPLY	L15 208/120 VAC MISC SWGR 1A ON ALTERNATE SUPPLY	L25 STATION SERVICE XFMER 1T OR 1AA SUDDEN PRESSURE PROTECTION	L35 GENERATOR VAPOR EXTRACTOR OVERLOAD	L45 DEFOAMING TANK LEVEL HI	L55 SEAL OIL PRESSURE LO	L65 EMERGENCY AIR SIDE SEAL OIL BACKUP PUMP ALARM	L75 HYDROGEN SIDE SEAL OIL PUMP OFF	L85 HYDROGEN SYSTEM WATER DETECTOR HI	L95 GENERATOR NEGATIVE SEQUENCE ALARM

MAIN CONTROL BOARD ANNUNCIATOR PANEL M

ANNUNCIATOR DIESEL GENERATOR 1B
WINDOW GROUP V

V11 DIESEL GEN. 1B ENGINE SHUTDOWN	V21 DIESEL GEN. 1B OUT OF SERVICE OR ON LOCAL CONTROL	V31 SEQUENCER B1G TESTING	V41 INVERTER 1C FAULT	V51 4KV BUS 1G, 1J OR 1L BKR. AUTO TRIP	V61 4KV BUS 1G, 1J OR 1L DIFF.PROTECTION	V71 600V LC 1C,1E,1J,.L OR 1S BKR. AUTO TRIP
V12 DIESEL GEN. 1B GENERATOR FAULT TRIP	V22 DIESEL GEN. 1B DAY TANK FUEL OIL LEVEL LO-HI	V32 125V DC BUS 1B UNDERVOLTAGE OR GROUND	V42 INVERTER 1D FAULT	V52 4KV BUS 1G UNDERVOLTAGE OR LOSS OF DC	V62 4KV BUS 1G BKR ON LOCAL CONTROL	V72 600V LC 1C OR 1E GROUND FAULT OR BKR. ON LOCAL CONTROL
V13 DIESEL GEN. 1B TROUBLE	V23 SEQUENCER B1G LOAD SHEDDING	V33 125V DC BUS 1B BATT. BREAKER 72-1B18 TRIPPED	V43 INVERTER 1G FAULT	V53 4KV BUS 1J UNDERVOLTAGE OR LOSS OF DC	V63 4KV BUS 1J BKR. ON LOCAL CONTROL	V73 600V LC 1J GROUND FAULT OR BKR. ON LOCAL
V14 DIESEL GEN 1B BKR. 52-DG08 LOSS OF DC	V24 SEQUENCER B1G FAILURE	V34 BATT.CHARGER 1B FAULT OR DISCONNECTED	V44 STA.SERV.TRANS. 1E DIFF.PROTECTION	V54 4KV BUS 1L UNDERVOLTAGE	V64 4KV BUS 1L BKR. ON LOCAL CONTROL	V74 600V LC 1L GROUND FAULT OR BKR. ON LOCAL CONTROL
	V25 SEQUENCER B1G LOSS OF DC	V35 SEQUENCER B1G SIAS	V45 STA.SERV.TRANS 1F SUDDEN PRESSURE	V55 BATTERY NO. 3 OR 4 UNDERVOLTAGE OR BATT CHARGER 3 OR 4 ALARM		V75 600V LC 1S GROUND FAULT OR BKR. ON LOCAL CONTROL

ANNUNCIATOR DIESEL GENERATOR 1-2A
WINDOW GROUP W

W11 DIESEL GEN.1-2A ENGINE SHUTDOWN	W21 DIESEL GEN.1-2A OUT OF SERVICE OR ON LOCAL CONTROL	W31 SEQ. B1F OR B2F TESTING	W41 INVERTER 1A FAULT	W51 4KV BUS 1F, 1H OR 1K BKR. AUTO TRIP	W61 4KV BUS 1F, 1H OR 1K DIFF.PROTECTION	W71 600V LC 1A, 1D, 1G, 1H, 1K OR 1L BKR. AUTO TRIP
W12 DIESEL GEN.1-2A GENERATOR FAULT TRIP	W22 DIESEL GEN.1-2A DAY TANK FUEL OIL LEVEL LO-HI	W32 125V DC BUS 1A UNDERVOLTAGE OR GROUND	W42 INVERTER 1B FAULT	W52 4KV BUS 1F UNDERVOLTAGE OR LOSS OF DC	W62 4KV BUS 1F BKR ON LOCAL CONTROL	W72 600V LC 1A OR 1D GROUND FAULT OR BKR. ON LOCAL CONTROL
W13 DIESEL GEN.1-2A TROUBLE	W23 SEQ. B1F OR B2F LOAD SHEDDING	W33 125V DC BUS 1A BATT. BREAKER 72-1A05 TRIPPED	W43 INVERTER 1F FAULT	W53 4KV BUS 1H UNDERVOLTAGE OR LOSS OF DC	W63 4KV BUS 1H BKR. ON LOCAL CONTROL	W73 600V LC 1G GROUND FAULT
W14 DIESEL GEN 1-2A BKR. 52-DF08-1 OR 52-DF08-2 LOSS OF DC	W24 SEQ. B1F OR B2F FAILURE	W34 BATT.CHARGER 1A FAULT OR DISCONNECTED	W44 STA.SERV.TRANS. 1D OR 1G DIFF.PROTECTION	W54 4KV BUS 1K UNDERVOLTAGE	W64 4KV BUS 1K BKR. ON LOCAL CONTROL	W74 600V LC 1H GROUND FAULT OR BKR. ON LOCAL CONTROL
W15 DIESEL GEN.1-2A NOT AVAILABLE FOR UNIT 1 OR 2	W25 SEQ. B1F OR B2F LOSS OF DC	W35 BATT.CHARGER 1C FAULT	W45 STA.SERV.TRANS 1F SUDDEN PRESSURE	W55 SEQ. B1F OR B2F SIAS	W65 600V LC 1K GROUND FAULT OR BKR. ON LOCAL CONTROL	W75 600V LC 1K GROUND FAULT OR BKR. ON LOCAL CONTROL

ANNUNCIATOR DIESEL GENERATOR 2C
WINDOW GROUP X

X11 DIESEL GEN. 2C ENGINE SHUTDOWN	X21 DIESEL GEN. 2C OUT OF SERVICE OR ON LOCAL CONTROL	X31 SEQ. B1J OR B2J TESTING		X51 4KV BUS 2J BKR. AUTO TRIP	X61 4KV BUS 2J DIFF.PROTECTION	X71 600V LC 2J BKR. AUTO TRIP
X12 DIESEL GEN.2C GENERATOR FAULT TRIP	X22 DIESEL GEN.2C DAY TANK FUEL OIL LEVEL LO-HI			X52 4KV BUS 2J UNDERVOLTAGE OR LOSS OF DC	X62 4KV BUS 2J BKR ON LOCAL CONTROL	X72 600V LC 2J GROUND FAULT OR BKR. ON LOCAL CONTROL
X13 DIESEL GEN.2C TROUBLE	X23 SEQ. B1J OR B2J LOAD SHEDDING					
X14 DIESEL GEN. 2C BKR. 52-DJ06-1 OR 52-DJ06-2 LOSS OF DC	X24 SEQ. B1J OR B2J FAILURE				X64 DIESEL OIL STORAGE TANK 1-2A LEVEL HI	X74 DIESEL BLDG ALARM PANEL
X15 DIESEL GEN.2C NOT AVAILABLE FOR UNIT 1 OR 2	X25 SEQ. B1J OR B2J LOSS OF DC				X65 OPERATOR START STANDBY FUEL OIL PUMP 1B 2B OR 2C	X75 DIESEL BLDG FLOODING

ANNUNCIATOR DIESEL GENERATOR 2B
WINDOW GROUP Y

Y11 DIESEL GEN. 2B ENGINE SHUTDOWN	Y21 DIESEL GEN. 2B OUT OF SERVICE OR ON LOCAL CONTROL	Y31 SEQUENCER B2G TESTING	Y41 INVERTER 2C FAULT	Y51 4KV BUS 2G, OR 2L BKR. AUTO TRIP	Y61 4KV BUS 2G, OR 2L DIFF.PROTECTION	Y71 600V LC 2C, 2E, OR 2L BKR. AUTO TRIP
Y12 DIESEL GEN. 2B GENERATOR FAULT TRIP	Y22 DIESEL GEN. 2B DAY TANK FUEL OIL LEVEL LO-HI	Y32 125V DC BUS 2B UNDERVOLTAGE OR GROUND	Y42 INVERTER 2D FAULT	Y52 4KV BUS 2G UNDERVOLTAGE OR LOSS OF DC	Y62 4KV BUS 2G BKR ON LOCAL CONTROL	Y72 600V LC 2C OR 2E GROUND FAULT OR BKR. ON LOCAL CONTROL
Y13 DIESEL GEN. 2B TROUBLE	Y23 SEQUENCER B2G LOAD SHEDDING	Y33 125V DC BUS 2B BATT. BREAKER 72-LB18 TRIPPED	Y43 INVERTER 2G FAULT	Y53 4KV BUS 2L UNDERVOLTAGE	Y63 4KV BUS 2L BKR. ON LOCAL CONTROL	Y73 600V LC 2L GROUND FAULT OR BKR. ON LOCAL CONTROL
Y14 DIESEL GEN 2B BKR. 52-DG08 LOSS OF DC	Y24 SEQUENCER B2G FAILURE	Y34 BATT.CHARGER 2B FAULT OR DISCONNECTED	Y44 STA.SERV.TRANS. 2E DIFF.PROTECTION			
Y15	Y25 SEQUENCER B2G LOSS OF DC	Y35 SEQUENCER B2G SIAS	Y45 STA.SERV.TRANS 2F SUDDEN PRESSURE			Y75 UNIT 2 VALVE BOX FLOODING

ANNUNCIATOR DIESEL GENERATOR 1C
WINDOW GROUP 2

z11	z21	z31	z41	z51	z61	z71
DIESEL GEN.1C ENGINE SHUTDOWN	DIESEL GEN.1C OUT OF SERVICE OR ON LOCAL CONTROL	SEQ. B1H OR B2H TESTING	INVERTER 2A FAULT	4KV BUS 2F, 2H OR 2K BKR. AUTO TRIP	4KV BUS 2F, 2H OR 2K DIFF.PROTECTION	600V LC 2A, 2E, 2G, 2H OR 2K BKR. AUTO TRIP
z12	z22	z32	z42	z52	z62	z72
DIESEL GEN.1C GENERATOR FAULT TRIP	DIESEL GEN.1C DAY TANK FUEL OIL LEVEL LO-HI	125V DC BUS 2A UNDERVOLTAGE OR GROUND	INVERTER 2B FAULT	4KV BUS 2F UNDERVOLTAGE OR LOSS OF DC	4KV BUS 2F BKR ON LOCAL CONTROL	600V LC 2A OR 2D GROUND FAULT OR BKR. ON LOCAL CONTROL
z13	z23	z33	z43	z53	z63	z73
DIESEL GEN.1C TROUBLE	SEQ. B1H OR B2H LOAD SHEDDING	125V DC BUS 2A BATT. BREAKER 72-1A05 TRIPPED	INVERTER 2F FAULT	4KV BUS 2H UNDERVOLTAGE OR LOSS OF DC	4KV BUS 2H BKR. ON LOCAL CONTROL	600V LC 2G GROUND FAULT OR BKR. ON LOCAL CONTROL
z14	z24	z34	z44	z54	z64	z74
DIESEL GEN 1C BKR. 52-DG07-1 OR 52-DG07-2 LOSS OF DC	SEQ. B1H OR B2H FAILURE	BATT.CHARGER 2A FAULT OR DISCONNECTED	STA.SERV.TRANS. 2D OR 2G DIFF.PROTECTION	4KV BUS 2K UNDERVOLTAGE	4KV BUS 2K BKR. ON LOCAL CONTROL	600V LC 2H GROUND FAULT OR BKR. ON LOCAL CONTROL
z15	z25	z35	z45	z55	z65	z75
DIESEL GEN.1C NOT AVAILABLE FOR UNIT 1 OR 2	SEQ. B1H OR B2H LOSS OF DC	BATT.CHARGER 2C FAULT	STA.SERV.TRANS 2F SUDDEN PRESSURE	BATTERY NO. 1 OR 2 UNDERVOLTAGE OR BATT. CHARGER 1 OR 2 ALARM	OPERATOR START STAND-BY FO PUMP	600V LC 2K GROUND FAULT OR BKR. ON LOCAL CONTROL

TIME	EVENT
0902	• Annunciator J-01 Steam Gen 1A Water Level Lo Alert Clears
	• Annunciator H-32 Pressurizer SI and Power Operated Relief Valve Block P-11 Alarms
	• Annunciator P-73 CTMT Sump Hi-Hi Level Alarms (BOP)
	• TSLB 3 lights 7-1, 7-2, and 7-3 go out
	• TSLB 4 lights 1-1 and 1-2 go out
0903	• The following MCB Annunciators Alarm (NOTE 1) E-42 Containment Pressure Hi-2 Alert J-24 Main Steam Line 1A, 1B, or 1C Isolation Valve Air Pressure Lo J-71 Steam Gen 1A Main Steam Isolation Closed J-72 Steam Gen 1B Main Steam Isolation Closed J-73 Steam Gen 1C Main Steam Isolation Closed
	• TSLB-1 lights 2-2, 2-3, and 2-4 come on

NOTES: 1. When operators scan the steam, FW, and mini-flow panel, indicate that MSIVs are all closed

TIME	EVENT
0904	• The following MCB Annunciators Alarm:
	H-52 Reactor Coolant Loops ΔT Deviation Hi-Lo
	H-22 Pressurizer Hi-Lo Pressure Alert
	H-23 Pressurizer Pressure Lo Safety Inj Alert
	G-14 Pressurizer Pres Lo Safety Inj Reac Trip
	• The following MCB Annunciators Clear:
	J-51 Steam Gen 1A Level Deviation
	J-22 Steam Gen 1B Water Level Lo-Lo Alert
	J-23 Steam Gen 1C Water Level Lo-Lo Alert
	G-34 Steam Gen 1B Water Level Lo-Lo- Reactor Trip
	G-44 Steam Gen 1C Water Level Lo-Lo Reactor Trip
	V-13 Diesel Gen 1B Trouble
	X-13 Diesel Gen 2C Trouble
	Z-13 Diesel Gen 1C Trouble
	• TSLB-2 lights 17-1, 17-2, 17-3, 19-1, 19-2, and 19-3 Light
	• TSLB-4 lights 5-1, 5-2, 5-3, 6-1, 6-2, 6-3 go out

NOTES:

TIME	EVENT
0908	• The following MCB Annunciators Alarm:
	D-33 CCW Flow from RCP 1A, 1B, 1C Oil Coolers Lo
	[illegible] Containment Pressure Hi-3 Alert
	E-44 Containment Spray Actuation
	E-45 Containment Isolation Phase B
	J-51 Steam Gen 1A Level Deviation
	L-23 RCP Thermal Barrier Isol Valve 3184 Air Pres Low (BOP)
	N-23 RCP Thermal Barrier Isol Valve 3045 Air Pres Low (BOP)
	• Current TSLB status per attached drawings
	• When RCPs secured, the following MCB Annunciators Alarm (Note 1):
	E-51 RCS Loop 1A Flow Lo or RCP 1A Breaker Open
	E-52 RCS Loop 1B Flow Lo or RCP 1B Breaker Open
	E-53 RCS Loop 1C Flow Lo or RCP 1C Breaker Open
	E-65 RCS RTD Manifold Bypass Loop Flow 1A, 1B, or 1C Lo
	H-61 RCP 1A Bearing Upper/Lower Oil Res Hi Level
	H-62 RCP 1B Bearing Upper/Lower Oil Res Hi Level
	H-63 RCP 1C Bearing Upper/Lower Oil Res Hi Level

NOTES: 1. The following TSLB lights come on when RCPs secured:

