


## ***LIST OF FIGURES***

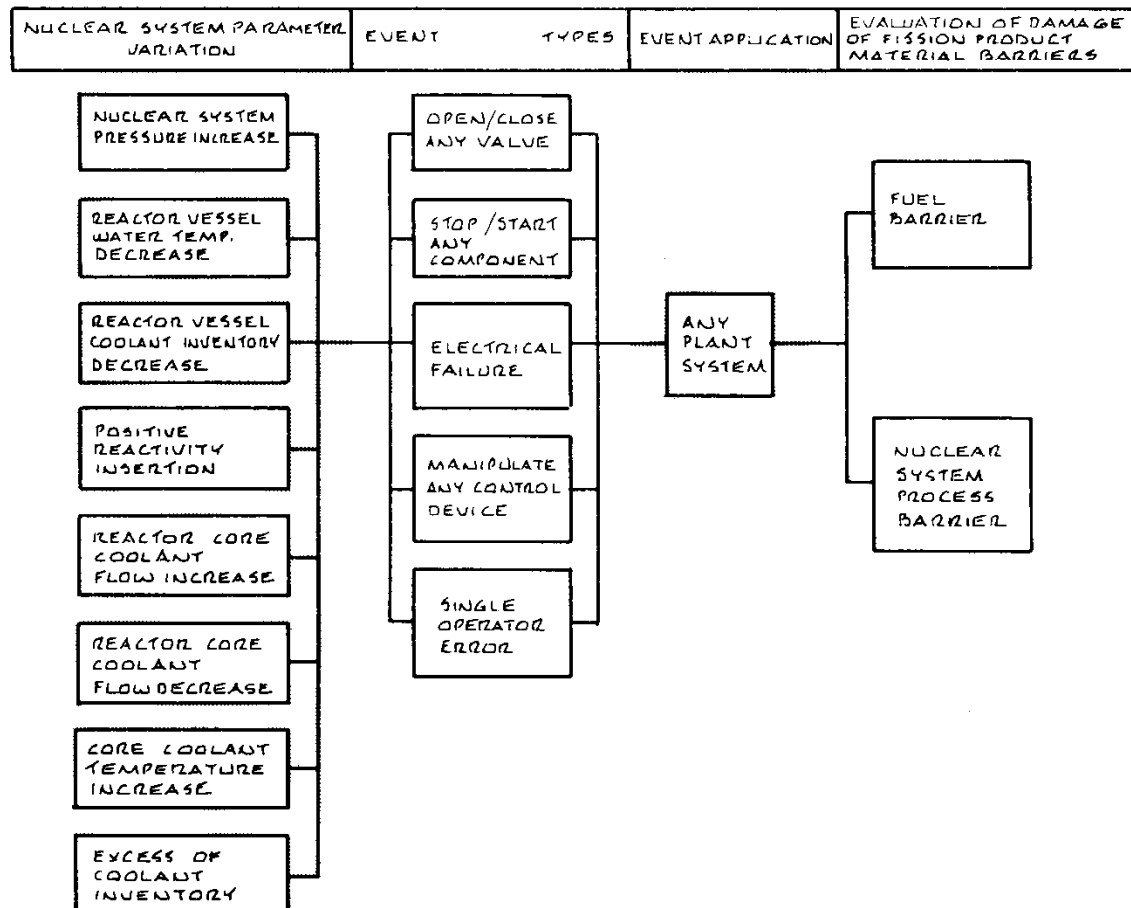
<b>FIGURE NUMBER</b>	<b>TITLE</b>
FIGURE 15-1	PLANT SAFETY ANALYSIS METHOD FOR IDENTIFYING AND EVALUATING ABNORMAL OPERATIONAL TRANSIENTS
FIGURE 15-2	PLANT SAFETY ANALYSIS METHOD FOR IDENTIFYING AND EVALUATING ACCIDENTS
FIGURE 15-3	LOSS OF 100 DEGREE FEEDWATER HEATING MANUAL FLOW CONTROL, UNIT 2 –CYCLE 7
FIGURE 15-4	DELETED IN REVISION 21
FIGURE 15-5	FEEDWATER CONTROLLER FAILURE MAXIMUM DEMAND (EOC), UNIT 1- CYCLE 21
FIGURE 15-6	DELETED IN REVISION 22.
FIGURE 15-7	FEEDWATER CONTROLLER FAILURE MAXIMUM DEMAND (EOC), UNIT 2 – CYCLE 22
FIGURE 15-8	DELETED IN REVISION 22.
FIGURE 15-9	DELETED IN REVISION 22.
FIGURE 15-10	FEEDWATER CONTROLLER FAILURE WITH TBPOOS, ICF, AND NFWT, UNIT 2 - CURRENT CYCLE (EOC 22)
FIGURE 15-11	INADVERTENT HPCI ACTIVATION, UNIT 1 – CYCLE 9 (BOC9 TO EOC9)
FIGURE 15-12	INADVERTENT HPCI ACTIVATION, UNIT 2 - CYCLE 10
FIGURE 15-13	PRESSURE REGULATOR FAILURE (OPEN), UNIT 1 – CYCLE 1
FIGURE 15-14	PRESSURE REGULATOR FAILURE (OPEN), UNIT 2 – CYCLE 1
FIGURE 15-15	INADVERTENT OPENING OF A RELIEF OR SAFETY VALVE, UNIT 2 – CYCLE 1
FIGURE 15-16	GENERATOR LOAD REJECTION WITH 25 PERCENT BYPASS, UNIT 1 – CYCLE 1
FIGURE 15-17	GENERATOR LOAD REJECTION NO BYPASS WITH ICF, UNIT 1 – CURRENT CYCLE (EOC 21)
FIGURE 15-18	GENERATOR LOAD REJECTION, NO BYPASS, WITH ICF, UNIT 2 - (EOC 22)
FIGURE 15-19	TURBINE TRIP WITH 25 PERCENT BYPASS, UNIT 1 – CYCLE 1
FIGURE 15-20	TURBINE TRIP WITHOUT BYPASS WITH ICF, UNIT 1 – CURRENT CYCLE (EOC 21)
FIGURE 15-21	TURBINE TRIP WITHOUT BYPASS, WITH ICF, UNIT 2 (EOC 22)
FIGURE 15-22	DELETED IN REVISION 22.
FIGURE 15-23	DELETED IN REVISION 22.
FIGURE 15-24	CLOSURE OF ALL MSIV FLUX SCRAM, UNIT 1 – CURRENT CYCLE (CYCLE 21)
FIGURE 15-25	CLOSURE OF ALL MSIV FLUX SCRAM, UNIT 2 – (CYCLE 22)
FIGURE 15-26	EXTENDED POWER UPRATE MSIV CLOSURE WITH FLUX SCRAM (102 PERCENT INITIAL POWER)
FIGURE 15-27	UNIT 2 – CYCLE 1 LOSS OF AUXILIARY POWER (TRANSFORMER) WITH 25 PERCENT BYPASS
FIGURE 15-28	UNIT 2 - CYCLE 1 LOSS OF AUXILIARY POWER (ALL GRID CONNECTIONS) WITH 25 PERCENT BYPASS
FIGURE 15-29	UNIT 1 – CYCLE 1 LOSS OF FEEDWATER FLOW
FIGURE 15-30	UNIT 2 – CYCLE 1 LOSS OF FEEDWATER FLOW
FIGURE 15-31	WATER LEVEL RESPONSE WITH REACTOR CORE ISOLATION COOLING FOR LOSS OF FEEDWATER FLOW EVENT AT ORIGINAL POWER

	<p style="text-align: center;"><b>UPDATED FSAR</b></p> <p style="text-align: center;"><b>ACCIDENT ANALYSES</b></p> <p style="text-align: center;"><b>CHAPTER 15 FIGURES</b></p>	<p>Revision: 25</p> <p>Chapter: 15</p> <p>Page: 2 of 2</p>
---	---	--

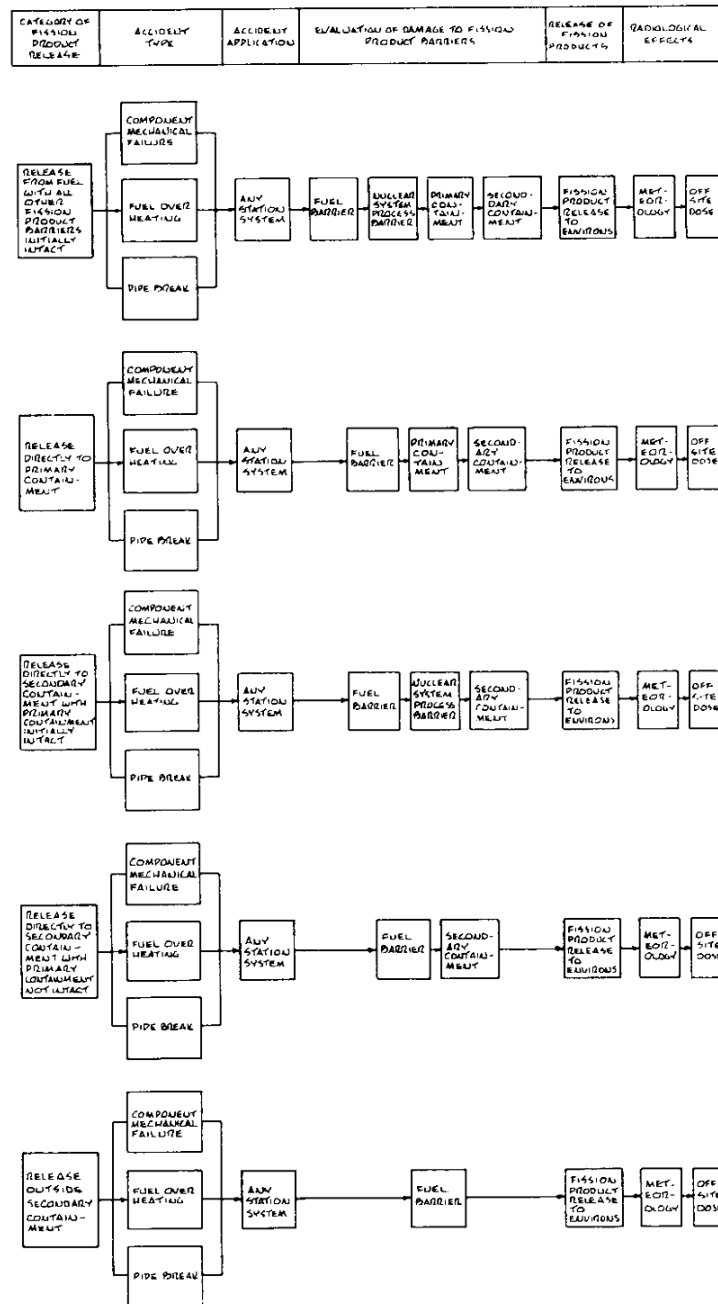
## ***LIST OF FIGURES***

<b>FIGURE NUMBER</b>	<b>TITLE</b>
FIGURE 15-32	PRESSURE RESPONSE WITH REACTOR CORE ISOLATION COOLING FOR LOSS OF FEEDWATER FLOW EVENT AT ORIGINAL POWER
FIGURE 15-33	UNIT 2 – CYCLE 1 TRIP OF ONE RECIRCULATION PUMP
FIGURE 15-34	UNIT 1 – CYCLE 1 TRIP OF TWO RECIRCULATION PUMPS
FIGURE 15-35	UNIT 2 – CYCLE 1 TRIP OF BOTH RECIRCULATION PUMPS
FIGURE 15-36	UNIT 1 – CYCLE 1 SEIZURE OF ONE RECIRCULATION PUMP
FIGURE 15-37	UNIT 2 - CYCLE 1 SEIZURE OF ONE RECIRCULATION PUMP
FIGURE 15-38	SEIZURE OF OPERATING RECIRCULATION PUMP SINGLE LOOP OPERATION
FIGURE 15-39	UNIT 2 – CYCLE 1 ABNORMAL STARTUP OF IDLE RECIRCULATION PUMP
FIGURE 15-40	UNIT 1 – CYCLE 1 ABNORMAL STARTUP OF IDLE RECIRCULATION PUMP
FIGURE 15-41	UNIT 1 – CYCLE 1 RECIRCULATION FLOW CONTROL FAILURE – INCREASING FLOW
FIGURE 15-42	UNIT 2 – CYCLE 1 RECIRCULATION FLOW CONTROL FAILURE – INCREASING FLOW
FIGURE 15-43	UNIT 2 – CYCLE 1 MAXIMUM ROD WORTH VERSUS POWER LEVEL
FIGURE 15-44	UNIT 2 – CYCLE 1 ROD DROP ACCIDENT (POWER RANGE) PEAK FUEL ENTHALPY
FIGURE 15-45	MAIN STEAM LINE BREAK ACCIDENT BREAK LOCATION

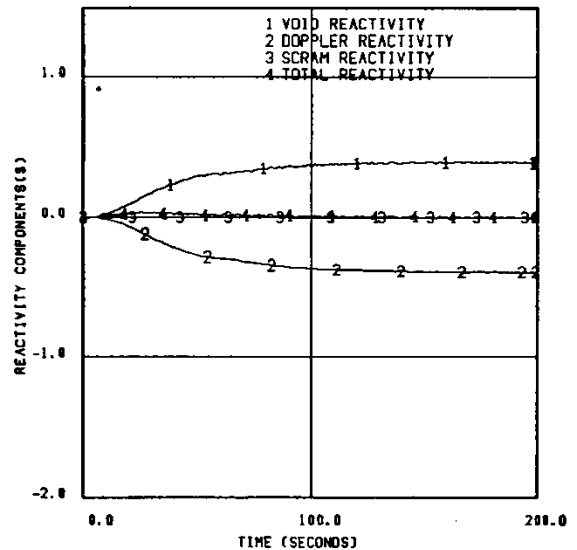
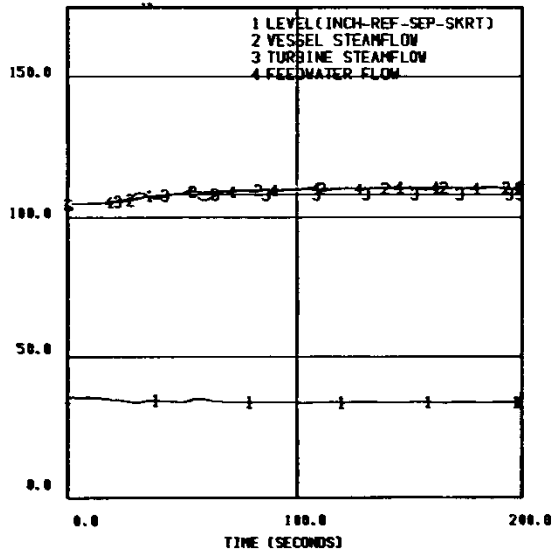
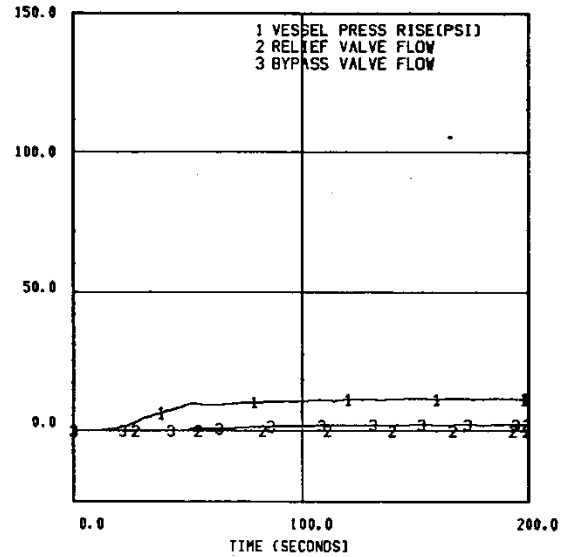
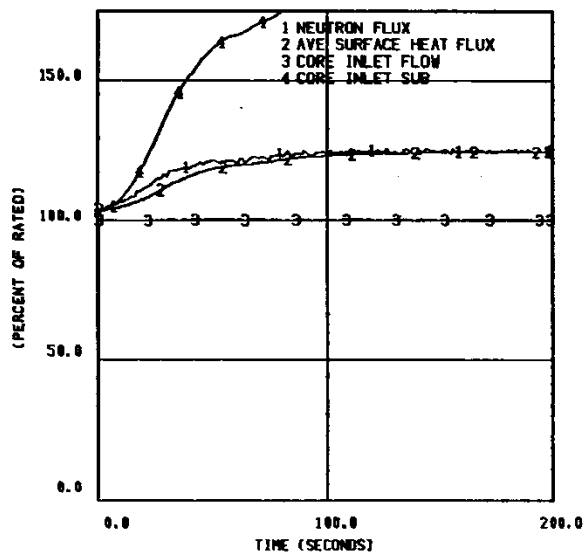
## PLANT SAFETY ANALYSIS METHOD FOR IDENTIFYING AND EVALUATING ABNORMAL OPERATIONAL TRANSIENTS



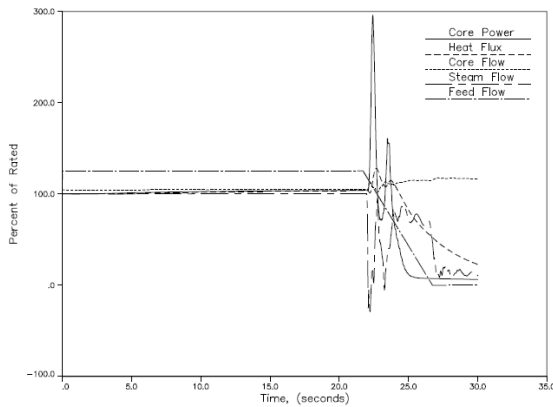
## PLANT SAFETY ANALYSIS METHOD FOR IDENTIFYING AND EVALUATING ACCIDENTS



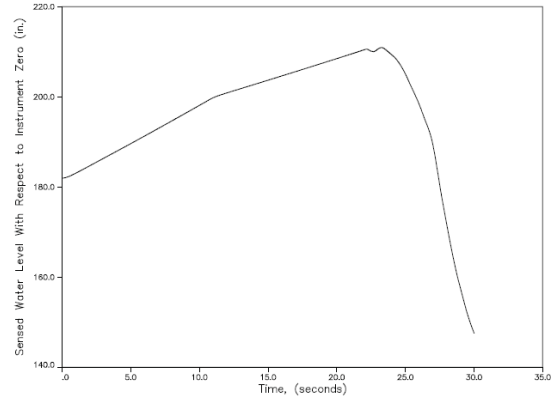
## LOSS OF 100 DEGREE FEEDWATER HEATING, MANUAL FLOW CONTROL, UNIT 2—CYCLE 7



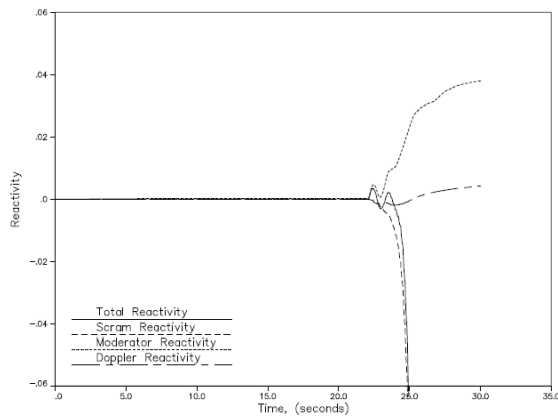
## FEEDWATER CONTROLLER FAILURE, MAXIMUM DEMAND (EOC), UNIT 1 – CYCLE 21



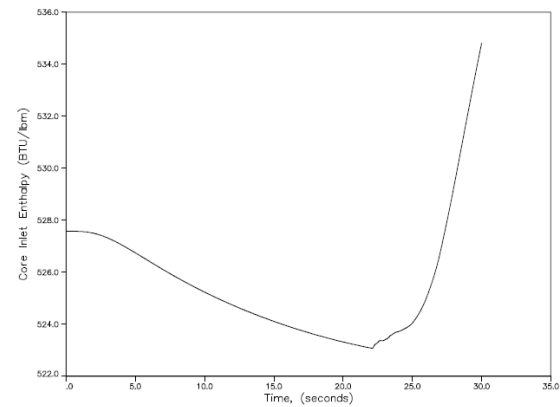
BRK1 CY21 FWCF 100P104.5F 19080.9X HBB TSSS Nom P Nom FWT