TSLB-1 10-1, 10-2, & 10-3

TSLB-2 3-1, 4-1, 5-1, 6-1
3-2, 4-2, 5-2, 6-2
3-3, 4-3, 5-3, 6-3

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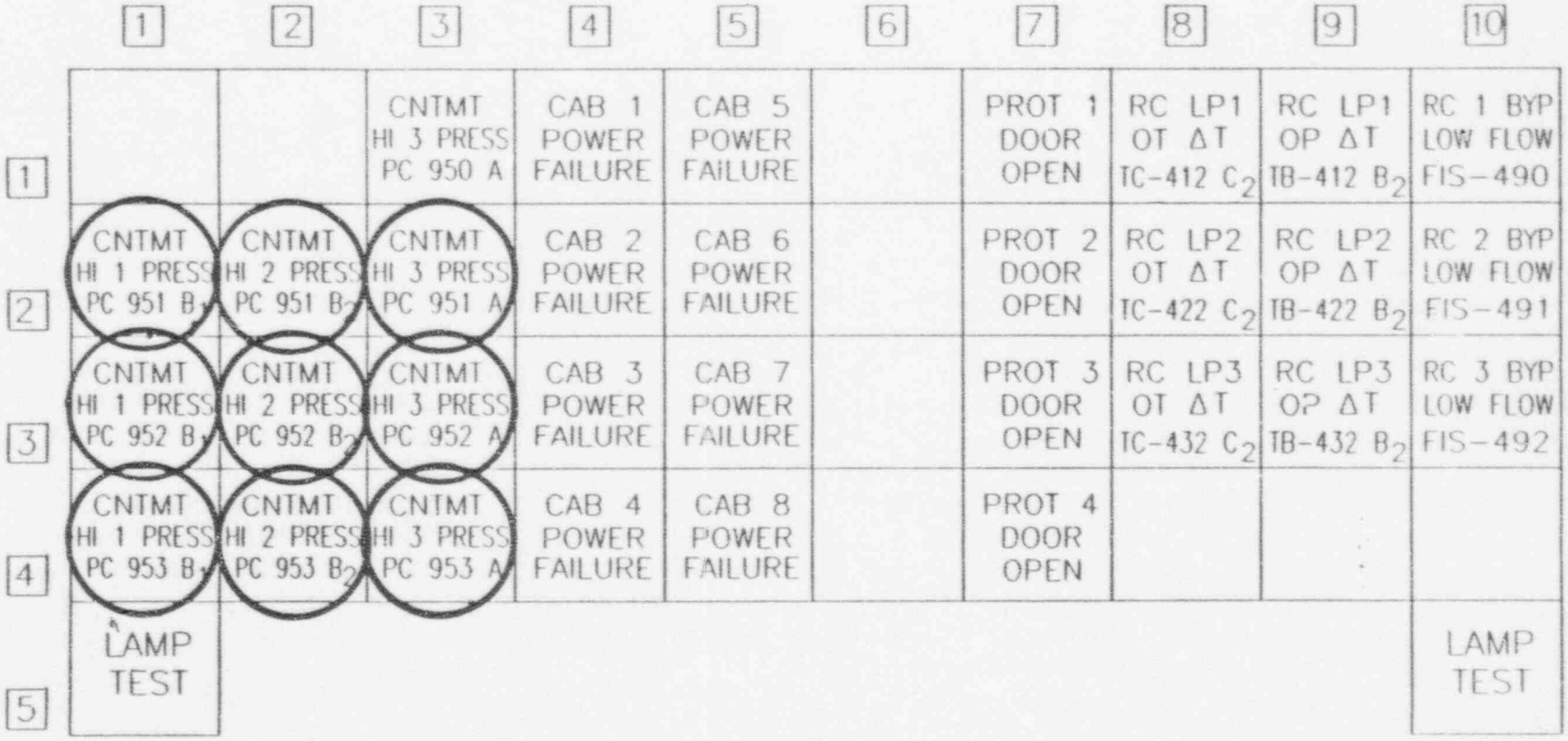
TRIP STATUS LIGHT BOX 1



	1	2	3	4	5	6	7	8	9	10
1			CNTMT HI 3 PRESS PC 950 A	CAB 1 POWER FAILURE	CAB 5 POWER FAILURE		PROT 1 DOOR OPEN	RC LP1 OT ΔT TC-412 C_2	RC LP1 OP ΔT TB-412 B_2	RC 1 BYP LOW FLOW FIS-490
2	CNTMT HI 1 PRESS PC 951 B_1	CNTMT HI 2 PRESS PC 951 B_2	CNTMT HI 3 PRESS PC 951 A	CAB 2 POWER FAILURE	CAB 6 POWER FAILURE		PROT 2 DOOR OPEN	RC LP2 OT ΔT TC-422 C_2	RC LP2 OP ΔT TB-422 B_2	RC 2 BYP LOW FLOW FIS-491
3	CNTMT HI 1 PRESS PC 952 B_1	CNTMT HI 2 PRESS PC 952 B_2	CNTMT HI 3 PRESS PC 952 A	CAB 3 POWER FAILURE	CAB 7 POWER FAILURE		PROT 3 DOOR OPEN	RC LP3 OT ΔT TC-432 C_2	RC LP3 OP ΔT TB-432 B_2	RC 3 BYP LOW FLOW FIS-492
4	CNTMT HI 1 PRESS PC 953 B_1	CNTMT HI 2 PRESS PC 953 B_2	CNTMT HI 3 PRESS PC 953 A	CAB 4 POWER FAILURE	CAB 8 POWER FAILURE		PROT 4 DOOR OPEN			
5	LAMP TEST									LAMP TEST

TRIP STATUS LIGHT BOX 2
(SHEET 1)

	1	2	3	4	5	6	7	8	9	10
1	RCP BUS A UNDERVOLT	RCP BUS A UNDERFREQ	RCP1 BKR OPEN	RC LP1 LO FLOW FB-414A	RC LP2 LO FLOW FB-424A	RC LP3 LO FLOW FB-434A	RC LP1 OT ΔT TB-412 C_1	RC LP1 OP ΔT TB-412 B_1	RC LP1 LO T AVG TB-412 D	RC LP1 LOLO TAVG TB-412 E
2	RCP BUS B UNDERVOLT	RCP BUS B UNDERFREQ	RCP2 BKR OPEN	RC LP1 LO FLOW FB-415A	RC LP2 LO FLOW FB-425A	RC LP3 LO FLOW FB--435A	RC LP2 OT ΔT TB-422 C_1	RC LP2 OP ΔT TB-422 B_1	RC LP2 LO T AVG TB-422 D	RC LP2 LOLO TAVG TB-422 E
3	RCP BUS C UNDERVOLT	RCP BUS C UNDERFREQ	RCP3 BKR OPEN	RC LP1 LO FLOW FB-416A	RC LP2 LO FLOW FB-426A	RC LP3 LO FLOW FB-436A	RC LP3 OT ΔT TB-432 C_1	RC LP3 OP ΔT TB-432 B_1	RC LP3 LO T AVG TB-432 D	RC LP3 LOLO TAVG TB- 432 E
4										
5	LAMP TEST									

TRIP STATUS LIGHT BOX 2
(SHEET 2)

11	12	13	14	15	16	17	18	19	20	
PR HI Q HI SET NC-41R	PR HI Q RATE NC-41U/D	TURB AUTO STOP 63-1	TURB. STOP VLV 1 CLOSED			PRZR LO PRESS PB-455 D	PRZR HI LVL LB-459 A_1	PRZR LO PRESS PB-455 C	PRZR HI PRESS PB-455 A	1
PR HI Q HI SET NC-42R	PR HI Q RATE NC-42U/D	TURB AUTO STOP 63-2	TURB. STOP VLV 2 CLOSED			PRZR LO PRESS PB-456 D	PRZR HI LVL LB-460 A_1	PRZR LO PRESS PB-456 C	PRZR HI PRESS PB-456 A	2
PR HI Q HI SET NC-43R	PR HI Q RATE NC-43U/D	TURB AUTO STOP 63-3	TURB. STOP VLV 3 CLOSED			PRZR LO PRESS PB-457 D	PRZR HI LVL LB-461 A_1	PRZR LO PRESS PB-457 C	PRZR HI PRESS PB-457 A	3
PR HI Q HI SET NC-44R	PR HI Q RATE NC-44U/D		TURB. STOP VLV 4 CLOSED							4
									LAMP TEST	5

TRIP STATUS LIGHT BOX 3

	1	2	3	4	5	6	7	8	9	10
1	SR HI Q NC-31 D	IR HI Q NC-35 F	IR P6 NC-36 D	PR P8 NC-41 N	PR P10 NC-41 M	PR HI Q LO SET NC-41P	PRZR HI PRESS PB-455 B		PR P9 NC-41 S	
2	SR HI Q NC-32 D	IR HI Q NC-36 F	IR P6 NC-36 D	PR P8 NC-42 N	PR P10 NC-42 M	PR HI Q LO SET NC-42P	PRZR HI PRESS PB-456 B		PR P9 NC-42 S	
3				PR P8 NC-43 N	PR P10 NC-43 M	PR HI Q LO SET NC-43P	PRZR HI PRESS PB-457 B	TURB PWR P13 PB-446 A	PR P9 NC-43 S	
4				PR P8 NC-44 N	PR P10 NC-44 M	PR HI Q LO SET NC-44P		TURB PWR P13 PB-447 E	PR P9 NC-44 S	
	LAMP TEST									LAMP TEST

TRIP STATUS LIGHT BOX 4
(SHEET 1)

	1	2	3	4	5	6	7	8	9	10
1	SG1 LO LVL LB-474B	SG2 LO LVL LB-484B	SG3 LO LVL LA-494B	SG1 LOLO LVL LA-474A	SG2 LOLO LVL LA-484A	SG3 LOLO LVL LB-494A	SG1 HIHI LVL LC-474C	SG2 HIHI LVL LC-484C	SG3 HIHI LVL LC-494C	
2	SG1 LO LVL LB-475B	SG2 LO LVL LB-485B	SG3 LO LVL LA-495B	SG1 LOLO LVL LA-475A	SG2 LOLO LVL LA-485A	SG3 LOLO LVL LB-495A	SG1 HIHI LVL LC-475C	SG2 HIHI LVL LC-485C	SG3 HIHI LVL LC-495C	STM LP1 P1<P2 $PB-474B_2$
3	SG1 FW<STM FB-478B	SG2 FW<STM FB-488B	SG3 FW<STM FB-498A	SG1 LOLO LVL LB-476A	SG2 LOLO LVL LB-486A	SG3 LOLO LVL LB-496A	SG1 HIHI LVL LB-476C	SG2 HIHI LVL LB-486C	SG3 HIHI LVL LB-496C	STM LP1 P1<P2 $PB-475B_2$
4	SG1 FW<STM FB-478A	SG2 FW<STM FB-488A	SG3 FW<STM FB-498A							STM LP1 P1<P2 $PB-476B_2$
5	LAMP TEST									

TRIP STATUS LIGHT BOX 4
(SHEET 2)

11	12	13	14	15	16	17	18	19	20	
										1
STM LP1 P1<P3 PB-494B_2	STM LP2 P2<P1 PB-474B_1	STM LP2 P2<P3 PB-484B_1	STM LP3 P3<P2 PB-484B_1	STM LP3 P3<P1 PB-494B_1				STM LP1 LO PRESS PB-474A		2
STM LP1 P1<P3 PB-495B_2	STM LP2 P2<P1 PB-475B_1	STM LP2 P2<P3 PB-485B_1	STM LP3 P3<P2 PB-485B_1	STM LP3 P3<P1 PB-495B_1	STM LP1 HI FLOW FB-474A	STM LP2 HI FLOW FB-484A	STM LP3 HI FLOW FB-494A	STM LP2 LO PRESS PB-485A		3
STM LP1 P1<P3 PB-496B_2	STM LP2 P2<P1 PB-476B_1	STM LP2 P2<P3 PB-486B_1	STM LP3 P3<P2 PB-486B_1	STM LP3 P3<P1 PB-496B_1	STM LP1 HI FLOW FB-475A	STM LP2 HI FLOW FB-485A	STM LP3 HI FLOW PB-495A	STM LP3 LO PRESS PB-496A		4
									LAMP TEST	5

TIME	EVENT
0910	• The following MCB Annunciators Alarm:

B-11 Containment Cooler 1A, 1B, 1C, or 1D Drain Level Hi

B-12 Containment Cooler 1A, 1B, 1C, or 1D Drain Level Hi-Hi

B-91 Penetration Rm to Atmosphere 1A ΔP Hi-Lo

B-92 Penetration Rm to Atmosphere 1B ΔP Hi-Lo

C-05 Spray Additive Tank Level Lo

G-24 Steam Generator 1A Water Level Lo-Lo Reactor Trip

G-25 Steam Generator 1A Steamline ΔP Hi Safety Inj Reactor Trip

J-01 Steam Generator 1A Water Level Lo Alert

J-04 Main Steam Line 1A, 1B, or 1C Pressure Lo Alert

J-21 Steam Generator 1A Water Level Lo-Lo Alert

- The following TSLB's lights come on:

TSLB-4	1-1	4-1	10-2	11-2	19-2
	1-2	4-2	10-3	11-3	
		4-3	10-4	11-4	

- The following MCB Annunciators Clear:

J-02 Steam Gen 1B Water Level Lo Alert

J-03 Steam Gen 1C Water Level Lo Alert

E-43 Containment Pressure Hi-3 Alert

F-03 Source Range Loss of Detector Voltage

- The following TSLB lights go OFF

TSLB-1 3-1, 3-2, 3-3, 3-4

TSLB-4 2-1, 2-2, 3-1, 3-2

NOTES:

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CONTROL ROOM CONTROLLER CARD

TIME	EVENT
0912	• RMS Alarm Sounds (NOTE 1)
0915	• The following MCB Annunciators Alarm: C-02 Containment Spray Pump 1B Overload Trip E-64 RWST Tech Spec Min Level Train A E-74 RWST Tech Spec Min Level Train B C-71 Excess LTDN Hx Outlet Temperature Hi
	• When CTMT Spray Actuation and Phase B Reset, the following annunciators clear: E-44 Containment Spray Actuation E-45 Containment Isolation Phase B
0930	• The following MCB Annunciators Clear: H-03 Pressurizer Level Deviation Lo Backup Htrs Off and LTDN Secured H-12 Pressurizer Level Deviation Lo
	• The following MCB Annunciators Alarm: H-02 Pressurizer Level Deviation Hi Backup Heaters On H-15 Pressurizer Surge Line Temperature Lo

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NOTES: 1. R-15 Alarm clears

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TIME	EVENT
0945	• The following MCB Annunciators Clear: E-42 CTMT pressure Hi-2 Alert J-21 Steam Gen 1A Water Level Lo-Lo Alert G-24 Steam Gen 1A Water Level Lo-Lo Reac Trip • The following TSLB Lights go out: TSLB-1 2-2, 2-3, 2-4 TSLB-4 4-1 4-2 4-3
0945+	With preparations made and 1B RCP started, the following annunciators clear: L-23 RCP Thermal Barrier Isol Valve 3184 Air Pres Low (BOP) N-23 RCP Thermal Barrier Isol Valve 3045 Air Pres Low (BOP) D-21 RCP 1A, 1B, or 1C #1 seal leakoff flow Lo D-33 CCW Flow From RCP 1A, 1B, or 1C Oil Coolers Lo E-52 RCS Loop 1B Flow Lo or RCP 1B Breaker Open H-61 RCP 1A Bearing Upper/Lower Oil Res High Level H-62 RCP 1B Bearing Upper/Lower Oil Res High Level H-63 RCP 1C Cearing Upper/Lower Oil Res High Level

NOTES:

CONTROL ROOM CONTROLLER CARD

TIME	EVENT
0956±	• Annunciator K-91 Turbine Condenser Vacuum Lo Alarms
	• The following Annunciators Clear: J-01 Steam Gen 1A Water Level Lo Alert J-51 Steam Gen 1A Level Deviation
	• TSLB-4 lights 1-1 and 1-2 go out
1000	• Current Annunciator Status Per Attached Drawings
1015	• The following MCB Annunciators Alarm: C-31 Accumulator 1A Pressure Hi-Lo C-32 Accumulator 1B Pressure Hi-Lo C-33 Accumulator 1C Pressure Hi-Lo
	• The following MCB Annunciators Clear: G-25 Steam Gen 1A Steam Line ΔP Hi Safety Inj Reac Trip J-41 Steam Gen 1A Steam Line ΔP Hi Alert
1015+	• When accumulator discharge MOV's closed, B-83 ESS Valves Off Normal Alarms

NOTES:

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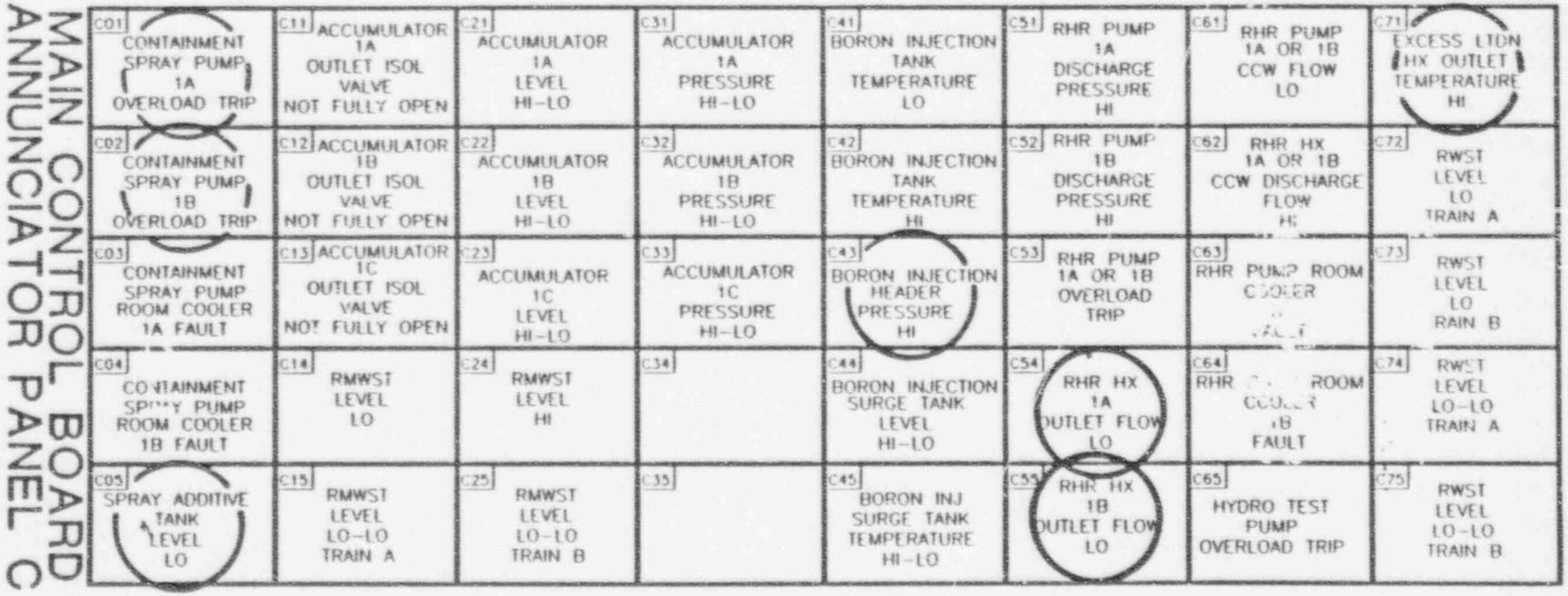
MAIN CONTROL BOARD ANNUNCIATOR PANEL A

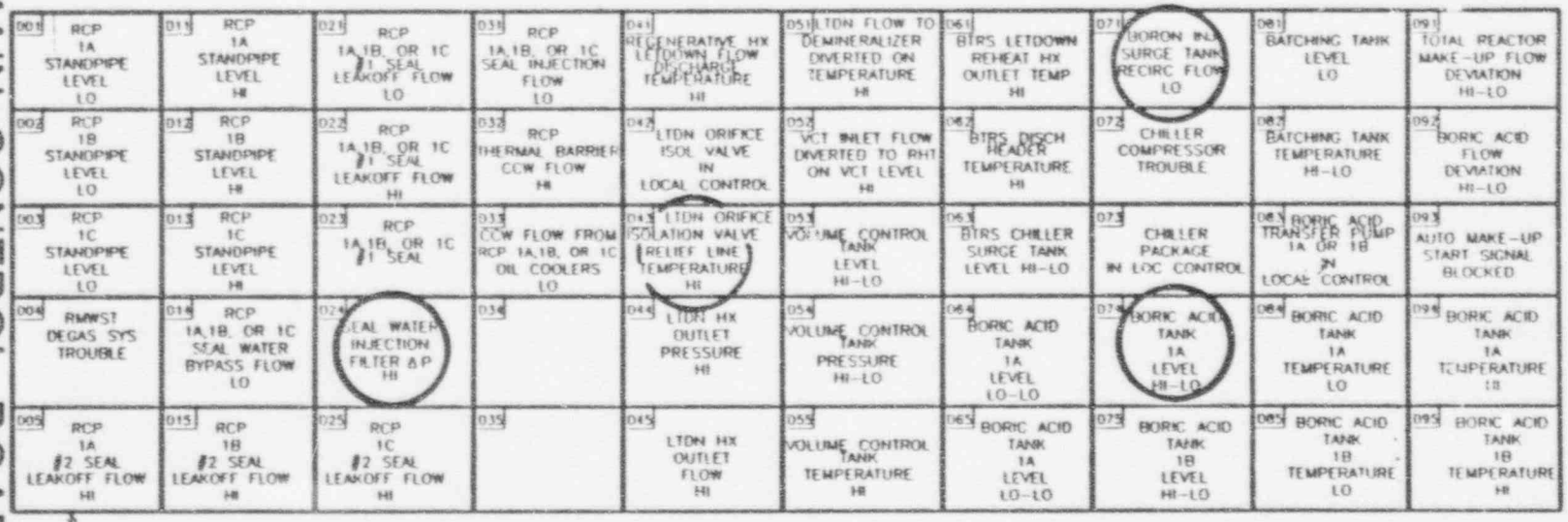
A01 CCW PUMP 1A OVERLOAD TRIP	A11 CCW ROOM COOLER 1A FAULT	A21 CCW HX 1A SW OR CCW FLOW LO	A31 RIVER WTR PUMP ROOM TRAIN A FLOODING	A41 RIVER WTR PUMP ROOM TRAIN B FLOODING	A51 SERVICE WTR STRUCTURE FLOODING	A61 RIVER LEVEL [illegible] TRAIN A	A71 RIVER LEVEL HI TRAIN B
A02 CCW PUMP 1B OVERLOAD TRIP	A12 CCW ROOM COOLER 1B FAULT	A22 CCW HX 1B SW OR CCW FLOW LO	A32 RIVER WTR TRAIN A PRESSURE LO	A42 RIVER WTR PUMP TRIPPED	A52 RIVER WTR STRUCTURE ALARM	A62 RIVER LEVEL LO TRAIN A	A72 RIVER LEVEL LO TRAIN B
A03 CCW PUMP 1C OVERLOAD TRIP	A13 CCW PUMP 1A, 1B, OR 1C ON LOCAL CONTROL	A23 CCW HX 1C SW OR CCW FLOW LO	A33 RIVER WTR TRAIN B PRESSURE LO	A43 SELECTOR SWITCH IN LOCAL POSITION	A53 SERVICE WTR STRUCTURE ALARM	A63 SERVICE WTR POND LEVEL LO TRAIN A	A73 SERVICE WTR POND LEVEL LO TRAIN B
A04 CCW SURGE TANK 1A LEVEL HI-LO	A14 CCW SURGE TANK 1B LEVEL HI-LO	A24 CCW PUMP ROOM FLOODING LEVEL 10 INCHES	A34 SERVICE WTR TRAIN A PRESSURE LO	A44 SERVICE WTR PUMP TRIPPED	A54 CTMT COOLER SERVICE WTR FLOW	A64 SERVICE WTR WET PIT LEVEL LO TRAIN A	A74 SERVICE WTR WET PIT LEVEL LO TRAIN B
A05 CCW SURGE TANK 1A LEVEL LO-LO	A15 CCW SURGE TANK 1B LEVEL LO-LO	A25 CCW PUMP ROOM FLOODING LEVEL 18 INCHES	A35 SERVICE WTR TRAIN B PRESSURE LO	A45 SW TO AUX BLDG TRAIN A OR B HEADER PRESS LO	A55 SW TO TURB BLDG TRAIN A OR B FLOW HIGH	A65 DILUTION DISCHARGE TEMPERATURE HI	A75 METAL IMPACT MON SYSTEM ALARM

MAIN CONTROL BOARD ANNUNCIATOR PANEL B

801 CONTAINMENT COOLER 1A FAN FAULT	811 CONTAINMENT COOLER 1A,1B,1C, OR 1D DRAIN LEVEL HI	821 CRDM COOLER FAN 1B FAULT	831 REACTOR CAVITY COOLING FAN 1A FAULT	841 CONTAINMENT PREACCESS FAN 1A FAULT	851 PENETRATION RM EXHAUST FAN 1A FAULT	861 PENETRATION RM RECIRC FAN 1A FAULT	871 PENETRATION RM CHARCOAL FILTER 1A ΔP HI OR TEMP HI	881 PENETRATION RM ABSOLUTE FILTER 1A ΔP HI	891 PENETRATION RM TO ATMOSPHERE 1A ΔP HI-LO
802 CONTAINMENT COOLER 1B FAN FAULT	812 CONTAINMENT COOLER 1A,1B,1C, OR 1D DRAIN LEVEL HI-HI	822 CRDM COOLING FAN 1A FAULT	832 REACTOR CAVITY COOLING FAN 1B FAULT	842 CONTAINMENT PREACCESS FAN 1B FAULT	852 PENETRATION RM EXHAUST FAN 1B FAULT	862 PENETRATION RM RECIRC FAN 1B FAULT	872 PENETRATION RM CHARCOAL FILTER 1B ΔP HI OR TEMP HI	882 PENETRATION RM ABSOLUTE FILTER 1B ΔP HI	892 PENETRATION RM TO ATMOSPHERE 1B ΔP HI-LO
803 CONTAINMENT COOLER 1C FAN FAULT	813 CONTAINMENT AIR TEMP HI	823 BOTH CRDM FANS STOPPED	833 BOTH REACTOR CAVITY FANS STOPPED	843 CONTAINMENT PREACCESS FILTER 1A ΔP HI	853 CONTAINMENT PURGE SUPPLY FAN FAULT	863 CONTAINMENT PURGE EXHAUST FAN FAULT	873 HOT SHUTDOWN PANEL SELECTOR SWITCH IN LOCAL	883 ESS VALVES OFF NORMAL	893 ANNUNCIATOR FAILURE
804 CONTAINMENT COOLER 1D FAN FAULT	814 CNMT COOLER SW DISCH VALVE 1A,1B,1C, OR 1D CLOSED	824 CRDM COOLING FAN 1A OR 1B IN LOCAL CONTROL	834 REACTOR CAVITY COOLING FAN 1A OR 1B IN LOCAL CONTROL	844 CONTAINMENT PREACCESS FILTER 1B ΔP HI	854 RECORDER POWER FAILURE	864 CONTAINMENT PURGE INLET AIR TEMP LO	874 ESS VALVES OFF NORMAL	884 ESS VALVES OFF NORMAL	894 ANNUNCIATOR SYSTEM DC SUPPLY FAILURE
805 CONTAINMENT COOLER FAN 1A,1B,1C, OR 1D IN LOCAL CONTROL	815 SG 1A,1B,1C TUBE LEAK ABOVE SETPT	825 SG TUBE LEAK MONITOR SYSTEM TREB	835 RMW PUMPS DISCHARGE PRESS LO	845 BALANCE OF PLANT PANELS ALARM	855 CONTAINMENT AIR MOISTURE HI	865 CONTAINMENT TO PENETRATION RM ΔP HI-LO	875 ESS VALVES OFF NORMAL	885 ESS VALVES OFF NORMAL	895 ANNUNCIATOR SYSTEM DC GROUND


MAIN CONTROL BOARD
ANNUNCIATOR PANEL C
C01 CONTAINMENT SPRAY PUMP 1A OVERLOAD TRIP
C11 ACCUMULATOR 1A OUTLET ISOL VALVE NOT FULLY OPEN
C21 ACCUMULATOR 1A LEVEL HI-LO
C31 ACCUMULATOR 1A PRESSURE HI-LO
C41 BORON INJECTION TANK TEMPERATURE LO
C51 RHR PUMP 1A DISCHARGE PRESSURE HI
C61 RHR PUMP 1A OR 1B CCW FLOW LO
C71 EXCESS LTDN HX OUTLET TEMPERATURE HI
C02 CONTAINMENT SPRAY PUMP 1B OVERLOAD TRIP
C12 ACCUMULATOR 1B OUTLET ISOL VALVE NOT FULLY OPEN
C22 ACCUMULATOR 1B LEVEL HI-LO
C32 ACCUMULATOR 1B PRESSURE HI-LO
C42 BORON INJECTION TANK TEMPERATURE HI
C52 RHR PUMP 1B DISCHARGE PRESSURE HI
C62 RHR HX 1A OR 1B CCW DISCHARGE FLOW HI
C72 RWST LEVEL LO TRAIN A
C03 CONTAINMENT SPRAY PUMP ROOM COOLER 1A FAULT
C13 ACCUMULATOR 1C OUTLET ISOL VALVE NOT FULLY OPEN
C23 ACCUMULATOR 1C LEVEL HI-LO
C33 ACCUMULATOR 1C PRESSURE HI-LO
C43 BORON INJECTION HEADER PRESSURE HI
C53 RHR PUMP 1A OR 1B OVERLOAD TRIP
C63 RHR PUMP ROOM COOLER FAULT
C73 RWST LEVEL LO RAIN B
C04 CONTAINMENT SPRAY PUMP ROOM COOLER 1B FAULT
C14 RMWST LEVEL LO
C24 RMWST LEVEL HI
C34
C44 BORON INJECTION SURGE TANK LEVEL HI-LO
C54 RHR HX 1A OUTLET FLOW LO
C64 RHR PUMP ROOM COOLER 1B FAULT
C74 RWST LEVEL LO-LO TRAIN A
C05 SPRAY ADDITIVE TANK LEVEL LO
C15 RMWST LEVEL LO-LO TRAIN A
C25 RMWST LEVEL LO-LO TRAIN B
C35
C45 BORON INJ SURGE TANK TEMPERATURE HI-LO
C55 RHR HX 1B OUTLET FLOW LO
C65 HYDRO TEST PUMP OVERLOAD TRIP
C75 RWST LEVEL LO-LO TRAIN B

MAIN CONTROL BOARD
ANNUNCIATOR PANEL D



001 RCP 1A STANDPIPE LEVEL LO	011 RCP 1A STANDPIPE LEVEL HI	021 RCP 1A,1B, OR 1C #1 SEAL LEAKOFF FLOW LO	031 RCP 1A,1B, OR 1C SEAL INJECTION FLOW LO	041 REGENERATIVE HX LETDOWN FLOW DISCHARGE TEMPERATURE HI	051 LTDN FLOW TO DEMINERALIZER DIVERTED ON TEMPERATURE HI	061 BTRS LETDOWN REHEAT HX OUTLET TEMP HI	071 BORON INJ. SURGE TANK RECIRC FLOW LO	081 BATCHING TANK LEVEL LO	091 TOTAL REACTOR MAKE-UP FLOW DEVIATION HI-LO
002 RCP 1B STANDPIPE LEVEL LO	012 RCP 1B STANDPIPE LEVEL HI	022 RCP 1A,1B, OR 1C #1 SEAL LEAKOFF FLOW HI	032 RCP THERMAL BARRIER CCW FLOW HI	042 LTDN ORIFICE ISOL VALVE IN LOCAL CONTROL	052 VCT INLET FLOW DIVERTED TO RHT ON VCT LEVEL HI	062 BTRS DISCH HEADER TEMPERATURE HI	072 CHILLER COMPRESSOR TROUBLE	082 BATCHING TANK TEMPERATURE HI-LO	092 BORIC ACID FLOW DEVIATION HI-LO
003 RCP 1C STANDPIPE LEVEL LO	013 RCP 1C STANDPIPE LEVEL HI	023 RCP 1A,1B, OR 1C #1 SEAL	033 CCW FLOW FROM RCP 1A,1B, OR 1C OIL COOLERS LO	043 LTDN ORIFICE ISOLATION VALVE RELIEF LINE TEMPERATURE HI	053 VOLUME CONTROL TANK LEVEL HI-LO	063 BTRS CHILLER SURGE TANK LEVEL HI-LO	073 CHILLER PACKAGE IN LOC CONTROL	083 BORIC ACID TRANSFER PUMP 1A OR 1B IN LOCAL CONTROL	093 AUTO MAKE-UP START SIGNAL BLOCKED
004 RMWST DEGAS SYS TROUBLE	014 RCP 1A,1B, OR 1C SEAL WATER BYPASS FLOW LO	024 SEAL WATER INJECTION FILTER ΔP HI	034	044 LTDN HX OUTLET PRESSURE HI	054 VOLUME CONTROL TANK PRESSURE HI-LO	064 BORIC ACID TANK 1A LEVEL LO-LO	074 BORIC ACID TANK 1A LEVEL HI-LO	084 BORIC ACID TANK 1A TEMPERATURE LO	094 BORIC ACID TANK 1A TEMPERATURE HI
005 RCP 1A #2 SEAL LEAKOFF FLOW HI	015 RCP 1B #2 SEAL LEAKOFF FLOW HI	025 RCP 1C #2 SEAL LEAKOFF FLOW HI	035	045 LTDN HX OUTLET FLOW HI	055 VOLUME CONTROL TANK TEMPERATURE HI	065 BORIC ACID TANK 1A LEVEL LO-LO	075 BORIC ACID TANK 1B LEVEL HI-LO	085 BORIC ACID TANK 1B TEMPERATURE LO	095 BORIC ACID TANK 1B TEMPERATURE HI