BRK1 CY21 FWCF 100P104.5F 19080.9X HBB TSSS Nom P Nom FWT



BRK1 CY21 FWCF 100P104.5F 19080.9X HBB TSSS Nom P Nom FWT



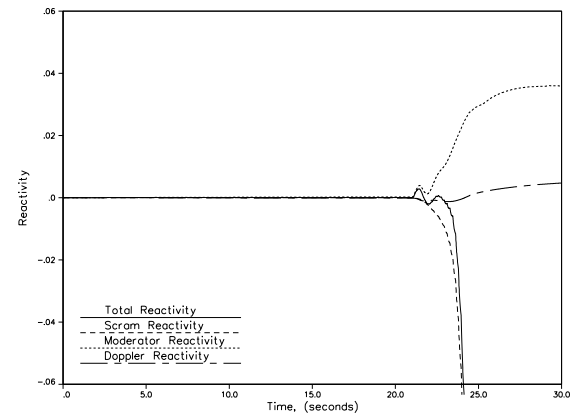
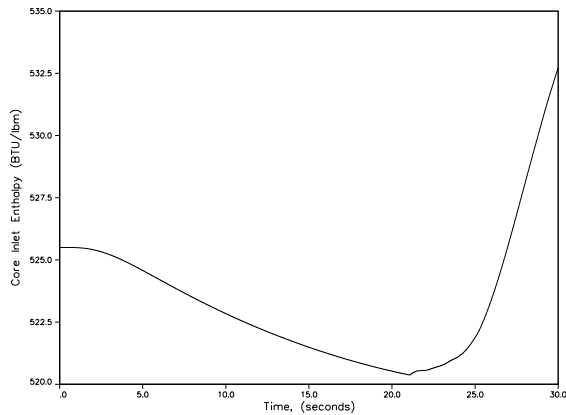
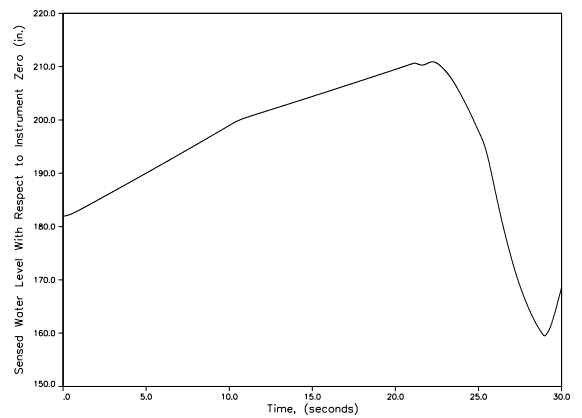
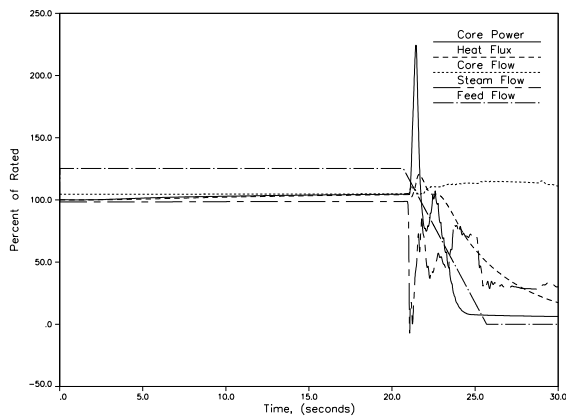
BRK1 CY21 FWCF 100P104.5F 19080.9X HBB TSSS Nom P Nom FWT



**UPDATED FSAR**  
**ACCIDENT ANALYSES**  
**CHAPTER 15 FIGURES**

Revision: 25  
Figure: 15-7  
Page: 1 of 1

## FEEDWATER CONTROLLER FAILURE, MAXIMUM DEMAND (EOC), UNIT 2 – CYCLE 22

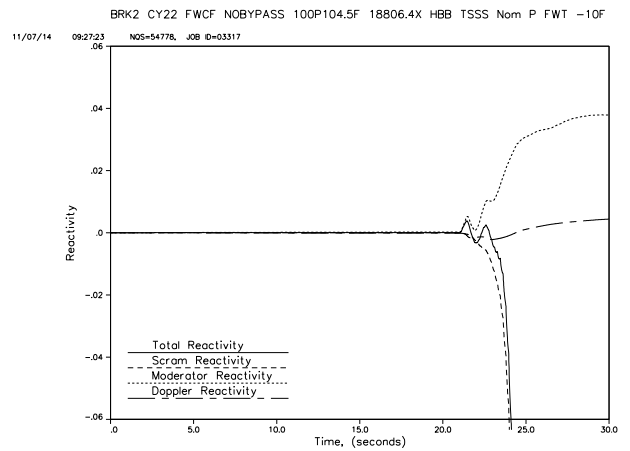
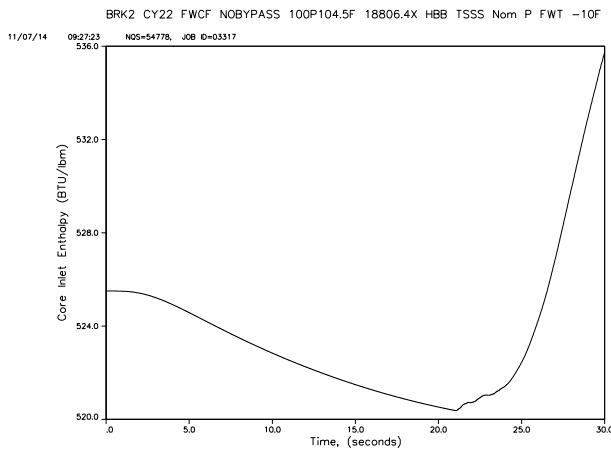
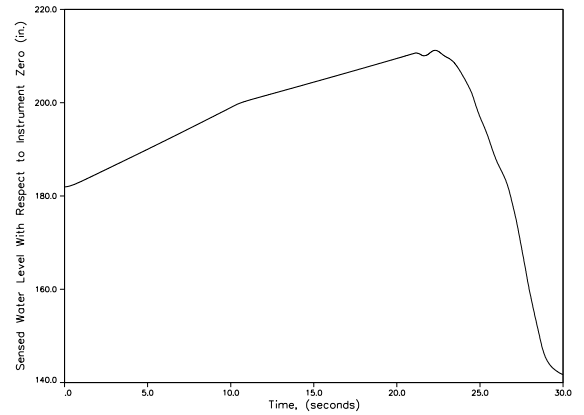
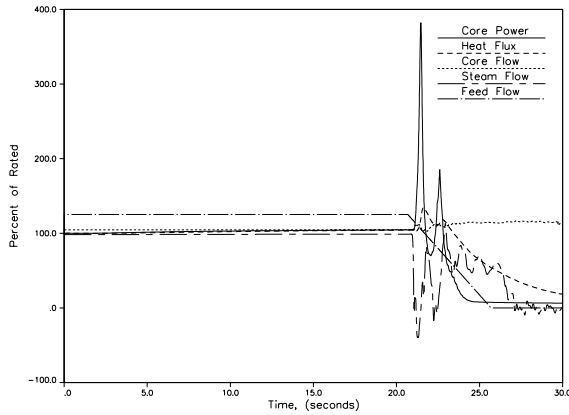




**UPDATED FSAR**  
**ACCIDENT ANALYSES**  
**CHAPTER 15 FIGURES**

Revision: 25  
Figure: 15-10  
Page: 1 of 1

## FEEDWATER CONTROLLER FAILURE WITH TBPOOS, ICF, AND NFWT, UNIT 2 – CURRENT CYCLE (EOC 22)



BRK2 CY22 FWCF NOBYPASS 100P104.5F 18806.4X HBB TSSS Norm P FWT -10F

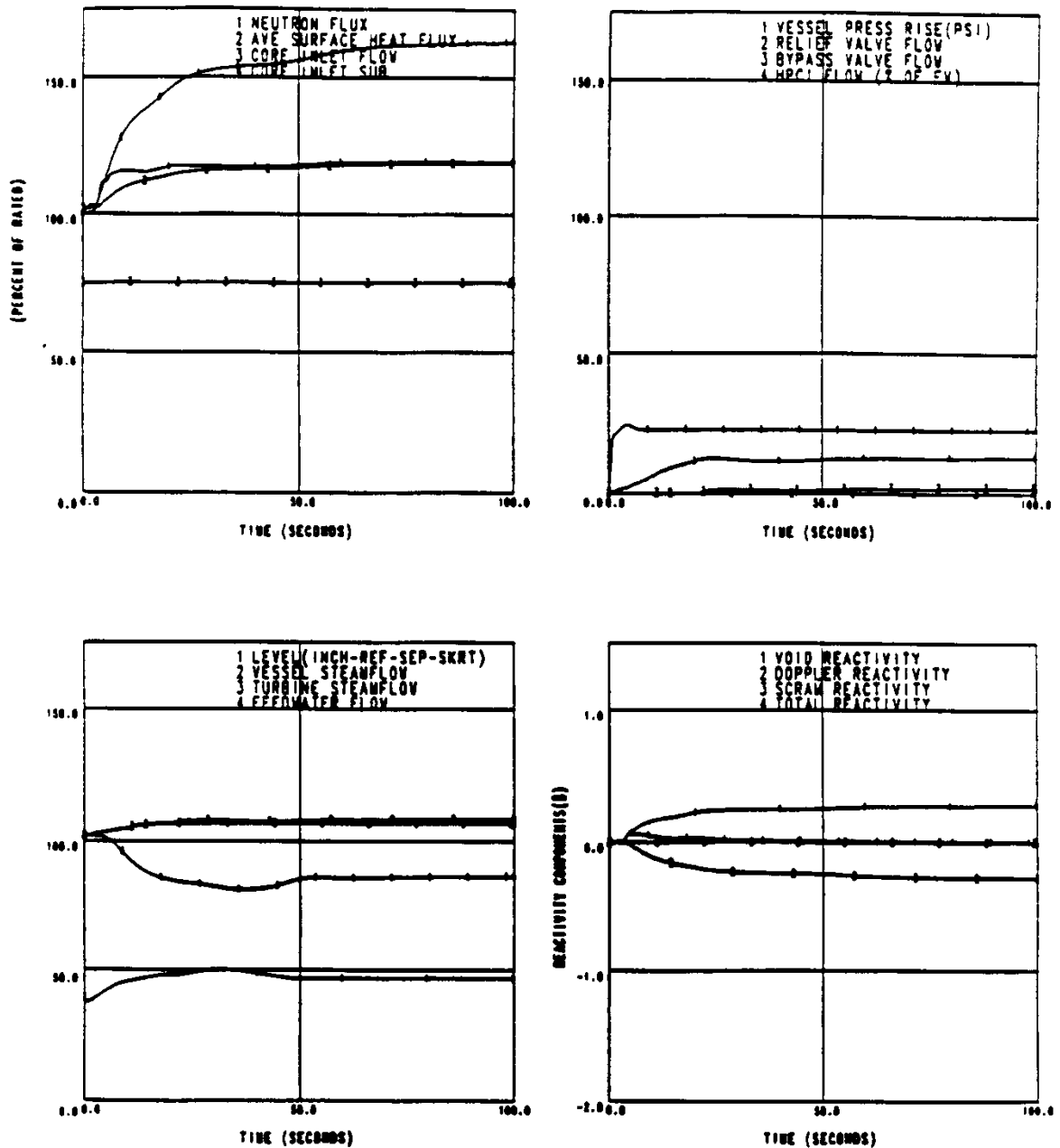
11/07/14 09:27:23 NGS-54778, JOB ID=03317