MAIN CONTROL BOARD ANNUNCIATOR PANEL E

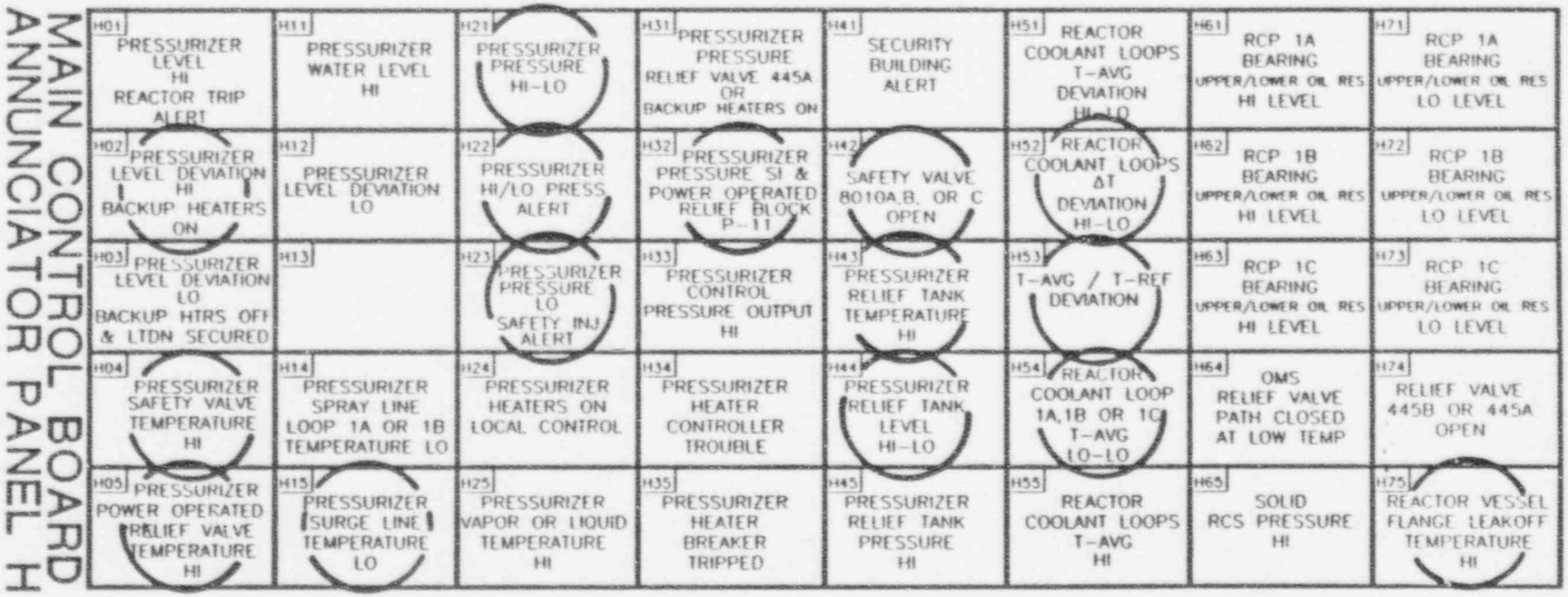
E01 CHARGING OR SEAL INJECTION FLOW CONTROL VALVE IN LOCAL CONTROL	E11 CHG PUMP 1A,1B, OR 1C OVERLOAD TRIP	E21 PROCESS CABINET POWER SUPPLY FAILURE	E31 MULTIPLYING RELAY CAB TRAIN A LOSS OF POWER	E41 CONTAINMENT PRESSURE HI-1 ALERT	E51 RCS LOOP 1A FLOW LO OR RCP 1A BREAKER OPEN	E61 OVERTEMP ΔT SINGLE INPUT ALERT	E71 SPENT FUEL POOL TEMPERATURE HI
E02 CHARGING HEADER FLOW HI-LO	E12 CHARGING PUMP IN LOCAL CONTROL	E22 PROCESS PROTECTION RACKS >1 SET OF DOORS OPEN	E32 MULTIPLYING RELAY CAB TRAIN B LOSS OF POWER	E42 CONTAINMENT PRESSURE HI-2 ALERT	E52 RCS LOOP 1B FLOW LO OR RCP 1B BREAKER OPEN	E62 OVERPOWER ΔT SINGLE INPUT ALERT	E72 SPENT FUEL POOL LEVEL HI-LO
E03 CHG PUMP 1A,1B, OR 1C LUBE OIL HI TEMP	E13 CHG PUMP ROOM COOLER 1A OR 1B FAULT	E23 PROCESS CHANNEL SPRAY ACTUATION TEST SEQUENCE VIOLATION	E33 AUX BLDG HIGH ROOM PRESSURE	E43 CONTAINMENT PRESSURE HI-3 ALERT	E53 RCS LOOP 1C FLOW LO OR RCP 1C BREAKER OPEN	E63 RWST LEVEL HIGH TRAIN A	E73 RWST LEVEL HIGH TRAIN B
E04 CHG PUMP 1A,1B, OR 1C CCW FLOW LO	E14 CHG PUMP ROOM COOLER 1B OR 1C FAULT	E24 SOLID STATE PROTECTION SYS TRAIN A TROUBLE	E34	E44 CONTAINMENT SPRAY ACTUATION	E54 RCP BUS UNDERVOLTAGE SINGLE INPUT ALERT	E64 RWST TECH SPEC MIN LEVEL TRAIN A	E74 RWST TECH SPEC MIN LEVEL TRAIN B
E05 RCP VIBRATION TROUBLE	E15	E25 SOLID STATE PROTECTION SYS TRAIN B TROUBLE	E35 AMSAC SYS TRBL	E45 CONTAINMENT ISOLATION PHASE B	E55 RCP BUS UNDERFREQUENCY SINGLE INPUT ALERT	E65 RCS RTD MANIFOLD BYPASS LOOP FLOW 1A,1B, OR 1C LO	E75 SPDS PLT COMPUTER INV TRBL

MAIN CONTROL BOARD ANNUNCIATOR PANEL F

F01 SOURCE RANGE HI FLUX LEVEL AT SHUTDOWN	F11 INTERMEDIATE RANGE LOSS OF DETECTOR VOLTAGE	F21 POWER RANGE HI Φ - HI RANGE REACTOR TRIP SINGLE CHANNEL ALERT	F31 INTERMEDIATE RANGE HI FLUX LEVEL AUTO/MANUAL ROD STOP	F41 CONTROL ROD BANK POSITION LO	F51 ROD CONTROL SYS URGENT FAILURE	F61	F71 RADIATION MONITOR SYSTEM HI RADIATION
F02 SOURCE RANGE HI FLUX LEVEL AT SHUTDOWN ALARM BLOCKED	F12 INTERMEDIATE RANGE (N-35) LOSS OF COMPENSATING VOLTAGE	F22 POWER RANGE HI Φ - HI RANGE REACTOR TRIP SINGLE CHANNEL ALERT	F32 POWER RANGE OVERPOWER AUTO/MANUAL ROD STOP	F42 CONTROL ROD BANK POSITION LO-LO	F52 ROD CONTROL SYS NON-URGENT FAILURE	F62 DELTA FLUX DEVIATION ALERT	F72 RADIATION MONITOR SYSTEM CHANNEL FAILURE
F03 SOURCE RANGE LOSS OF DETECTOR VOLTAGE	F13 INTERMEDIATE RANGE (N-36) LOSS OF COMPENSATING VOLTAGE	F23 POWER RANGE HIGH FLUX RATE SINGLE CHANNEL ALERT	F33 OVERPOWER ΔT AUTO/MANUAL ROD STOP AND TURBINE RUNBACK	F43 ROD AT BOTTOM	F53 ROD POSITION INDICATION SYS URGENT FAILURE	F63 CORE CLG MONITOR CH A FAIL	F73 RADIATION MONITOR SYS CHANNEL TEST
F04 NUCLEAR INSTRUMENTATION SYSTEM CHANNEL IN TRIP BYPASS	F14 POWER RANGE UPPER DETECTOR HI FLUX DEVIATION OR AUTO DEFEAT	F24	F34 OVERTEMP ΔT AUTO/MANUAL ROD STOP AND TURBINE RUNBACK	F44 TWO OR MORE RODS AT BOTTOM	F54 ROD POSITION INDICATION SYS NON-URGENT FAILURE	F64 CORE CLG MONITOR CH B FAIL	F74 CONTAINMENT PURGE HI RADIATION RE-24A - RE-24B
F05 NUCLEAR INSTRUMENTATION SYSTEM CHANNEL IN TEST	F15 POWER RANGE LOWER DETECTOR HI FLUX DEVIATION OR AUTO DEFEAT	F25 POWER RANGE CHANNEL DEVIATION	F35 BANK D FULL ROD WITHDRAWAL AUTO ROD STOP	F45 ROD CONTROL MG SET 1A OR 1B TRIPPED	F55 COMPUTER ALARM ROD DEVIATION ROD SEQUENCE OR POWER RANGE FLUX TILT	F65 GROSS FAIL FUEL DETECTOR SYSTEM TROUBLE	F75 FUEL HANDLING AREA HI RADIATION RE-25A - RE-25B

MAIN CONTROL BOARD ANNUNCIATOR PANEL G

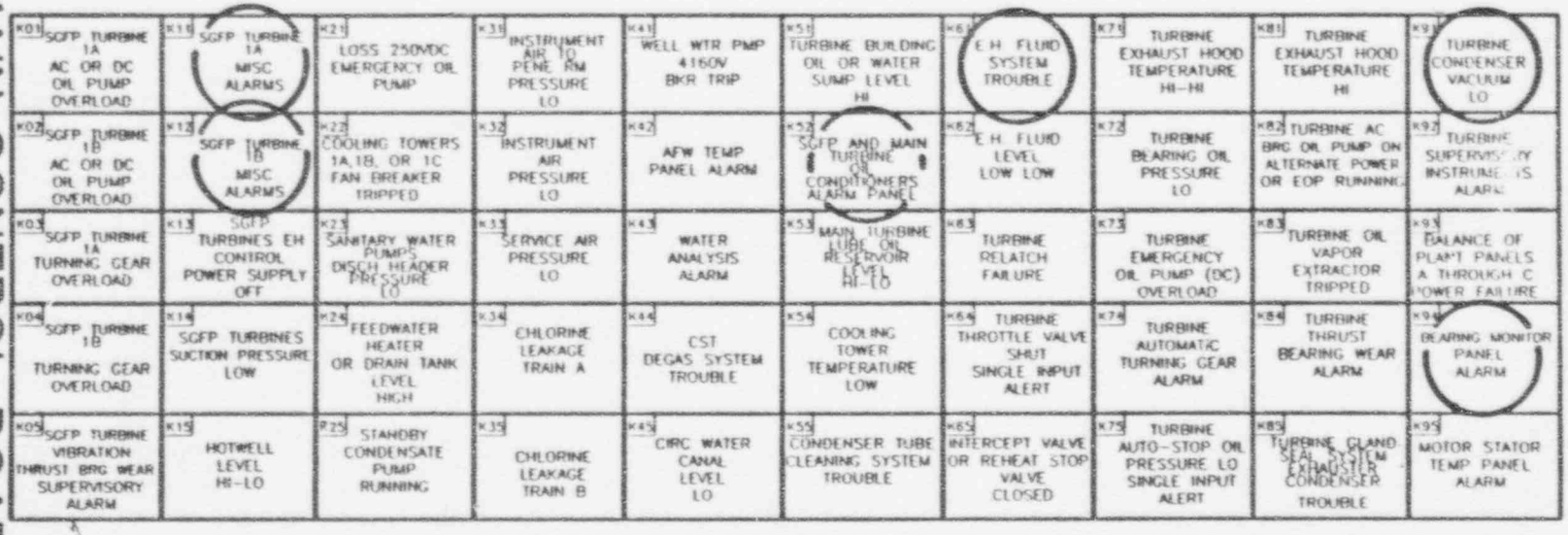
G21 SOURCE RANGE HI FLUX LEVEL REAC TRIP	G11 PRESSURIZER HI PRESSURE REAC TRIP	G31 OVERPOWER ΔT REAC TRIP	G41 RCP BUSES UNDERVOLTAGE REAC TRIP	G51 ONE LOOP LOW FLOW OR RCP BREAKER OPEN REAC TRIP	G61 CONTAINMENT PRESSURE HI-1 SAFETY INJ REAC TRIP	G71 AMSAC TURB TRIP AFW START	G81 MANUAL TURBINE TRIP	G91 TURBINE BEARING OIL PRESSURE LO TRIP
G02 INTERMEDIATE RANGE HI FLUX LEVEL REAC TRIP	G12 PRESSURIZER LO PRESSURE REAC TRIP	G22 OVERTEMP ΔT REAC TRIP	G32 RCP BUSES UNDERFREQUENCY REAC TRIP	G42 TWO LOOPS LOW FLOW OR RCP BREAKER OPEN REAC TRIP	G52 MANUAL SAFETY INJ REAC TRIP	G62	G72 TURBINE AUTO STOP OIL TRIP	G82 TURBINE LOW VACUUM TRIP
G03 POWER RANGE HI FLUX LEVEL LO RANGE REAC TRIP	G13 PRESSURIZER HI WATER LEVEL REAC TRIP	G23 STEAM GEN 1A FEEDWATER AND LEVEL LO REAC TRIP	G33 STEAM GEN 1B FEEDWATER AND LEVEL LO REAC TRIP	G43 STEAM GEN 1C FEEDWATER AND LEVEL LO REAC TRIP	G53 MANUAL REAC TRIP	G63	G73 E H AC POWER FAILURE	G83 TURBINE OVERSPEED TRIP
G04 POWER RANGE HI FLUX LEVEL HI RANGE REAC TRIP	G14 PRESSURIZER PRES LO SAFETY INJ REAC TRIP	G24 STEAM GEN 1A WATER LEVEL LO-LO REAC TRIP	G34 STEAM GEN 1B WATER LEVEL LO-LO REAC TRIP	G44 STEAM GEN 1C WATER LEVEL LO-LO REAC TRIP	G54 REAC TRIP CAUSED BY TURB TRIP	G64	G74	G84 TURBINE THRUST BEARING WEAR TRIP
G05 POWER RANGE HI POWER RATE REAC TRIP	G15 LOW STM LINE PRES SAF INJ/RX TRIP	G25 STEAM GEN 1A STEAMLINE ΔP HI SAFETY INJ REAC TRIP	G35 STEAM GEN 1B STEAMLINE ΔP HI SAFETY INJ REAC TRIP	G45 STEAM GEN 1C STEAMLINE ΔP HI SAFETY INJ REAC TRIP	G55	G65 STEAM GEN 1A WATER LEVEL HI-HI TURB TRIP	G75 STEAM GEN 1B WATER LEVEL HI-HI TURB TRIP	G85 STEAM GEN 1C WATER LEVEL HI-HI TURB TRIP


MAIN CONTROL BOARD
ANNUNCIATOR PANEL H
H01 PRESSURIZER LEVEL HI REACTOR TRIP ALERT
H11 PRESSURIZER WATER LEVEL HI
H21 PRESSURIZER PRESSURE HI-LO
H31 PRESSURIZER PRESSURE RELIEF VALVE 445A OR BACKUP HEATERS ON
H41 SECURITY BUILDING ALERT
H51 REACTOR COOLANT LOOPS T-AVG DEVIATION HI-LO
H61 RCP 1A BEARING UPPER/LOWER OIL RES HI LEVEL
H71 RCP 1A BEARING UPPER/LOWER OIL RES LO LEVEL
H02 PRESSURIZER LEVEL DEVIATION HI BACKUP HEATERS ON
H12 PRESSURIZER LEVEL DEVIATION LO
H22 PRESSURIZER HI/LO PRESS ALERT
H32 PRESSURIZER PRESSURE SI & POWER OPERATED RELIEF BLOCK P-11
H42 SAFETY VALVE 8010A,B, OR C OPEN
H52 REACTOR COOLANT LOOPS ΔT DEVIATION HI-LO
H62 RCP 1B BEARING UPPER/LOWER OIL RES HI LEVEL
H72 RCP 1B BEARING UPPER/LOWER OIL RES LO LEVEL
H03 PRESSURIZER LEVEL DEVIATION LO BACKUP HTRS OFF & LTDN SECURED
H13
H23 PRESSURIZER PRESSURE LO SAFETY INJ ALERT
H33 PRESSURIZER CONTROL PRESSURE OUTPUT HI
H43 PRESSURIZER RELIEF TANK TEMPERATURE HI
H53 T-AVG / T-REF DEVIATION
H63 RCP 1C BEARING UPPER/LOWER OIL RES HI LEVEL
H73 RCP 1C BEARING UPPER/LOWER OIL RES LO LEVEL
H04 PRESSURIZER SAFETY VALVE TEMPERATURE HI
H14 PRESSURIZER SPRAY LINE LOOP 1A OR 1B TEMPERATURE LO
H24 PRESSURIZER HEATERS ON LOCAL CONTROL
H34 PRESSURIZER HEATER CONTROLLER TROUBLE
H44 PRESSURIZER RELIEF TANK LEVEL HI-LO
H54 REACTOR COOLANT LOOP 1A,1B OR 1C T-AVG LO-LO
H64 OMS RELIEF VALVE PATH CLOSED AT LOW TEMP
H74 RELIEF VALVE 445B OR 445A OPEN
H05 PRESSURIZER POWER OPERATED RELIEF VALVE TEMPERATURE HI
H15 PRESSURIZER SURGE LINE TEMPERATURE LO
H25 PRESSURIZER VAPOR OR LIQUID TEMPERATURE HI
H35 PRESSURIZER HEATER BREAKER TRIPPED
H45 PRESSURIZER RELIEF TANK PRESSURE HI
H55 REACTOR COOLANT LOOPS T-AVG HI
H65 SOLID RCS PRESSURE HI
H75 REACTOR VESSEL FLANGE LEAKOFF TEMPERATURE HI

MAIN CONTROL BOARD
ANNUNCIATOR PANEL J

J01 STEAM GEN 1A WATER LEVEL LO ALERT	J11 STEAM GEN 1A STEAM FLOW > FEED FLOW	J21 STEAM GEN 1A WATER LEVEL LO-LO ALERT	J31 STEAM GEN 1A WATER LEVEL HI-HI ALERT	J41 STEAM GEN 1A STEAM LINE ΔP HI ALERT	J51 STEAM GEN 1A LEVEL DEVIATION	J61 STEAM GEN 1A FEED FLOW > STEAM FLOW	J71 STEAM GEN 1A MAIN STEAM ISOLATION CLOSED	J81 MDAFP 1A OVERCURRENT TRIP	J91 MDAFP 1A SUCTION PRESSURE LO
J02 STEAM GEN 1B WATER LEVEL LO ALERT	J12 STEAM GEN 1B STEAM FLOW > FEED FLOW	J22 STEAM GEN 1B WATER LEVEL LO-LO ALERT	J32 STEAM GEN 1B WATER LEVEL HI-HI ALERT	J42 STEAM GEN 1B STEAM LINE ΔP HI ALERT	J52 STEAM GEN 1B LEVEL DEVIATION	J62 STEAM GEN 1B FEED FLOW > STEAM FLOW	J72 STEAM GEN 1B MAIN STEAM ISOLATION CLOSED	J82 MDAFP 1B OVERCURRENT TRIP	J92 MDAFP 1B SUCTION PRESSURE LO
J03 STEAM GEN 1C WATER LEVEL LO ALERT	J13 STEAM GEN 1B STEAM FLOW > FEED FLOW	J23 STEAM GEN 1C WATER LEVEL LO-LO ALERT	J33 STEAM GEN 1C WATER LEVEL HI-HI ALERT	J43 STEAM GEN 1C STEAM LINE ΔP HI ALERT	J53 STEAM GEN 1C LEVEL DEVIATION	J63 STEAM GEN 1C FEED FLOW > STEAM FLOW	J73 STEAM GEN 1C MAIN STEAM ISOLATION CLOSED	J83 TDAFP FAULT	J93 TDAFP SUCTION PRESSURE LO
J04 MAIN STEAM LINE 1A,1B, OR 1C PRESSURE LOW ALERT	J14 MAIN STEAM LINE 1A,1B, OR 1C STEAM FLOW HI ALERT	J24 MAIN STEAM LINE 1A,1B, OR 1C ISOLATION VALVE AIR PRESSURE LO	J34 CONDENSATE STORAGE TANK LEVEL LO-LO TRAIN A	J44 CONDENSATE STORAGE TANK LEVEL LO-LO TRAIN B	J54 REACTOR TRIP AND T-AVG LO FEEDWATER CONTROL VALVE ISOLATION	J64 TDAFP TRIP/THROTTLE VALVE CLOSED	J74 TDAFP UNINTERRUPTIBLE POWER SUPPLY FAULT	J84 MDAFP 1A OR 1B OR TDAFP IN LOCAL CONTROL	J94 MDAFP 1A ROOM COOLER FAULT
J05 MAIN STEAM LINE POWER OPERATED RELIEF 1A,1B,1C V LOCAL CONTROL	J15 STEAM GEN BLOWDOWN PROCESSING PNL TROUBLE	J25 TURB WATER INDUCTION PROT PNL ALARM	J35 HI STM FLOW AND LO-LO T-AVG OR LO STM PRESS STEAMLINE ISOL	J45 CONDENSATE STORAGE TANK LEVEL HI-LO	J55 TDAFW STEAM ISO VALVE AIR ACCUM PRESS LOW	J65 SW ISOLATION TO SUCTION MDAFP 1A OR 1B OR TDAFP OPEN	J75 MDAFP/TDAFP SUCTION FLOW HI-LO	J85 MDAFP OR TDAFP FLOW CONTROL VALVES IN LOCAL CONTROL	J95 MDAFP 1B ROOM COOLER FAULT

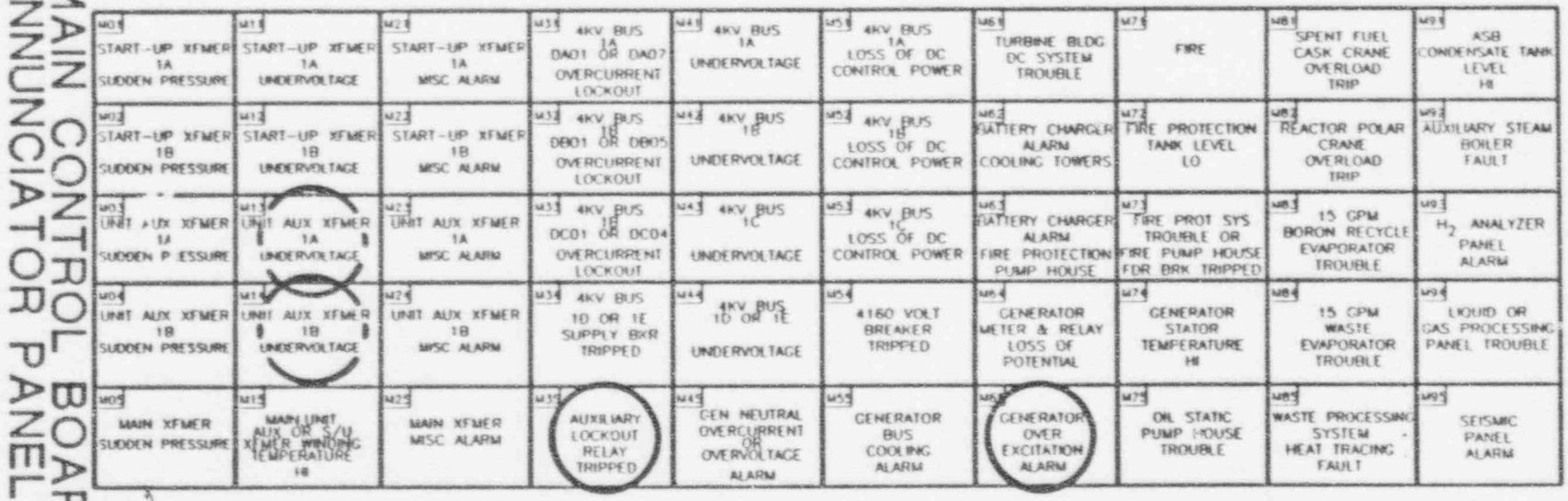
MAIN CONTROL BOARD
ANNUNCIATOR PANEL K



K01 SGFP TURBINE 1A AC OR DC OIL PUMP OVERLOAD	K11 SGFP TURBINE 1A MISC ALARMS	K21 LOSS 250VDC EMERGENCY OIL PUMP	K31 INSTRUMENT AIR TO PENE RM PRESSURE LO	K41 WELL WTR PMP 4160V BKR TRIP	K51 TURBINE BUILDING OIL OR WATER SUMP LEVEL HI	K61 E H FLUID SYSTEM TROUBLE	K71 TURBINE EXHAUST HOOD TEMPERATURE HI-HI	K81 TURBINE EXHAUST HOOD TEMPERATURE HI	K91 TURBINE CONDENSER VACUUM LO
K02 SGFP TURBINE 1B AC OR DC OIL PUMP OVERLOAD	K12 SGFP TURBINE 1B MISC ALARMS	K22 COOLING TOWERS 1A,1B, OR 1C FAN BREAKER TRIPPED	K32 INSTRUMENT AIR PRESSURE LO	K42 AFW TEMP PANEL ALARM	K52 SGFP AND MAIN TURBINE OIL CONDITIONERS ALARM PANEL	K62 E H FLUID LEVEL LOW LOW	K72 TURBINE BEARING OIL PRESSURE LO	K82 TURBINE AC BRG OIL PUMP ON ALTERNATE POWER OR EOP RUNNING	K92 TURBINE SUPERVISORY INSTRUMENTS ALARM
K03 SGFP TURBINE 1A TURNING GEAR OVERLOAD	K13 SGFP TURBINES EH CONTROL POWER SUPPLY OFF	K23 SANITARY WATER PUMPS DISCH HEADER PRESSURE LO	K33 SERVICE AIR PRESSURE LO	K43 WATER ANALYSIS ALARM	K53 MAIN TURBINE LUBE OIL RESERVOIR LEVEL HI-LO	K63 TURBINE RELATCH FAILURE	K73 TURBINE EMERGENCY OIL PUMP (DC) OVERLOAD	K83 TURBINE OIL VAPOR EXTRACTOR TRIPPED	K93 BALANCE OF PLANT PANELS A THROUGH C POWER FAILURE
K04 SGFP TURBINE 1B TURNING GEAR OVERLOAD	K14 SGFP TURBINES SUCTION PRESSURE LOW	K24 FEEDWATER HEATER OR DRAIN TANK LEVEL HIGH	K34 CHLORINE LEAKAGE TRAIN A	K44 CST DEGAS SYSTEM TROUBLE	K54 COOLING TOWER TEMPERATURE LOW	K64 TURBINE THROTTLE VALVE SHUT SINGLE INPUT ALERT	K74 TURBINE AUTOMATIC TURNING GEAR ALARM	K84 TURBINE THRUST BEARING WEAR ALARM	K94 BEARING MONITOR PANEL ALARM
K05 SGFP TURBINE VIBRATION THRUST BRG WEAR SUPERVISORY ALARM	K15 HOTWELL LEVEL HI-LO	K25 STANDBY CONDENSATE PUMP RUNNING	K35 CHLORINE LEAKAGE TRAIN B	K45 CIRC WATER CANAL LEVEL LO	K55 CONDENSER TUBE CLEANING SYSTEM TROUBLE	K65 INTERCEPT VALVE OR REHEAT STOP VALVE CLOSED	K75 TURBINE AUTO-STOP OIL PRESSURE LO SINGLE INPUT ALERT	K85 TURBINE GLAND SEAL SYSTEM EXHAUSTER CONDENSER TROUBLE	K95 MOTOR STATOR TEMP PANEL ALARM

MAIN CONTROL BOARD
ANNUNCIATOR PANEL L

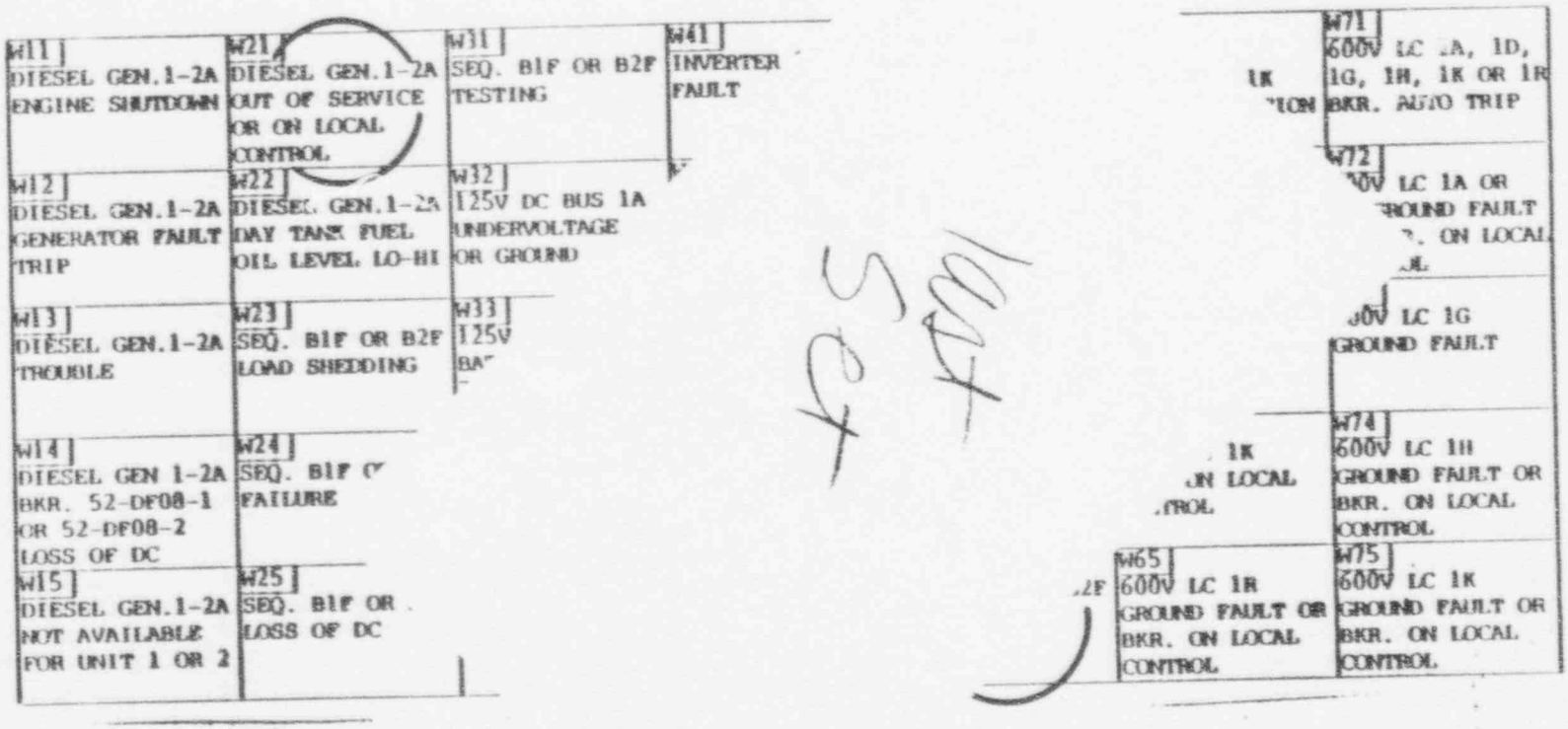
L01 HEATER DRAIN PUMP 1A OR 1B TRIPPED	L11 DEH TROUBLE	L21	L31 STATION SERVICE XFMER 1I DIFFERENTIAL PROTECTION	L41	L51 STATION SERVICE XFMER 1N DIFFERENTIAL PROTECTION	L61 STATION SERVICE XFMER 1P OR 1Q DIFFERENTIAL PROTECTION	L71 STATION SERVICE XFMER 1U OR 1V SUDDEN PRESS	L81 HYDROGEN PURITY HI-LO	L91 GENERATOR EXCITER SWITCHGEAR ALARM
L02 600V LC 1A EA02 OR EA07 OVERCURRENT TRIP	L12 600V LC 1B EB02 OR EB07 OVERCURRENT TRIP	L22 600V LC 1C EC02 OR EC07 OVERCURRENT TRIP	L32 600V LC 1I EI02 OR EI05 OVERCURRENT TRIP	L42 600V LC 1M EM02 OR EM07 OVERCURRENT TRIP	L52 600V LC 1N EN02 OR EN04 OVERCURRENT TRIP	L62 600V LC 1P,1Q,1U,1V,1W 1X,1Y OR 1Z UNDERVOLTAGE ALARM	L72 STATION SERVICE XFMER 1W OR 1X SUDDEN PRESS	L82 HYDROGEN PRESSURE HI-LO	L92 VOLT REG TRIP/PSS OFF
L03 480V LTG XFMER 1A OR 1B 600V FEEDER BKR OVERCURRENT TRIP	L13 600V LC 1B BUS GROUNDED	L23 600V MCC 1C,1D OR 1E FEEDER BKR OVERCURRENT TRIP	L33 600V LC 1I BUS GROUNDED	L43 600V LC 1M BUS GROUNDED	L53 600V LC 1N BUS GROUNDED	L63 600 VOLT BREAKER TRIPPED	L73 STATION SERVICE XFMER 1Y OR 1Z SUDDEN PRESS	L83 HYDROGEN TEMPERATURE HI	L93
L04 480V LTG XFMER 1C,1D,1E OR 1F 600V FEEDER BKR OVERCURRENT TRIP	L14 208/120 MISC POWER XFMER ALARM	L24 480/277V MISC POWER XFMER ALARM	L34 STATION SERVICE XFMER 1I SUPPLY BKR TRIPPED	L44 TURBINE SEAL OIL BACKUP PRESSURE LO	L54 AIR SIDE SEAL OIL PUMP OFF	L64 SEAL OIL BACKUP PUMP RUNNING	L74 HYDROGEN SIDE SEAL OIL LEVEL LO	L84	L94 PERM MAGNET GENERATOR FIELD BREAKER TRIPPED
L05 480/277 TURBINE BLDG LIGHTING ON ALTERNATE SUPPLY	L15 208/120 VAC MISC SWGR 1A ON ALTERNATE SUPPLY	L25 STATION SERVICE XFMER 1T OR 1AA SUDDEN PRESSURE PROTECTION	L35 GENERATOR VAPOR EXTRACTOR OVERLOAD	L45 DEFOAMING TANK LEVEL HI	L55 SEAL OIL PRESSURE LO	L65 EMERGENCY AIR SIDE SEAL OIL BACKUP PUMP ALARM	L75 HYDROGEN SIDE SEAL OIL PUMP OFF	L85 HYDROGEN SYSTEM WATER DETECTOR HI	L95 GENERATOR NEGATIVE SEQUENCE ALARM