BRK2 CY22 FWCF NOBYPASS 100P104.5F 18806.4X HBB TSSS Norm P FWT -10F

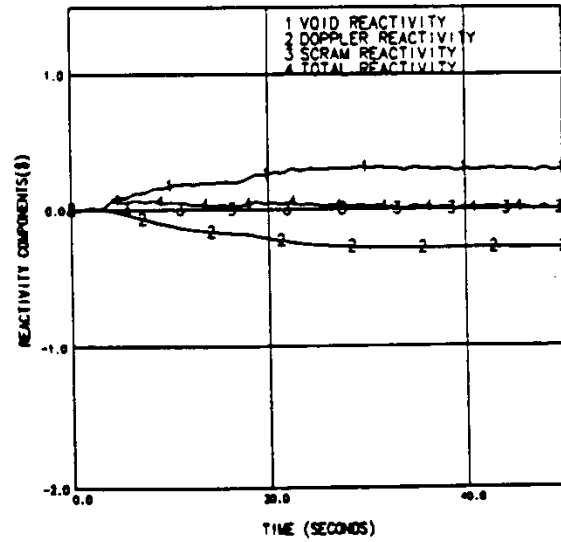
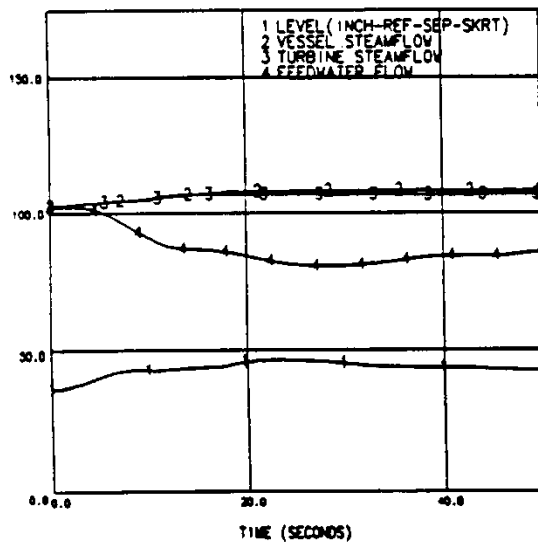
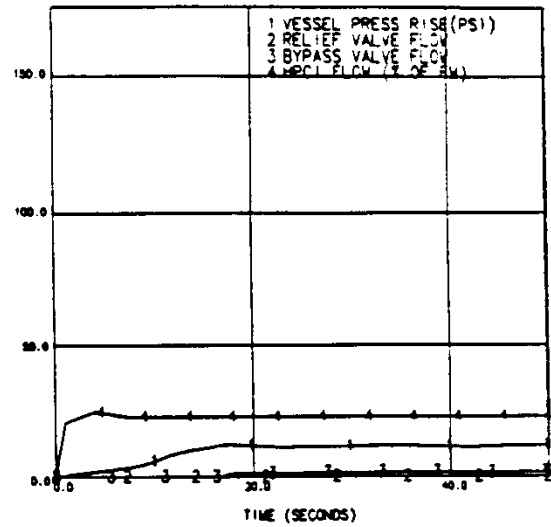
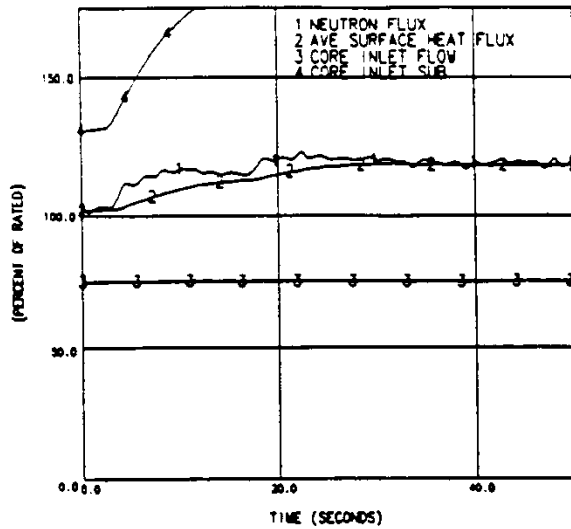
11/07/14 09:27:23 NGS-54778, JOB ID=03317



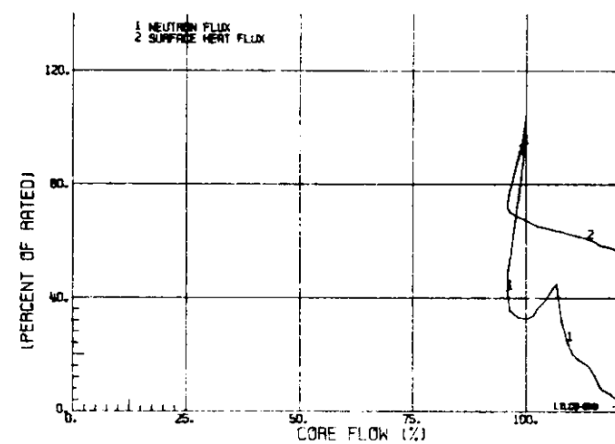
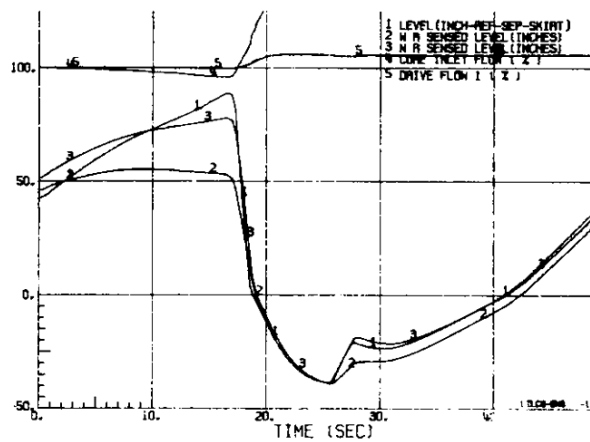
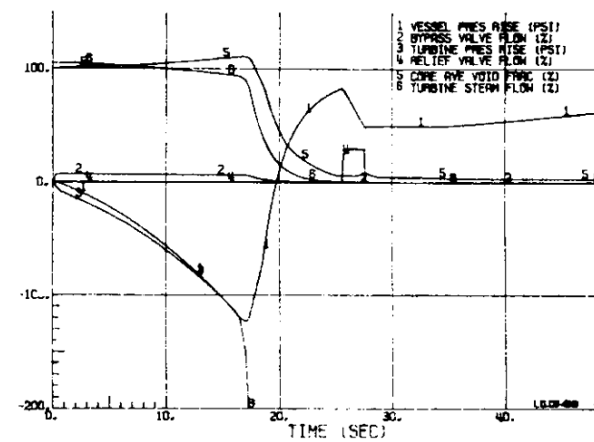
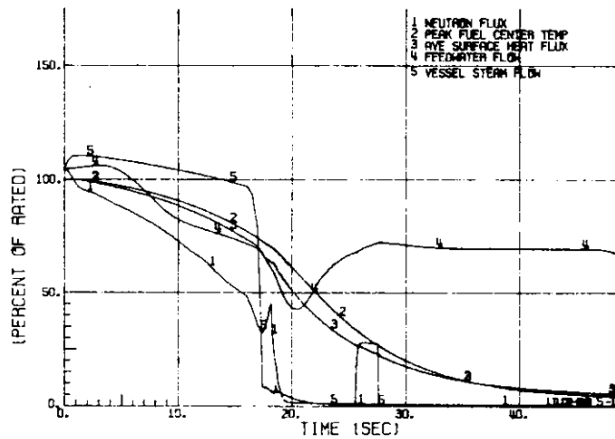
## INADVERTENT HPCI ACTIVATION, UNIT 1 – CYCLE 9 (BOC9 TO EOC9)