MAIN CONTROL BOARD
ANNUNCIATOR PANEL M
M01 START-UP XFMER 1A SUDDEN PRESSURE
M11 START-UP XFMER 1A UNDERVOLTAGE
M21 START-UP XFMER 1A MISC ALARM
M31 4KV BUS 1A DA01 OR DA07 OVERCURRENT LOCKOUT
M41 4KV BUS 1A UNDERVOLTAGE
M51 4KV BUS 1A LOSS OF DC CONTROL POWER
M61 TURBINE BLDG DC SYSTEM TROUBLE
M71 FIRE
M81 SPENT FUEL CASK CRANE OVERLOAD TRIP
M91 ASB CONDENSATE TANK LEVEL HI
M02 START-UP XFMER 1B SUDDEN PRESSURE
M12 START-UP XFMER 1B UNDERVOLTAGE
M22 START-UP XFMER 1B MISC ALARM
M32 4KV BUS 1B DB01 OR DB05 OVERCURRENT LOCKOUT
M42 4KV BUS 1B UNDERVOLTAGE
M52 4KV BUS 1B LOSS OF DC CONTROL POWER
M62 BATTERY CHARGER ALARM COOLING TOWERS
M72 FIRE PROTECTION TANK LEVEL LO
M82 REACTOR POLAR CRANE OVERLOAD TRIP
M92 AUXILIARY STEAM BOILER FAULT
M03 UNIT AUX XFMER 1A SUDDEN PRESSURE
M13 UNIT AUX XFMER 1A UNDERVOLTAGE
M23 UNIT AUX XFMER 1A MISC ALARM
M33 4KV BUS 1C DC01 OR DC04 OVERCURRENT LOCKOUT
M43 4KV BUS 1C UNDERVOLTAGE
M53 4KV BUS 1C LOSS OF DC CONTROL POWER
M63 BATTERY CHARGER ALARM FIRE PROTECTION PUMP HOUSE
M73 FIRE PROT SYS TROUBLE OR FIRE PUMP HOUSE FDR BRK TRIPPED
M83 15 GPM BORON RECYCLE EVAPORATOR TROUBLE
M93 H_2 ANALYZER PANEL ALARM
M04 UNIT AUX XFMER 1B SUDDEN PRESSURE
M14 UNIT AUX XFMER 1B UNDERVOLTAGE
M24 UNIT AUX XFMER 1B MISC ALARM
M34 4KV BUS 1D OR 1E SUPPLY BKR TRIPPED
M44 4KV BUS 1D OR 1E UNDERVOLTAGE
M54 4160 VOLT BREAKER TRIPPED
M64 GENERATOR METER & RELAY LOSS OF POTENTIAL
M74 GENERATOR STATOR TEMPERATURE HI
M84 15 GPM WASTE EVAPORATOR TROUBLE
M94 LIQUID OR GAS PROCESSING PANEL TROUBLE
M05 MAIN XFMER SUDDEN PRESSURE
M15 MAIN UNIT AUX OR S/U XFMER WINDING TEMPERATURE HI
M25 MAIN XFMER MISC ALARM
M35 AUXILIARY LOCKOUT RELAY TRIPPED
M45 GEN NEUTRAL OVERCURRENT OR OVERVOLTAGE ALARM
M55 GENERATOR BUS COOLING ALARM
M65 GENERATOR OVER EXCITATION ALARM
M75 OIL STATIC PUMP HOUSE TROUBLE
M85 WASTE PROCESSING SYSTEM - HEAT TRACING FAULT
M95 SEISMIC PANEL ALARM

ANNUNCIATOR DIESEL GENERATOR 1B
WINDOW GROUP V

V11 DIESEL GEN. 1B ENGINE SHUTDOWN	V21 DIESEL GEN. 1B OUT OF SERVICE OR ON LOCAL CONTROL	V31 SEQUENCER B1G TESTING	V41 INVERTER 1C FAULT	V51 4KV BUS 1G, 1J OR 1L BKR. AUTO TRIP	V61 4KV BUS 1G, 1J OR 1L DIFF.PROTECTION	V71 600V LC 1C,1E,1J,1L OR 1S BKR. AUTO TRIP
V12 DIESEL GEN. 1B GENERATOR FAULT TRIP	V22 DIESEL GEN. 1B DAY TANK FUEL OIL LEVEL LO-HI	V32 125V DC BUS 1B UNDERVOLTAGE OR GROUND	V42 INVERTER 1D FAULT	V52 4KV BUS 1G UNDERVOLTAGE OR LOSS OF DC	V62 4KV BUS 1G BKR ON LOCAL CONTROL	V72 600V LC 1C OR 1E GROUND FAULT OR BKR. ON LOCAL CONTROL
V13 DIESEL GEN. 1B TROUBLE	V23 SEQUENCER B1G LOAD SHEDDING	V33 125V DC BUS 1B BATT. BREAKER 72-1B18 TRIPPED	V43 INVERTER 1G FAULT	V53 4KV BUS 1J UNDERVOLTAGE OR LOSS OF DC	V63 4KV BUS 1J BKR. ON LOCAL CONTROL	V73 600V LC 1J GROUND FAULT OR BKR. ON LOCAL
V14 DIESEL GEN 1B BKR. 52-DG08 LOSS OF DC	V24 SEQUENCER B1G FAILURE	V34 BATT.CHARGER 1B FAULT OR DISCONNECTED	V44 STA.SERV.TRANS. 1E DIFF.PROTECTION	V54 4KV BUS 1L UNDERVOLTAGE	V64 4KV BUS 1L BKR. ON LOCAL CONTROL	V74 600V LC 1L GROUND FAULT OR BKR. ON LOCAL CONTROL
	V25 SEQUENCER B1G LOSS OF DC	V35 SEQUENCER B1G SIAS	V45 STA.SERV.TRANS 1F SUDDEN PRESSURE	V55 BATTERY NO. 3 OR 4 UNDERVOLTAGE OR BATT CHARGER 3 OR 4 ALARM		V75 600V LC 1S GROUND FAULT OR BKR. ON LOCAL CONTROL

ANNUNCIATOR DIESEL GENERAT
WINDOW GROUP W



ANNUNCIATOR DIESEL GENERATOR 2C
WINDOW GROUP X

X11 DIESEL GEN. 2C ENGINE SHUTDOWN	X21 DIESEL GEN. 2C OUT OF SERVICE OR ON LOCAL CONTROL	X31 SEQ. B1J OR B2J TESTING		X51 4KV BUS 2J BKR. AUTO TRIP	X61 4KV BUS 2J DIFF.PROTECTION	X71 600V LC 2J BKR. AUTO TRIP
X12 DIESEL GEN.2C GENERATOR FAULT TRIP	X22 DIESEL GEN.2C DAY TANK FUEL OIL LEVEL LO-HI			X52 4KV BUS 2J UNDERVOLTAGE OR LOSS OF DC	X62 4KV BUS 2J BKR ON LOCAL CONTROL	X72 600V LC 2J GROUND FAULT OR BKR. ON LOCAL CONTROL
X13 DIESEL GEN.2C TROUBLE	X23 SEQ. B1J OR B2J LOAD SHEDDING					
X14 DIESEL GEN. 2C BKR. 52-DJ06-1 OR 52-DJ06-2 LOSS OF DC	X24 SEQ. B1J OR B2J FAILURE				X64 DIESEL OIL STORAGE TANK 1-2A LEVEL HI	X74 DIESEL BLDG ALARM PANEL
X15 DIESEL GEN.2C NOT AVAILABLE FOR UNIT 1 OR 2	X25 SEQ. B1J OR B2J LOSS OF DC				X65 OPERATOR START STANDBY FUEL OIL PUMP 1B 2B OR 2C	X75 DIESEL BLDG FLOODING

ANNUNCIATOR DIESEL GENERATOR 2B
WINDOW GROUP Y

Y11 DIESEL GEN. 2B ENGINE SHUTDOWN	Y21 DIESEL GEN. 2B OUT OF SERVICE OR ON LOCAL CONTROL	Y31 SEQUENCER B2G TESTING	Y41 INVERTER 2C FAULT	Y51 4KV BUS 2G, OR 2L BKR. AUTO TRIP	Y61 4KV BUS 2G, OR 2L DIFF.PROTECTION	Y71 600V LC 2C, 2E, OR 2L BKR. AUTO TRIP
Y12 DIESEL GEN. 2B GENERATOR FAULT TRIP	Y22 DIESEL GEN. 2B DAY TANK FUEL OIL LEVEL LO-HI	Y32 125V DC BUS 2B UNDERVOLTAGE OR GROUND	Y42 INVERTER 2D FAULT	Y52 4KV BUS 2G UNDERVOLTAGE OR LOSS OF DC	Y62 4KV BUS 2G BKR ON LOCAL CONTROL	Y72 600V LC 2C OR 2E GROUND FAULT OR BKR. ON LOCAL CONTROL
Y13 DIESEL GEN. 2B TROUBLE	Y23 SEQUENCER B2G LOAD SHEDDING	Y33 125V DC BUS 2B BATT. BREAKER 72-LB18 TRIPPED	Y43 INVERTER 2G FAULT	Y53 4KV BUS 2L UNDERVOLTAGE	Y63 4KV BUS 2L BKR. ON LOCAL CONTROL	Y73 600V LC 2L GROUND FAULT OR BKR. ON LOCAL CONTROL
Y14 DIESEL GEN 2B BKR. 52-DG08 LOSS OF DC	Y24 SEQUENCER B2G FAILURE	Y34 BATT.CHARGER 2B FAULT OR DISCONNECTED	Y44 STA.SERV.TRANS. 2E DIFF.PROTECTION			
Y15	Y25 SEQUENCER B2G LOSS OF DC	Y35 SEQUENCER B2G SIAS	Y45 STA.SERV.TRANS 2F SUDDEN PRESSURE			Y75 UNIT 2 VALVE BOX FLOODING

ANNUNCIATOR DIESEL GENERATOR 1C
WINDOW GROUP 2

Z11 DIESEL GEN.1C ENGINE SHUTDOWN	Z21 DIESEL GEN.1C OUT OF SERVICE OR ON LOCAL CONTROL	Z31 SEQ. B1H OR B2H TESTING	Z41 INVERTER 2A FAULT	Z51 4KV BUS 2F, 2H OR 2K BKR. AUTO TRIP	Z61 4KV BUS 2F, 2H OR 2K DIFF.PROTECTION	Z71 600V LC 2A,2D,2G,2H OR 2K BKR. AUTO TRIP
Z12 DIESEL GEN.1C GENERATOR FAULT TRIP	Z22 DIESEL GEN.1C DAY TANK FUEL OIL LEVEL LO-HI	Z32 125V DC BUS 2A UNDERVOLTAGE OR GROUND	Z42 INVERTER 2B FAULT	Z52 4KV BUS 2F UNDERVOLTAGE OR LOSS OF DC	Z62 4KV BUS 2F BKR ON LOCAL CONTROL	Z72 600V LC 2A OR 2D GROUND FAULT OR BKR. ON LOCAL CONTROL
Z13 DIESEL GEN.1C TROUBLE	Z23 SEQ. B1H OR B2H LOAD SHEDDING	Z33 125V DC BUS 2A BATT. BREAKER 72-1A05 TRIPPED	Z43 INVERTER 2F FAULT	Z53 4KV BUS 2H UNDERVOLTAGE OR LOSS OF DC	Z63 4KV BUS 2H BKR. ON LOCAL CONTROL	Z73 600V LC 2G GROUND FAULT OR BKR. ON LOCAL CONTROL
Z14 DIESEL GEN 1C BKR. 52-D807-1 OR 52-D807-2 LOSS OF DC	Z24 SEQ. B1H OR B2H FAILURE	Z34 BATT.CHARGER 2A FAULT OR DISCONNECTED	Z44 STA.SERV.TRANS. 2D OR 2G DIFF.PROTECTION	Z54 4KV BUS 2K UNDERVOLTAGE	Z64 4KV BUS 2K BKR. ON LOCAL CONTROL	Z74 600V LC 2H GROUND FAULT OR BKR. ON LOCAL CONTROL
Z15 DIESEL GEN.1C NOT AVAILABLE FOR UNIT 1 OR 2	Z25 SEQ. B1H OR B2H LOSS OF DC	Z35 BATT.CHARGER 2C FAULT	Z45 STA.SERV.TRANS 2F SUDDEN PRESSURE	Z55 BATTERY NO. 1 OR 2 UNDERVOLTAGE OR BATT. CHARGER 1 OR 2 ALARM	Z65 OPERATOR START STAND-BY FO PUMP	Z75 600V LC 2K GROUND FAULT OR BKR. ON LOCAL CONTROL

TIME	EVENT
1030	• Annunciator F-71 Radiation Monitor System Hi Radiation Alarms • RMS Alarm Sounds (NOTE 1)
1045	• Annunciator C-71 Excess LTDN Hx Outlet Temperature Hi Clears • Annunciator G-65 Steam Gen 1A Water Level Hi-Hi Turbine Trip Alarms • Annunciator J-31 Steam Gen 1A Water Level Hi-Hi Alert Alarms • TSLB 4 Lights 7-1, 7-2, and 7-3 Light

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NOTES: 1. Release from PRT N_2 supply line to 121' PPR begins. RMS alarms with R-10 and R-14 followed shortly by R-21 and R-22.

TIME	EVENT
1115	• The following Annunciators Alarm: (NOTE 1) D-21 RCP 1A, 1B, or 1C #1 Seal Leakoff Flow Lo D-23 RCP 1A, 1B, or 1C #1 Seal ΔP Lo
1115+	• When 1B RCP secured, the following Annunciators Alarm: E-52 RCS Loop 1B Flow Lo or RCP 1B Breaker Open E-65 RCS RTD Manifold Bypass Loop Flow 1A, 1B, or 1C Lo
	• When 1B RCP secured, the following TSLB lights come on: TSLB-1 10-2 TSLB-2 3-2, 5-2
	• As RHR is placed in a normal cooldown lineup, the following annunciators alarm or clear as appropriate when pumps are started and valves are repositioned: B-74 ESS Valves Off Normal C-54 RHR Hx 1A Outlet Flow Lo C-55 RHR Hx 1B Outlet Flow Lo
	• As PORV's are cycled open/closed, annunciator H-74 Relief Valve 445B or 445A open alarms/clears

NOTES: 1. RMS alarm sounds, R-23B clears

CONTROL ROOM CONTROLLER CARD

TIME	EVENT
1230+	• Annunciator E-02 Charging Header Flow Hi-Lo Clears
1300+	• When repairs are completed on 1B CTMT Spray Pump Breaker: Annunciator C-02 Containment Spray Pump 1B Overload Trip Clears (NOTE 1)
1319	• The following Annunicators Clear: E-41 Containment Pressure Hi-1 Alert G-51 Containment Pressure Hi-1 Safety Inj Reac Trip • TSLB Lights 1-2, 1-3, 1-4 go out
1430	• The following MCB Annunciators Alarm C-72 RWST Level Lo Train A C-73 RWST Level Lo Train B

NOTES: 1. Clears when 1B CS pump breaker reset following repairs. Containment spray is reinitiated at 1315.

MONITOR CHECKLISTS

MONITOR CHECKLISTS

The checklists provided are listings of procedurally required actions grouped by responsible position. The listings include some actions which will not be required based on the scenario events and some actions which may or may not be required depending on exercise free-play decision. Monitors are to mark those actions not required as N/A. Questions concerning the applicability of specific actions should be addressed to the Training Manager.

TSC STAFF
EMERGENCY ACTION CHECKLIST
FOR DRILL MONITORS

___1. Verify work station is set up (e.g., desk unlocked, phone, etc.)

___2. Evaluate Rx vessel head vent requirements.

___3. Evaluate long term plant status.

___4. Plot hydrogen concentration on Post LOCA CTMT hydrogen concentration graph.

___5. Determine event specific procedure for post accident recovery (ex. post SGTR cooldown).

___6. Determine if RHR can be placed in service during post SGTR cooldown using backfill.

___7. Determine method for establishing RCP seal injection and CCW cooling.

___8. Provide recommendation for processing CTMT sump based on sample results.

___9. Provide recommendation on placing preaccess filtration system or Post LOCA vent system in operation.

___10. Determine long term plant status.

EMERGENCY DIRECTOR
EMERGENCY ACTION CHECKLIST
FOR DRILL MONITORS

___1. Evaluate plant conditions and if conditions warrant, declare an emergency.

___2. Assume the position of ED and announce to personnel in control room/TSC.

___3. Verify correct control room response to the emergency condition.

___4. Determine radiological status and initiate notification or evacuation per EIP's 9, 26, 8, and 10.

___5. Verify emergency organization callouts initiated per EIP-8.

___6. Initiate rescue and emergency repair operations per EIP-14.

___7. Maintain plant security per EIP-7.

___8. Establish communications with and provide information to the Recovery Manager per EIP-27.

___9. Perform personnel accountability per EIP-10.

___10. Coordinate and maintain communications with off-site authorities per EIP-26 and EIP-8.

___11. Direct setup of TSC per EIP-6, Appendix.

___12. Provide staffing of the Technical Support Center within 2 hours of the declaration of the emergency by notifying the Tech Manager.

___13. Assign an individual to keep a record of all communications with the general office and offsite authorities.

___14. Activate teams to search for unaccounted personnel according to EIP-14.

___15. Evaluate the emergency conditions and direct non-essential personnel to either depart from the site or return to work.

___16. Provide transportation for persons without vehicles.

___17. Provide clothing for personnel found to be contaminated.

___18. Provide periodic plant status updates to off-site authorities.

___19. Reassess conditions for possible upgrade of the emergency classification.

___20. If a fire, implement EIP-13.

___21. Close out by verbal summary or escalate to a higher level emergency, ensure off-site authorities notified and security notified.

___22. Activate only that portion of the emergency organization necessary to respond to the incident.

___23. Implement EIP-12 if the fire may potentially affect ECCS.

___24. Determine the conditions for use of smoke removal units in the RCA.

___25. Authorize the HP Manager to dispatch HP personnel.

___26. Authorize the HP Manager to reestablish manning of HP and dosimetry offices.

___27. Approve relocation of security personnel.

___28. Ensure radiological conditions which may require the relocation of security are evaluated and provided to security personnel.

___29. Approve exposure and/or dose rate limits with the aid of health physics, and be responsible for authorizing exceeding any 10CFR 20 exposure limit.

___30. Ensure applicable portions of the re-entry guideline are completed.

___31. Provide instructions for the Administrative Aide to notify TSC staff and the Recovery Manager.

___32. Initiate environmental sampling.

___33. Implement EIP-26.

___34. Authorize re-entries.

___35. Provide met data and dose estimates to off-site authorities.

___36. Coordinate press releases and recovery planning with the Recovery Manager.

___37. Coordinate with security for dispatching of company representative to off-site agencies and any required departures from site.

___38. Reassess conditions for possible upgrade to general emergency.

___39. Evacuate area(s) of the plant site, as necessary.

___40. Activate TSC, OSC, and EOF (at RM's discretion).

___41. Provide periodic meteorological and dose estimates to off-site authorities.

___42. Relocate the TSC should it become untenable due to radiological or other hazardous conditions.

___43. Assign an individual to maintain a log of important ED activities.

___44. Within 8 hours of the declaration of an emergency, provide a TSC continuous staffing rotating schedule.

___45. Authorize relocation of assembly areas from plume pathway.

SHIFT SUPERVISOR
EMERGENCY ACTION CHECKLIST
FOR DRILL MONITORS

___1. Announce the emergency on the PA system and dispatch a qualified individual to perform first aid.

___2. Account for all personnel if the ED is not present.

___3. Ensure affected unit is in safe condition and assess fire.

___4. Continue to reassess the situation for evacuation requirements and notify personnel accordingly.

___5. Implement EIP-12 if applicable.

___6. Implement EIP-18 if applicable.

___7. Direct Fire Brigade Chief in fighting the fire.

___8. Monitor EIP-9 criteria.

___9. Alert CSC if assistance from outside agencies is required.

___10. If time and personnel permit dispatch RMT to meet the offsite agency at the CSC.

___11. Evacuate affected areas of the site as necessary for an ALERT.

___12. Implement EIP-26. The shift supervisor shall notify the Central Security Control and the Emergency Director.

___13. Direct operational activities to combat the emergency and act as Emergency Director.

___14. Provide the ED the (following) information pertinent to the emergency. 1) Status of the unaffected unit. 2) Status of affected unit. 3) Emergency classification. 4) Emergency actions initiated. 5) Release information. 6) Requests for off-site assistance initiated. 7) Notifications initiated. 8) Prognosis for worsening or termination of the event.

___15. Implement EIP-17 Notification of Unusual Event if a contaminated, injured individual is transported to an off-site facility.

___16. Dispatch RMT if radiation exposure or contamination is possibly involved.

___17. Summon a local ambulance if the PEV is not available giving the number of injured personnel and whether radioactive materials are involved.

___18. Inform CSC to escort the ambulance upon arrival at the plant site to the location of the injured personnel.

___19. Notify SAMC and the company doctor and give all the information per EIP-11. 1) Number of casualties. 2) Whether radioactive material involved. 3) Level of contamination. 4) Nature of injury. 5) Estimated time of arrival. 6) Any other pertinent information. 7) The hospital will call back for verification. 8) Ensure ED is notified.

___20. Place the unit in a safe condition in accordance with the applicable Emergency Response Procedure.

___21. Restrict access to the at-the-controls area to only authorized personnel.

___22. Establish initial offsite communications.

MAINTENANCE MANAGER
EMERGENCY ACTION CHECKLIST
FOR DRILL MONITORS

___1. Assist the ED by selecting qualified personnel for assignment to a emergency repair party.

___2. Assist the ED by planning activities and giving instructions to members of the Emergency Repair Party.

___3. With HP Manager help, maintain exposures to maintenance personnel as low as reasonably achievable during re-entry repair or decontamination activities which result from an emergency.

___4. Ensure re-entry team is assigned a team leader.

___5. Ensure re-entry team wear radiological protection devices as directed by Health Physics.

___6. Ensure activities and transit route of re-entry team are planned with help from the emergency staff.

___7. Ensure re-entry personnel are briefed concerning the nature of the emergency, possible hazards, and duties in the emergency area.

___8. Discuss communications and alternatives if no communications are available, with re-entry personnel.

___9. Debrief re-entry personnel.

___10. Report de-brief information to ED.

___11. Complete applicable portions of the Re-entry Guideline.

TECHNICAL MANAGER
EMERGENCY ACTION CHECKLIST
FOR DRILL MONITORS

___1. Assign appropriate personnel to setup the TSC for emergency use per FNP-0-EIP-6 appendix.

___2. Assign a person to handle off-site communications and to log off-site communications. (Normally on-call licensing engineer.)

___3. Assign an engineer or Counting Room Tech to support off-site dose assessment. (Normally on-call reactor engineer.)

___4. Provide engineering support for assessing, mitigating, and/or recovering from the emergency. (On-call systems engineer.)

___5. Dispatch the on-call liaison person to the Houston County and/or Early County Emergency Operations Center when directed by the Emergency Director.

___6. Direct the on-call ENV-Supervisor to support off-site dose assessment.

___7. Direct the on-call Computer Support and on-call Quality Control personnel to activate the EOF per FNP-0-EIP-27, request HP support if needed.

___8. Perform hourly dose assessment.

___9. Review outgoing telecopies prior to off-site transmission.

___10. Augment TSC and EOF staffs as required.

___11. At the direction of the ED or RM, perform forecast Dose Assessment per EIP-29. (Normally on-call reactor engineer.)

___12. At the direction of the ED or RM, calculate radioactive release potential per EIP-29. (Normally on-call reactor engineer.)

___13. Direct the on-call Chemistry Supervisor to coordinate sampling.

___14. Ensure TSC Gaitronics is switched to "TSC I COM" position, volume is turned up and the unit is operable.

REACTOR ENGINEER
EMERGENCY ACTION CHECKLIST
FOR DRILL MONITORS

___1. Report to the TSC or location directed by the ED or Technical Manager.

___2. Establish the plant parameter remote monitoring capability in the TSC upon direction of ED.

___3. Complete manual dose assessment if automatic dose assessment is not available per EIP-9.

___4. Transmit dose assessment reports to state/local agencies per EIP-8 and EIP-26.

___5. Compute the total core inventory per EIP-30 for times after shutdown as specified by the Technical Manager.

___6. Determine plant power history for the 30 days prior to shutdown.

___7. Determine power correction factor.

___8. Determine corrected core inventory.

___9. Perform estimation of percent fuel damage per EIP-30.

___10. Determine the activity ratios for noble gases and iodines.

___11. Compare calculated activity ratios and fuel pellet ratio per EIP-30.

___12. Determine and record any available evidence of core uncovery.

___13. Obtain and compare core exit thermocouple values per EIP-30.

___14. Obtain and compare containment hydrogen concentration.

___15. Determine the extent of zirconium water reaction per EIP-30.

___16. Obtain and compare containment high range area radiation monitors per EIP-30.

___17. Perform the final core damage assessment per EIP-30.

LICENSING ENGINEER
EMERGENCY ACTION CHECKLIST
FOR DRILL MONITORS

___1. Report to the TSC or location directed by ED or the Technical Manager.

___2. Ensure TSC Gaitronics volume control is turned up, selected to TSC Com I Position, and the unit is operable.

___3. Establish communications with off-site authorities as directed by the ED per EIP-8 and EIP-26.

___4. Maintain a chronological log of all off-site communications noting the organization contacted and conversation summary.

___5. Transmit dose assessment reports to state/local agencies per EIP-8 and EIP-26.

CHEMISTRY SUPERVISOR
EMERGENCY ACTION CHECKLIST
FOR DRILL MONITORS

___1. Report to the TSC or other location designated by the Technical Manager or HP Manager.

___2. Coordinate sampling and analysis of primary coolant and ECCS Sump (via RHR) for FNP-O-EIP-30 core damage assessment.

___3. Coordinate sampling and analysis of the plant vent stack for determination of effluent source term for use in FNP-O-EIP-9 manual dose assessment calculations as needed.

___4. Coordinate sampling and analysis of containment atmosphere for FNP-O-EIP-30 core damage assessment.

___5. Coordinate sampling of site drinking water for radioactive contamination. If drinking water exceeds 10CFR20, App. B, Table 1 Column 2 limits, order quarantining and posting of affected outlets.

___6. Coordinate sampling of Sewage Treatment Plant as needed, isolating sources of excessive contamination.

___7. Coordinate sampling of Waste Settling Pond as needed, isolating sources of excessive contamination.

ENVIRONMENTAL SUPERVISOR
EMERGENCY ACTION CHECKLIST
FOR DRILL MONITORS

___1. Report to the ADMS terminal in the TSC or other location directed by the Technical Manager or HP Manager.

___2. Assist the Technical Manager with initial and follow-up notification messages for off-site dose assessment.

___3. Report to the EOF Dose Assessment Director to assist in dose assessment at the direction of the ED or Technical Manager.

___4. Obtain post accident samples from RCS, ECCS Sump, and containment atmosphere.

___5. Analyze post accident samples for isotopic specific activity with no decay correction applied and determine the following per EIP-30:

___ a. Complete Table 3A, RCS Activity Worksheet.

___ b. Complete Table 3B, Containment ECCS Sump Activity Worksheet.

___ c. Complete Table 3C, Containment Atmosphere Activity Worksheet.

___ d. Estimate the total liquid mass by completing Table 5, Estimate of Total Liquid Mass Worksheet.

___ e. Estimate RCS water mass and containment water mass per EIP-30.

___ f. Calculate total activity of each nuclide released to the RCS.

___ g. Calculate total activity of each nuclide released to the containment water.

___ h. Calculate total activity of each nuclide released to the containment atmosphere.

___ i. Calculate the total activity released of each nuclide by summing RCS, sump, and containment atmosphere.

___6. Divert EOF lab drains to holding tank from sewage treatment plant if the EOF lab is to be used for analyzing radioactive samples.

___7. Coordinate utilization of EOF laboratory and off-site laboratories as needed to support post accident sampling and analysis.

___8. Activate nurse's station for dosimetry issue station as needed.

___9. Coordinate issuance of personnel dosimetry as needed.

___10. Maintain log of all dosimetry devices issued by use of log book recording SSN, name, and dosimetry number issued.

CHEMISTRY TECH
EMERGENCY ACTION CHECKLIST
FOR DRILL MONITORS

___1. Sample RCS per CCP-1300.

___2. Obtain CTMT atmosphere grab sample and analyze.

___3. Sample for Boron concentration.

___4. Perform RCP-725.

___5. Sample CTMT sump liquid for radioactivity, chromates, and Boron.

___6. Obtain and analyze stack sample.

___7. Replacement of filters in Sping (if needed).

___8. Analyze RMT samples as necessary.

HP MANAGER
EMERGENCY ACTION CHECKLIST
FOR DRILL MONITORS

___1. Report to TSC or other location directed by the ED or Tech Manager.

___2. Evaluate relocation of access control as necessary for re-entry.

___3. Provide for on-site sampling and analysis of site drinking water, forage, soil, and air.

___4. Provide ED with information concerning environmental monitoring data.

___5. Maintain communications with environmental RMT's via radio located in the TSC.

___6. Provide for off-site sampling and analysis of radiological samples of forage, soil, water, and air.

___7. Dispatch HP technicians to provide radiation monitoring of personnel in the assembly areas and EOF.

___8. Provide HP coverage when searching for personnel in the assembly areas.

___9. Initiate recall of off-duty personnel.

___10. Monitor plant status and environmental monitoring data concerning any radiological incident.

___11. Assign personnel to RMT and maintain RMT assignment log and RMT data log.

___12. Assist ED in planning re-entry and recovery activities.

___13. Provide supervision for personnel, area, and equipment decontamination.

___14. Review of personnel past exposure history prior to allowance on a re-entry team.

___15. Pass along plant conditions to RMT's as incident progresses.

___16. Initiate call-in of contract technicians. Route to A.S.D when EOF has been staffed.

___17. Set up long-term shift fotation to support plant.

___18. Assist the Technical Manager in evaluating direct radiation, plume disposition and contamination in the environment.

___19. Assess the control room and TSC personnel for issue of personnel dosimetry devices in an emergency.

___20. Provide fire brigade support.

___21. Complete re-entry team checklist.

___22. Complete Re-entry Master List to log all re-entry team members.

___23. Track and record doses received by re-entry personnel on Re-entry Individual Exposure Record.

___24. Implement in-plant iodine monitoring as needed.

___25. Ensure in-plant C.A.M.'s for monitoring iodine are operable for iodine > 1 MPC.

___26. Periodically update field RMT's as to plant's emergency status.

___27. Withdraw RMT's from plume path when not actively surveying.

___28. Relinquish control of RMT's to Dose Assessment Director when EOF is manned and permission from ED is granted.

___29. Recommend relocation of assembly areas to the ED.

HP TECHS/RMT
EMERGENCY ACTION CHECKLIST
FOR DRILL MONITORS

FIRE:

___1. Report to HP office adjacent to control room unless otherwise instructed by control room.

___2. Don protective clothing and respiratory protection equipment.

___3. Accompany members of fire brigade to the fire.

___4. Survey the area of the fire to determine radiological hazards, supervise the use of protective clothing and equipment.

___5. Meet outside agencies at the CSC, issue them dosimetry, and remain with them inside the controlled area.

___6. Comply with EIP-10 during evacuations.

___7. Comply with EIP-11 with injured personnel.

___8. Comply with EIP-13 when supporting fire brigade.

___9. Decontaminate all personnel and equipment upon leaving RCA.

___10. Survey all off-site personnel, equipment, and vehicles prior to releasing them from the protected area.

___11. Ensure the return of all APCO equipment issued to outside agencies.

___12. Obtain the name and social security number of each off-site individual who entered the Protected Area and correlate the information with the appropriate personnel dosimetry device.