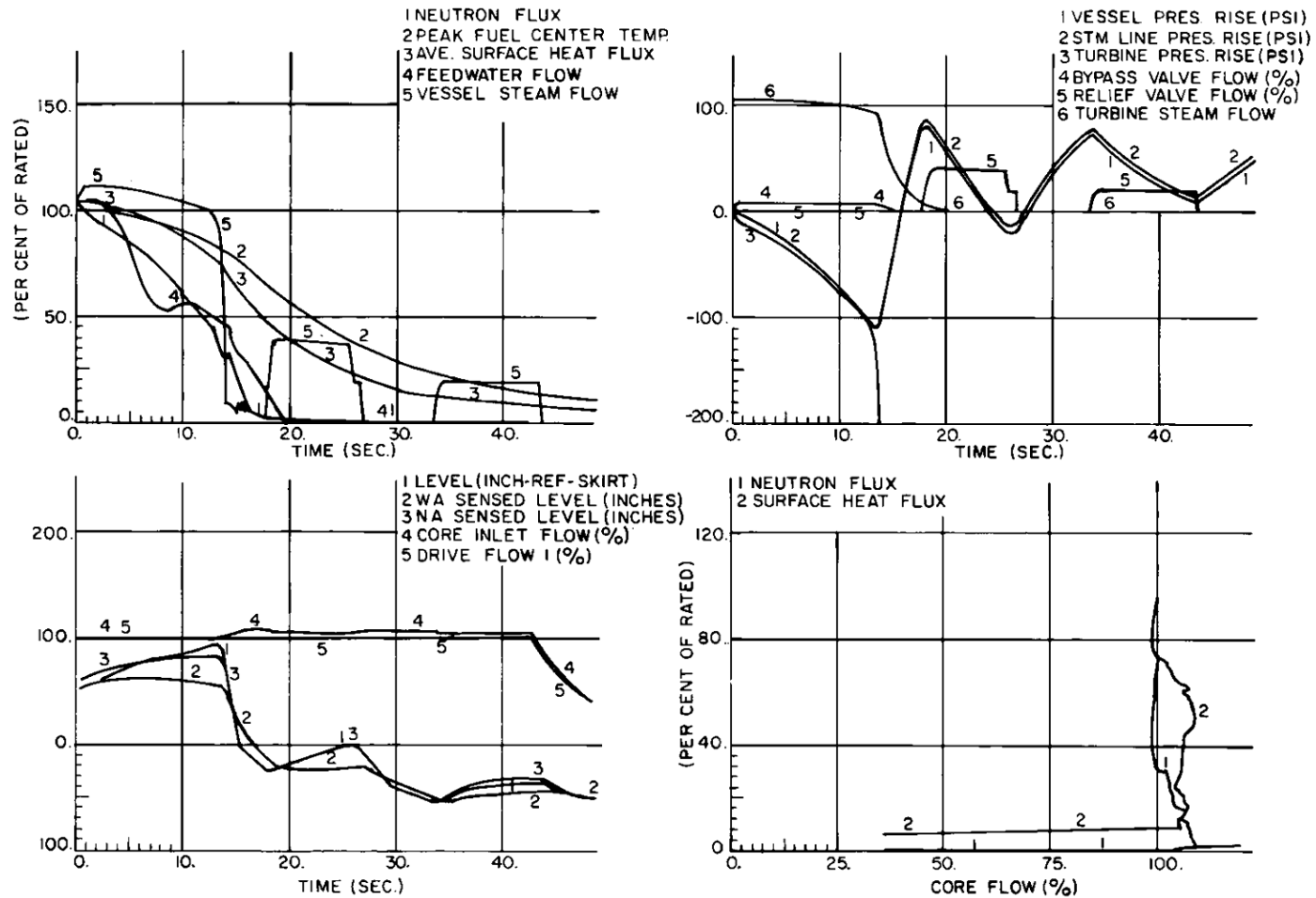
## INADVERTENT HPCI ACTIVATION, UNIT 2 – CYCLE 10



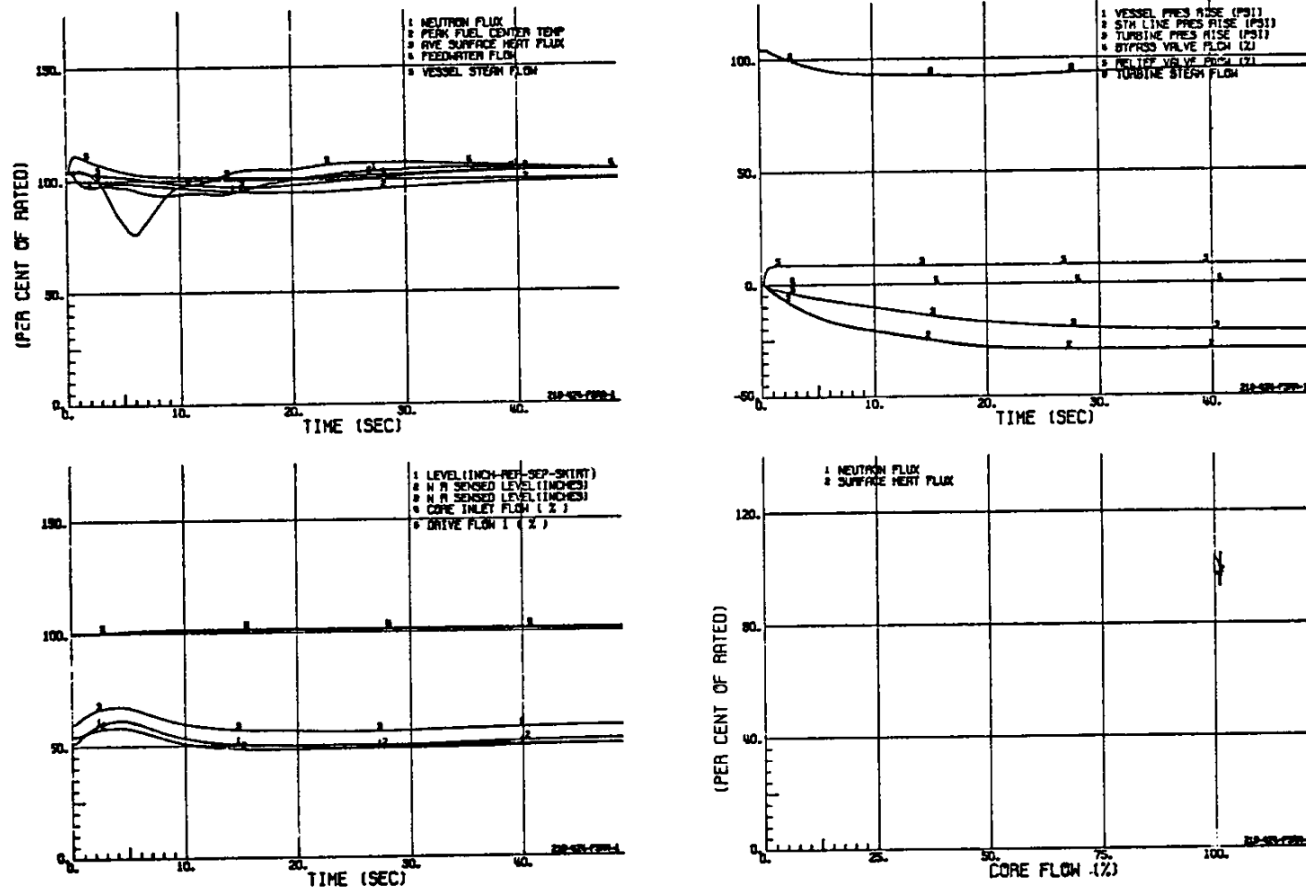
## PRESSURE REGULATOR FAILURE (OPEN), UNIT 1 – CYCLE 1



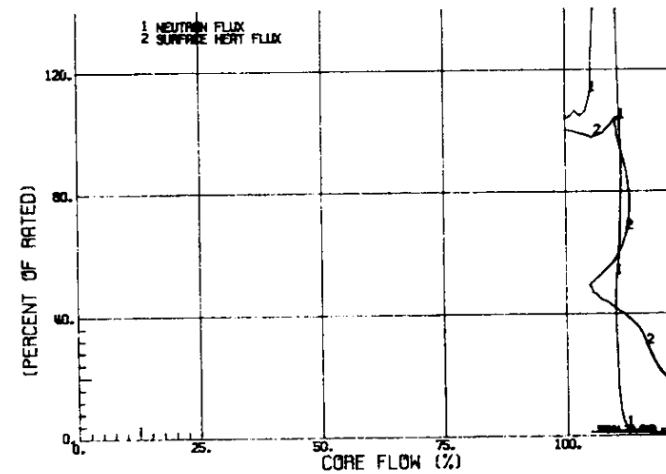
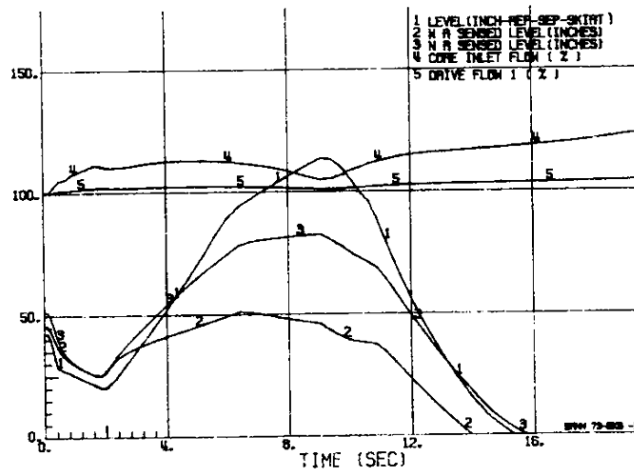
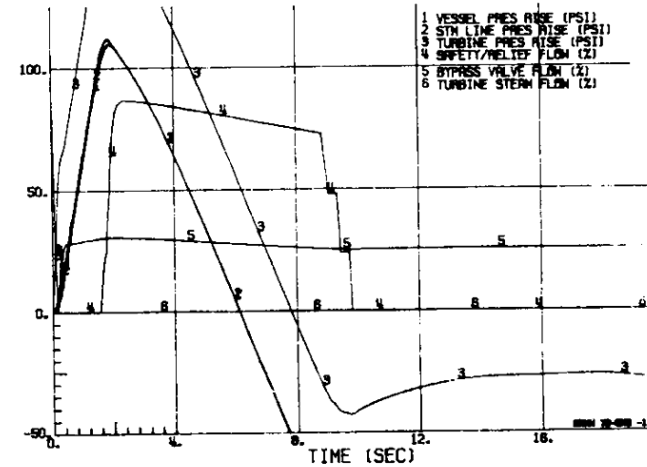
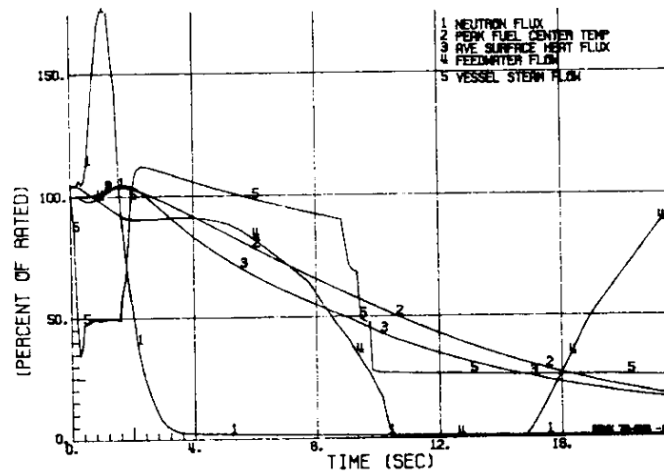
## PRESSURE REGULATOR FAILURE (OPEN), UNIT 2 – CYCLE 1



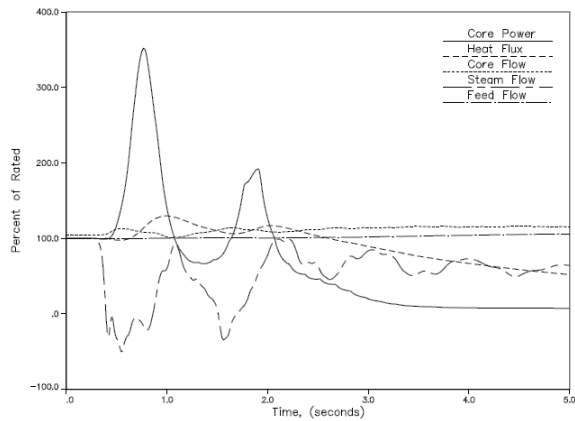
## INADVERTENT OPENING OF A RELIEF OR SAFETY VALVE, UNIT 2 – CYCLE 1



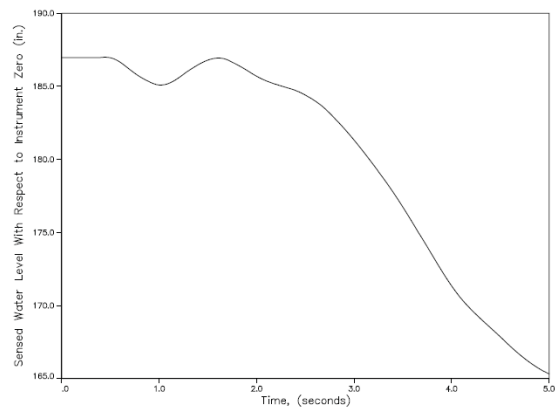
## GENERATOR LOAD REJECTION WITH 25 PERCENT BYPASS, UNIT 1 – CYCLE 1



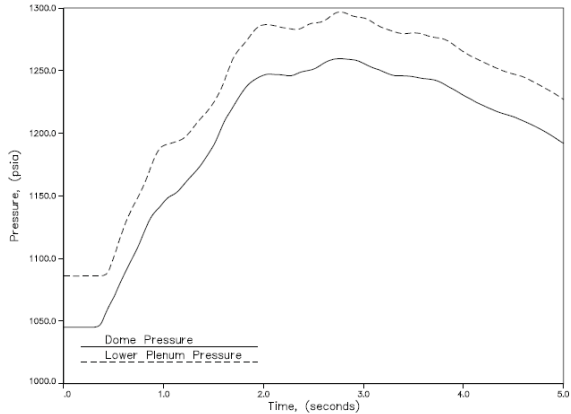
## GENERATOR LOAD REJECTION, NO BYPASS, WITH ICF, UNIT 1 – CURRENT CYCLE (EOC 21)



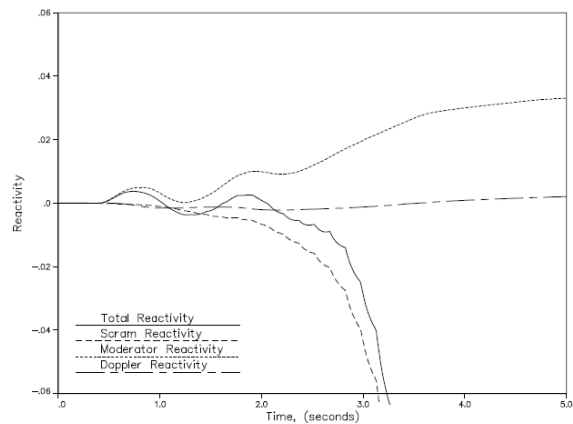
BRK1 CY21 LRNB 100P104.5F 19080.9X HBB TSSS Nom P Nom FWT



BRK1 CY21 LRNB 100P104.5F 19080.9X HBB TSSS Nom P Nom FWT



BRK1 CY21 LRNB 100P104.5F 19080.9X HBB TSSS Nom P Nom FWT



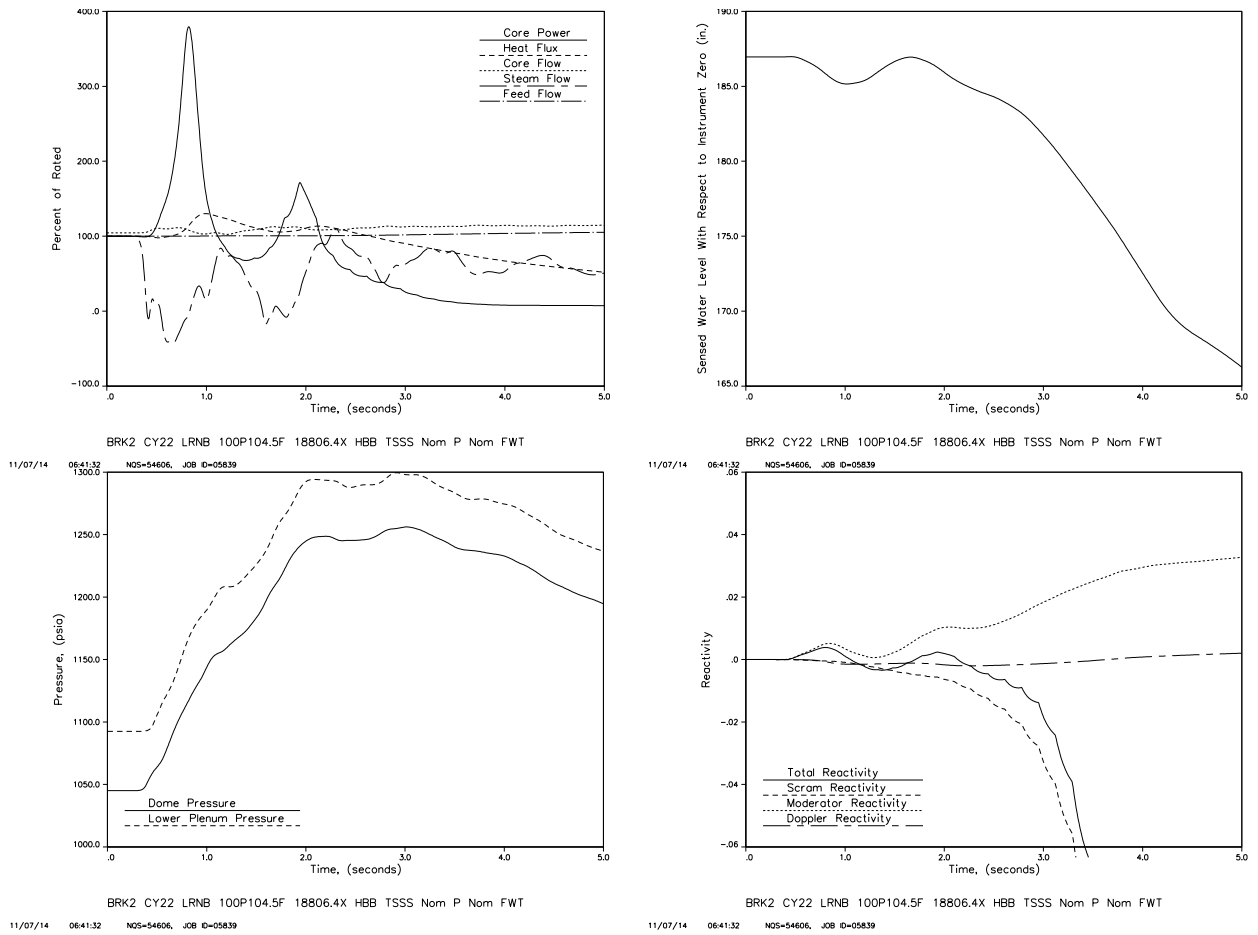
BRK1 CY21 LRNB 100P104.5F 19080.9X HBB TSSS Nom P Nom FWT