___13. Obtain personnel dosimetry devices and other APCO property from ambulance personnel when they are released.

PERSONNEL INJURY:

___1. Establish the degree of contamination and exposure of the patient.

___2. Establish protective clothing requirements for first aid personnel and/or ambulance personnel.

___3. Decontaminate the casualty and minimize the spread of contamination.

___4. Read the casualty(s) personnel dosimetry to determine classification and replace dosimetry (unexposed) on the contaminated area.

___5. Prepare the casualty for transportation to a medical treatment facility, if necessary.

___6. Assist the hospital staff as required.

___7. Periodically inform the ED as to the casualty's dispositions.

___8. Detain ambulance and its attendants at hospital until properly monitored and decontaminated.

HOSPITAL:

___1. Prepare morgue to receive casualty.

___2. Maintain a log of all personnel who enter the radiation casualty receiving area.

___3. Ensure ventilation system registers closed if high levels of contamination are involved.

___4. Ensure drain valves aligned to holding tank.

___5. Issue and log personnel monitoring devices to hospital personnel.

___6. Keep the doctor informed of radiation and contamination levels.

___7. Monitor the patient when directed by the doctor.

___8. Ensure all body excreta and excised tissue are placed in appropriately sealed and labeled containers.

___9. Provide decontamination information to doctor as requested.

___10. Advise doctor of radiological precautions necessary during and after transfer.

___11. After patient has left the RCRA, survey personnel, equipment, and area.

___12. Survey ambulance, ambulance personnel, path of casualty, and direct decontamination efforts if needed.

___13. Collect and prepare all bioassay personnel, path of casualty, and direct decontamination efforts.

___14. Sample the run-off in the holdup tank for analysis at the plant.

___15. Obtain personnel monitoring devices and appropriate information from hospital personnel.

___16. Document all survey data and record all actions in the log book.

___17. Maintain communications with ED or Health Physics Manager.

RE-ENTRY:

___1. Comply with EIP-14 if a member of a re-entry team.

___2. Don PC's and emergency equipment and perform radiological surveys as directed.

___3. Post and establish controlled access areas as appropriate.

___4. Report findings to TSC or EOF.

___5. Document Survey Data.

RMT:

___1. Obtain the RMT kit, check operability, and don necessary protective clothing.

___2. Proceed to the ENV vehicle placard and perform radio operability check.

___3. Perform direct radiation, air particulate, and radioiodine surveys.

___4. Replace any TLD in the area and post additional TLD's as directed.

___5. Document survey data.

___6. Relay data to the EOF or TSC.

___7. If a vehicular accident should occur enroute to SAMC and the Plant Emergency Vehicle or ambulance were to remain unattended, lock the vehicle, if radioactive materials are involved placard "Radioactive".

___8. Take soil, water, air, and vegetation samples.

HOUSTON/EARLY COUNTY EOC LIAISON
EMERGENCY ACTION CHECKLIST
FOR DRILL MONITORS

___1. Report to TSC.

___2. Determine plant status.

___3. Verify ED/TM briefing includes updated plant status, any press release information and approved route offsite with security approval.

___4. Report to the Dose Assessment Room at the Houston/Early County Courthouse at the direction of the Recovery Manager.

___5. Provide state and county government personnel with explanations of plant terminology, hardware, and operation.

___6. Notify the Technical Manager (TSC), ED Assistant or Dose Assessment Director (EOF) if communication problems become evident or if significant off-site actions are pending.

___7. Refrain from providing information or comments to news media personnel.

EMERGENCY COORDINATOR
EMERGENCY ACTION CHECKLIST
FOR DRILL MONITORS

___1. Activate the General Office Emergency Organization in accordance with EIP-111.

___2. Obtain the emergency classification, and description of conditions and prognosis from the ED.

___3. Contact an off-duty RM to act as NMC spokesman.

___4. Determine mode of transportation to the plant site and make provisions.

___5. Contact the on-call Public Information Emergency Coordinator to activate the Corporate Communication Emergency Organization.

___6. Have the ALA contact all on-call individuals listed below:

1) Engineering and Licensing Support Director, 2) Administrative Support Director, 3) Dose Assessment Director, 4) Dose Assessment Support

___7. Notify TSC of EOC Activation.

___8. Establish contact with Recovery Manager.

___9. Brief upper management on emergency and provide periodic update.

___10. Provide Recovery Manager with status briefing when he arrives at EOF.

___11. Deactivate EOC at direction of RM.

___12. Ensure that Tech Manager has dispatched plant personnel to staff EOF prior to RM arrival.

___13. Coordinate as necessary to issue a press release per GO-EIP-114.

___14. Coordinate performance of "Notification" section per EIP-111.

___15. Advises chopper of plume path if release is in progress.

___16. Keep adequate log of events.

RECOVERY MANAGER
EMERGENCY ACTION CHECKLIST
FOR DRILL MONITORS

___1. Review Plant Parameter Status Boards.

___2. Review off-site agency status.

___3. Review requests for off-site assistance.

___4. Review off-site Protective Action Status.

___5. Review Dose Assessment Status with Dose Assessment Director.

___6. Review Administrative Support Status with Administrative Support Director.

___7. Review Engineering and Licensing Status with Engineering and Licensing Support Director.

___8. Coordination of APCO emergency response activities with local, state and federal organization.

___9. Serve as company spokeperson.

___10. Direct the overall recovery effort.

___11. Review news releases.

___12. Analyze data to make deescalation decision.

___13. Review "On-Duty Supervision" status boards.

___14. Review In-Plant Protective Actions.

___15. Review Public Information Status.

___16. Update "On-Duty Supervision" status board.

___17. Notify affected organizations of shift turnover completion.

DOSE ASSESSMENT DIRECTOR
EMERGENCY ACTION CHECKLIST
FOR DRILL MONITORS

___1. Coordinate company environmental monitoring activities.

___2. Evaluate the magnitude and effect of actual or potential radioactive releases.

___3. Maintain appropriate status boards.

___4. Provide RM with recommendations for off-site protective measures.

___5. Review status of off-site dose calculations.

___6. Review existing meteorology and status of projections.

___7. Review status of APCO RMT.

___8. Review status of AL & GA RMT.

___9. Review status of environmental monitoring activities.

___11. Ensure Dose assessment status boards are current.

___12. Notify RM shift turnover is complete and update "On-duty Supervision" status board.

ADMINISTRATIVE SUPPORT DIRECTOR
EMERGENCY ACTION CHECKLIST
FOR DRILL MONITORS

___1. Maintain on-duty status boards.

___2. Establish shift schedules for EOF personnel.

___3. Review status of all incomplete requests for materials and supplies.

___4. Review status of all requests for manpower.

___5. Review status of logistics associated with manpower augmentation.

___6. Review status of corporate support organizations.

___7. Provide for the manning of emergency communications.

___8. Provide special communication needs.

___9. Provide for manpower augmentation.

___10. Administrative special budget activities.

___11. Provide clerical support.

___12. Obtain EOF turnover from Environmental Supervisor.

___13. Ensure EOF access control.

___14. Coordinate reprogramming of ROLM system per GO-EIP-138.

ENGINEERING AND LICENSING SUPPORT DIRECTOR
EMERGENCY ACTION CHECKLIST
FOR DRILL MONITORS

___1. Review engineering support agency status.

_2. Review status of incomplete requests for engineering support.

___3. Review status of onsite engineering manpower augmentations.

___4. Ensure that appropriate boards are current.

___5. Notify RM of turnover completion and update "On-Duty Supervision" status board.

___6. Notify engineering support organizations.

___7. Coordinate information and obtain release approval for Network news releases as directed.

ACTIVATION AND LOGISTICS
ASSISTANT CHECKLIST
FOR DRILL MONITORS

___1. Activate on-call staff as directed by EIP-111.

___2. Establish phone contact with TSC for status update.

___3. Direct Admin Assistant to initiate duties per EIP-111.

___4. Verify that EOC ENN is operable.

___5. Place appropriate NGD staff members on standby.

___6. Arrange for all necessary transportation before and after flights.

___7. Make notifications as directed per Appendix 3 of EIP-111.

___8. Perform Appendix 2 of EIP-111 in a timely manner.

___9. Arrange EOC relief crew as necessary.

MONITOR CHECK LIST

CORPORATE HEADQUARTERS

_____ 1. PIEC is notified of event and notes information given to him.

_____ 2. PIEC reviews available manpower pool and makes position assignments.

_____ 3. PIEC notifies Activation Assistant of event, gives her position assignments, and instructs her to proceed with notification procedures.

_____ 4. PIEC contacts senior available PISC and advises him of situation and departure time/location.

_____ 5. PIEC contacts VP-Public Affairs and advises him of situation.

_____ 6. PIEC contacts Corp. Media Coord. and instructs him to report to the Corporate Headquarters (and notify other staff if needed).

_____ 7. PIEC contact PI EOC Coord. and instructs to report to EOC (and notify other staff if needed).

_____ 8. PIEC contacts PI EOF Coord. and advises him of situation and departure time/location.

_____ 9. PIEC contact NMC Coord. and instructs to report to NMC.

_____ 10. PIEC contacts PI Emergency Staff Office Coord. and instructs to notify personnel and report to EOF for set-up.

_____ 11. Activation Assistant contacts Asst. Corp. Media Coord. and instructs to report to Corp. Headquarters.

_____ 12. Activation Assistant contacts NMC Media Relations Coord. and instructs to Report to NMC.

_____ 13. Activation Assistant contacts NMC Asst. Media Relations Coord. and instructs to report to NMC.

_____ 14. Activation Assistant contacts NMC Assistant and instructs to report to NMC after making other NMC staff notifications.

_____ 15. Activation Assistant contacts Employee Communication Coord. and notifies to report to Corporate Headquarters after notifying needed staff.

_____ 16. Activation Assistant contacts Headquarters Rumor Control personnel and notifies to report to Corporate Headquarters.

_____ 17. Activation Assistant contacts Emergency Telephone Answering Center Coord. and notifies to report to Corporate Headquarters.

18. Activation Assistant contacts Security and instructs to report to News Media Center in Dothan after making arrangements for security guards to also report to News Media Center in Dothan.

19. Activation Assistant contacts Select Groups & Political Liaison Coord. and instructs to report to Corporate Headquarters after notifying other needed staff.

20. Activation Assistant contacts Financial personnel and notifies to report to Corporate Headquarters after notifying other needed staff.

21. Activation Assistant contacts Corporate Headquarters support staff and instructs to report to the Corporate Headquarters.

22. Activation Assistant contacts any additional personnel needed and gives them instructions as indicated by PIEC.

23. Activation Assistant reports status of activation to PIEC and, once organization is activated, reports to emergency assignment.

24. Corporate Media Coordinator coordinates the activities of the media reps located at headquarters.

25. Corporate Media Coordinator coordinates agency approval and PISC approval of news releases prior to activation of the News Media Center in Dothan.

26. Corporate Media Coord. coordinates requests for information from the media.

27. Corporate Media Coord. monitors state and national media reports and evaluates consistency of information and effectiveness of public information releases.

28. Telephone Emergency Answering Center Coord. maintains and updates the emergency telephone actuality system.

29. Employee Communication Coordinator disseminates information to company employees and to system employee communications organizations.

30. Employee Communication Coordinator responds to inquiries from employees regarding drill or emergency.

31. Corporate Headquarters Rumor Control notes rumors reported to the company and responds to those concerning Alabama Power or refers the call to the proper emergency management agency for response.

32. Select Groups and Political Liaison Coord. is responsible for providing information to public officials who require information during an emergency at the Farley Nuclear Plant.

_____ 33. The Financial area coordinates requests for information from financial organizations.

_____ 34. Corporate Headquarters Security is responsible for preventing unauthorized personnel from entering the emergency organization's area.

MONITOR CHECK LIST

EMERGENCY OPERATIONS FACILITY

_____ 1. PI ESOC contacts FNP Visitors Center Staff and coordinates their emergency activities.

_____ 2. PI ESOC calls Southeast Division Telecommunications to set up public address system and communication equipment at the News Media Center.

_____ 3. PI ESOC verifies security has been contacted and personnel are en route to the NMC.

_____ 4. PI ESOC instructs NMC Equipment Coord. to obtain equipment and supplies and set up in the News Media Center.

_____ 5. PI ESOC instructs staff to obtain office equipment and supplies for Emergency Operations Facility.

_____ 6. PI ESOC secures and schedules any necessary local transportation needed for public information staff and activities.

_____ 7. PI ESOC contacts the principal at Northview High School and arranges for the facilities at the high school to be available and doors unlocked.

_____ 8. PI ESOC verifies with NMC Equipment Coord. that all equipment listed in Appendix 4 of GO-EIP-118 is set up and operational at the NMC.

_____ 9. PI ESOC designates personnel to coordinate NMC operations until the coordinator arrives.

_____ 10. PI ESOC insures proper installation of telecopier, telephones and other equipment at EOF.

_____ 11. PI ESOC establishes communication with Emergency Operations Center and obtains all news releases from Corporate Headquarters.

_____ 12. PI ESOC sets up office space for EOF Coordinator.

_____ 13. PI ESOC assists EOF Coordinator.

_____ 14. PI ESOC assures that all EOF communications facilities remain

functional.

_____ 15. PI ESOC maintains supplies for EOF.

_____ 16. PI EOF Coordinator works with Nuclear Generation EOF personnel in obtaining information necessary for preparing news release drafts.

_____ 17. PI EOF Coordinator prepares news release drafts for approval.

_____ 18. EOF Coordinator maintains contact with PISC and NMC Coordinator.

MONITOR CHECK LIST

NEWS MEDIA CENTER

_____ 1. Upon arrival at the NMC, the Equipment Coordinator contacts the principal at Northview to clear immediate admittance to the NMC.

_____ 2. NMC Equipment Coordinator obtains office/communication equipment and coordinates set-up and testing of equipment at NMC.

_____ 3. Southeast Division Telecommunications sets up and tests public address system & communications equipment at the NMC.

_____ 4. NMC Equipment Coord. & SE Div. Telecommunications report status of equipment operability upon arrival of NMC Coordinator and NMC Assistant.

_____ 5. NMC Assistant sets up offices in News Media Center.

_____ 6. NMC Assistant & Equipment Coord. set up news release posting area, bulletin boards and other informational boards in the agency room.

_____ 7. Equipment Coord. sets up news conference room and the media room.

_____ 8. NMC Coord. obtains copies of all news releases from Corporate Headquarters.

_____ 9. NMC Assistant verifies proper security is established and briefs security guards prior to NMC activation.

_____ 10. NMC Assistant distributes media kits and agency kits.

_____ 11. NMC Coord. notifies PISC that NMC is ready for activation.

_____ 12. NMC Coord. notifies Corporate Headquarters, EOF and EOC that the News Media Center is activated.

_____ 13. PISC, NMC Coord. and NMC Assistant contact agency personnel and coordinate as needed.

14. NMC Media Relations Coord. notifies media of NMC activation.

15. NMC Asst. coordinates agency approval, PISC approval, NMC Coordinator approval and NMC Media Relations Coord. approval on news release drafts and notifies EOF of changes.

16. Media Relations Coord. posts and distributes approved news releases to reporters.

17. NMC Assistant Posts and distributes approved news releases to agency personnel and APCo personnel and spokespersons.

18. PISC & NMC Coordinator maintain communications with and coordinate news conferences with public information agency personnel and the NRC.

19. Media Relations Coord. notifies media of times for news conferences.

20. PISC and/or NMC Media Relations Coordinator acts as moderator during news conferences at the NMC.

21. Media Relations Coordinator monitors local news media reports and evaluates public information effectiveness.

22. Equipment Coordinator & SE Div. Telecommunication maintain all equipment in working order.

23. PISC directs activities of the Corp. Comm. Emergency Org. and maintains contact with all areas of the organization.

24. PISC coordinates acquisition of additional public information support personnel from other system companies as needed.

25. Media Relations Coordinator coordinates requests for information from the media.

26. NMC Rumor Control notes rumors reported to the NMC and responds to those concerning APCo and refers the others to the proper emergency management agency for response.

27. NMC Assistant coordinates support activities for the emergency management agencies.

28. NMC Media Relations Coord. coordinates all activities in the News Media Room and the News Conference Room.

29. Media Relations Coord. coordinates activities of NMC media Relations personnel.

30. NMC security is responsible for signing in and badging anyone entering the NMC.

_____ 31. NMC security is responsible for preventing entry of unauthorized personnel into the NMC.

_____ 32. NMC security is responsible for preventing the media from entering the agency room.