**UPDATED FSAR**  
**ACCIDENT ANALYSES**  
**CHAPTER 15 FIGURES**

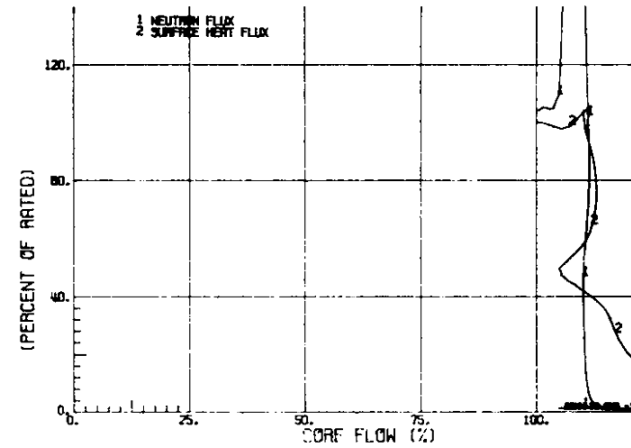
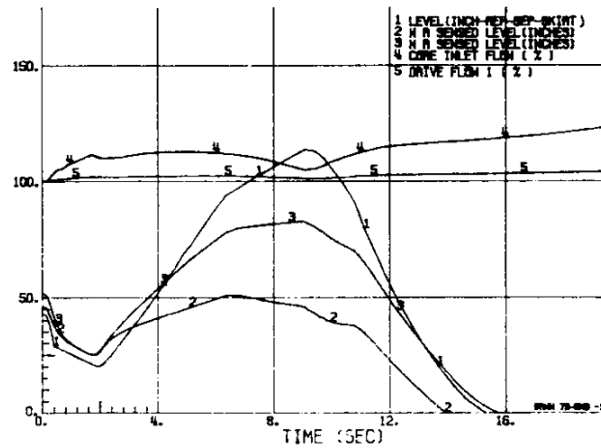
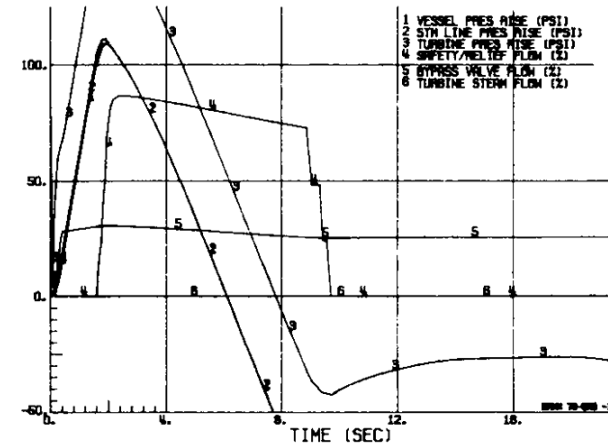
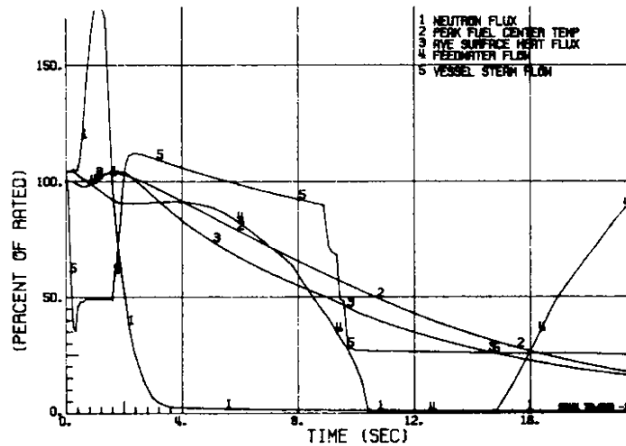
Revision: 25  
Figure: 15-18  
Page: 1 of 1

## GENERATOR LOAD REJECTION, NO BYPASS, WITH ICF, UNIT 2 –CURRENT CYCLE (EOC 22)

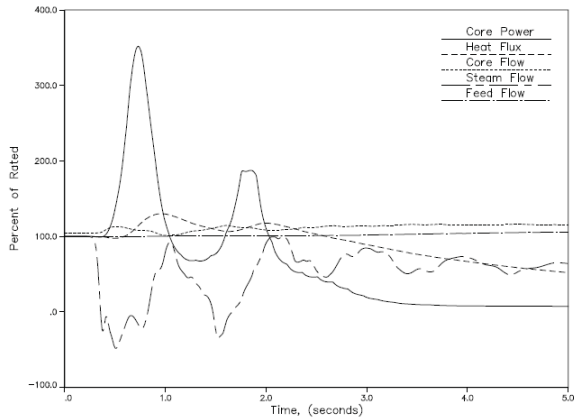




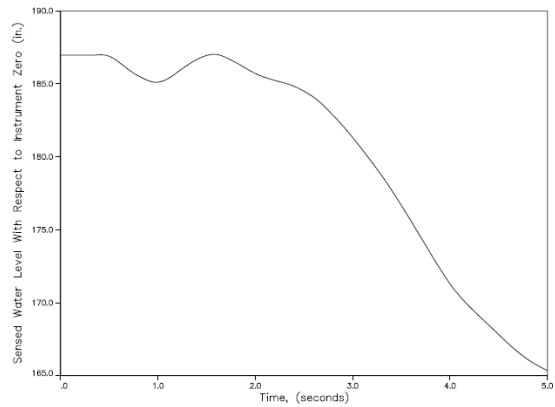
## TURBINE TRIP WITH 25 PERCENT BYPASS, UNIT 1 – CYCLE 1



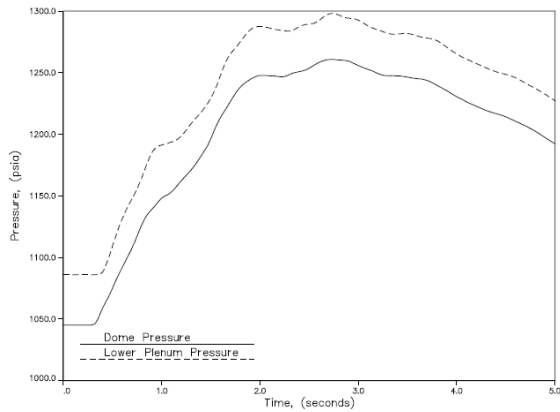
## TURBINE TRIP WITHOUT BYPASS, WITH ICF, UNIT 1 – CURRENT CYCLE (EOC 21)



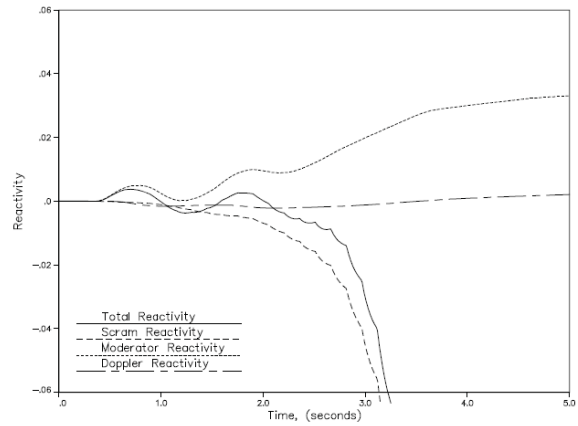
BRK1 CY21 TTNB 100P104.5F 19080.9X HBB TSSS Nom P Norm FWT



BRK1 CY21 TTNB 100P104.5F 19080.9X HBB TSSS Nom P Norm FWT



BRK1 CY21 TTNB 100P104.5F 19080.9X HBB TSSS Nom P Norm FWT



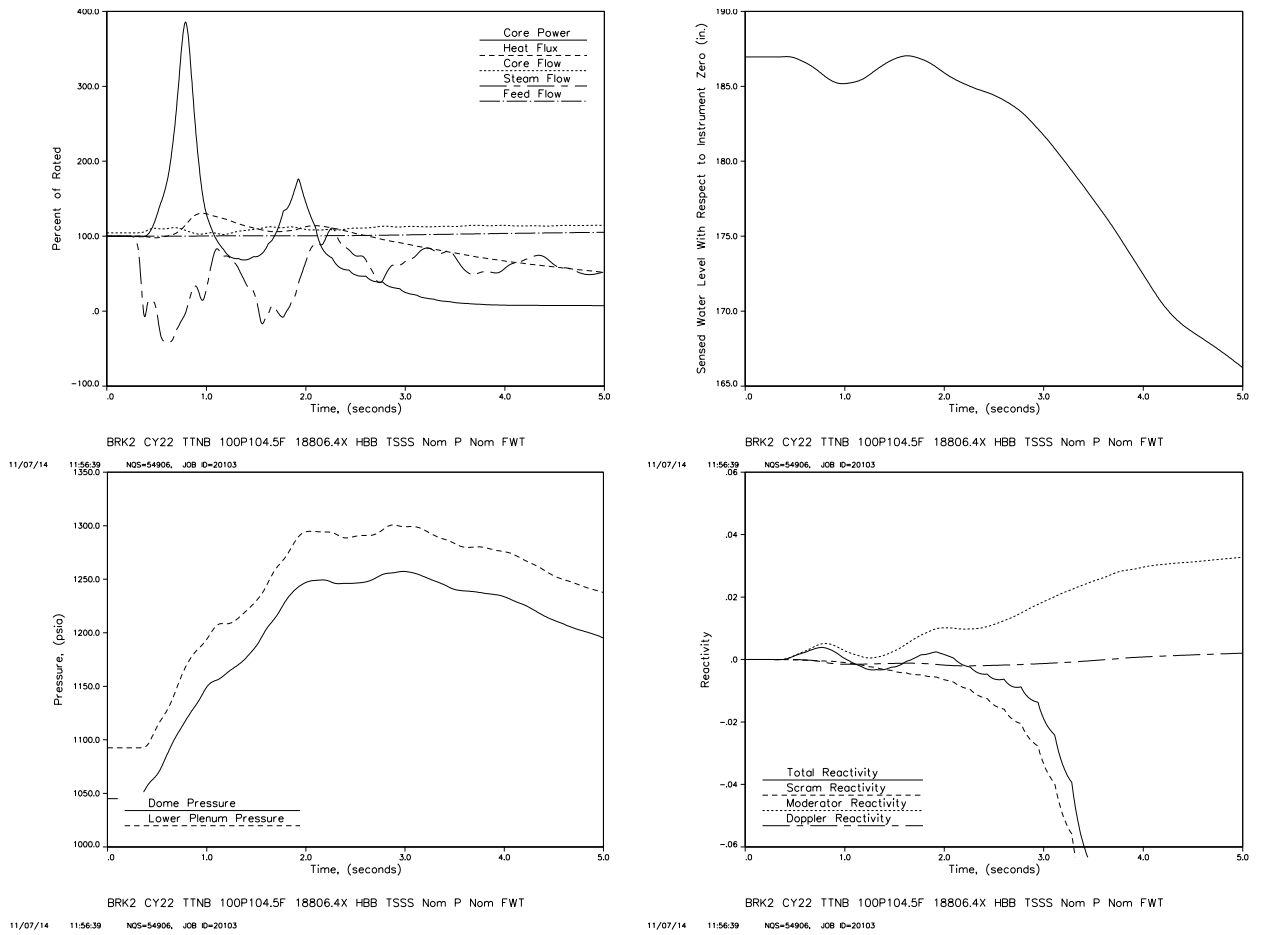
BRK1 CY21 TTNB 100P104.5F 19080.9X HBB TSSS Nom P Norm FWT



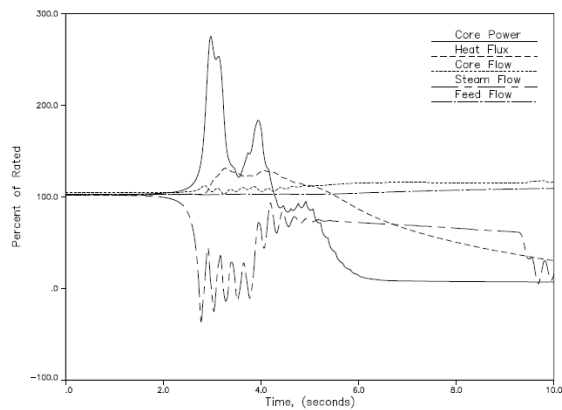
**UPDATED FSAR**  
**ACCIDENT ANALYSES**  
**CHAPTER 15 FIGURES**

Revision: 25  
Figure: 15-21  
Page: 1 of 1

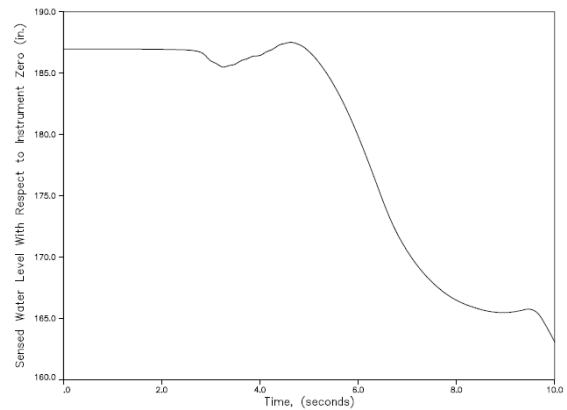
**TURBINE TRIP WITHOUT BYPASS, WITH ICF,  
UNIT 2 – CURRENT CYCLE (EOC 22)**



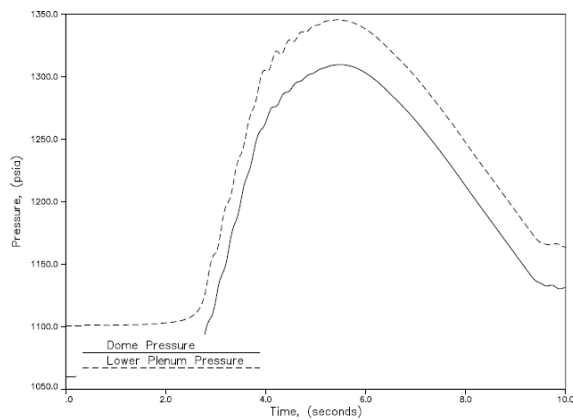
## CLOSURE OF ALL MSIV, FLUX SCRAM, UNIT 1 – CURRENT CYCLE (CYCLE 21)



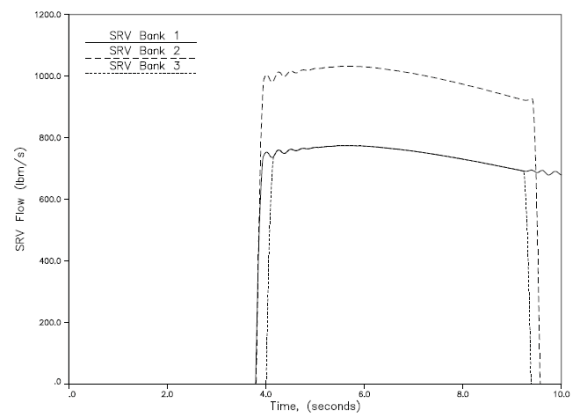
BRK1 CY21 ASME MSIV 102P104.5F 20598.1X HBB TSSS BASE



BRK1 CY21 ASME MSIV 102P104.5F 20598.1X HBB TSSS BASE



BRK1 CY21 ASME MSIV 102P104.5F 20598.1X HBB TSSS BASE



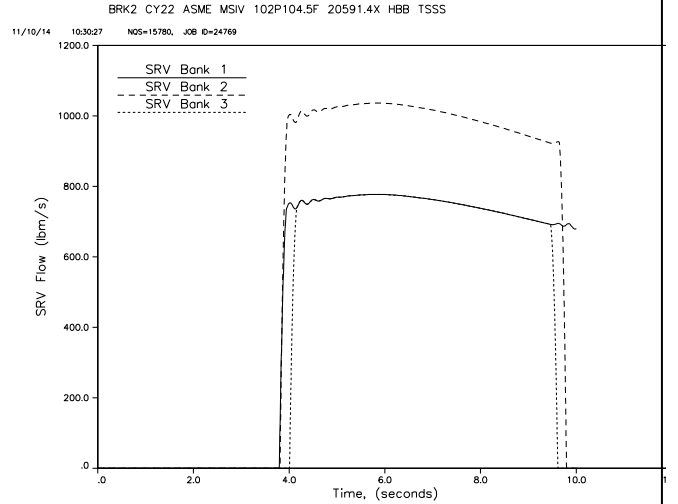
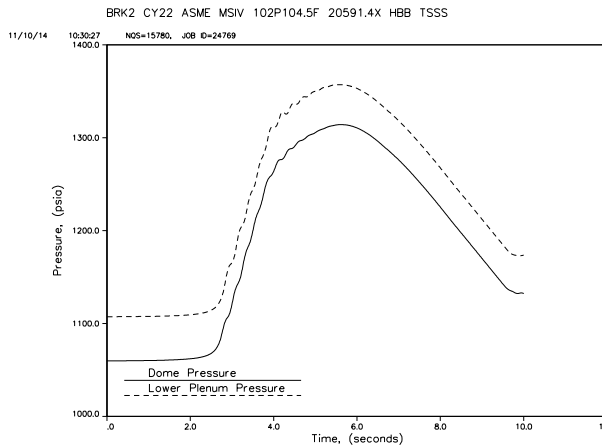
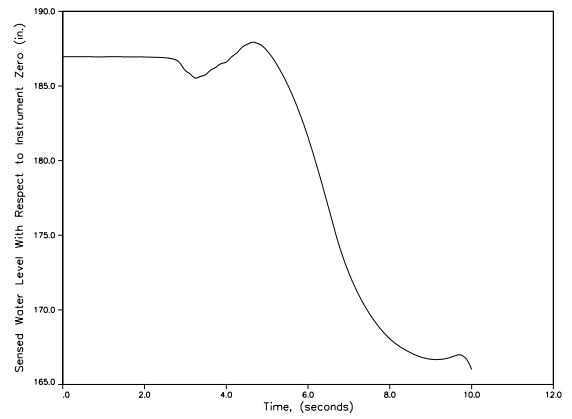
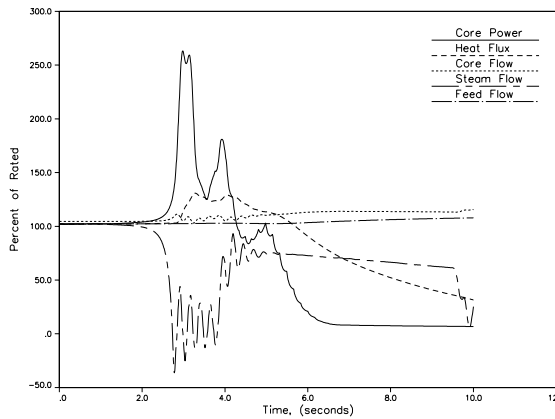
BRK1 CY21 ASME MSIV 102P104.5F 20598.1X HBB TSSS BASE



**UPDATED FSAR**  
**ACCIDENT ANALYSES**  
**CHAPTER 15 FIGURES**

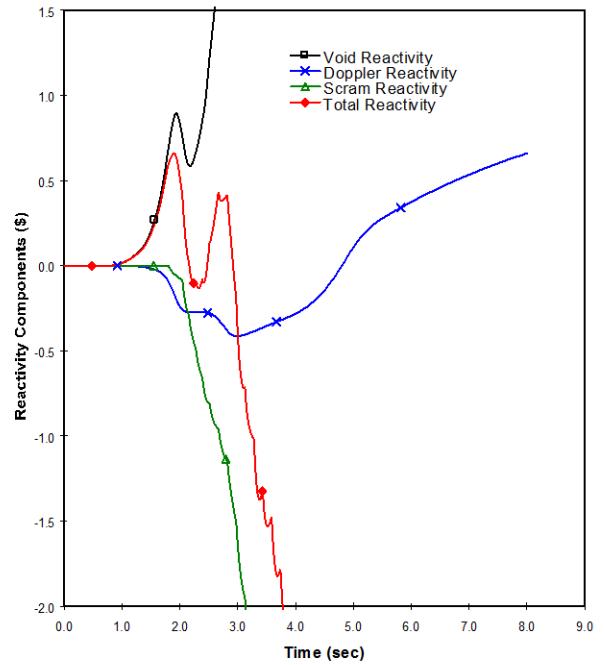
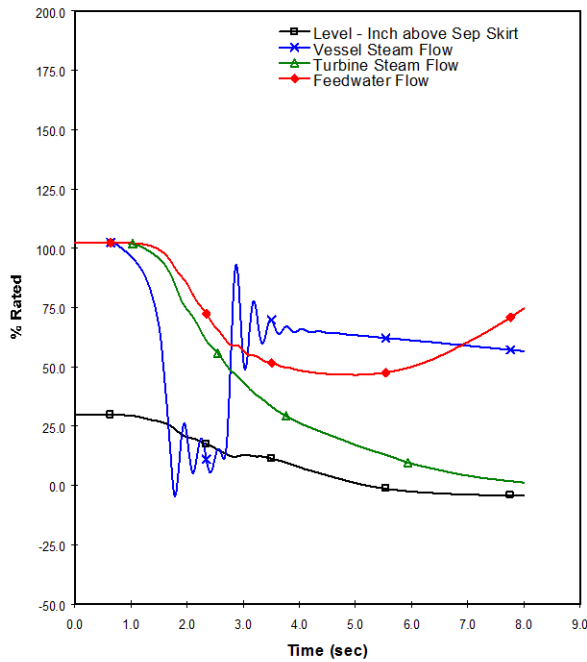
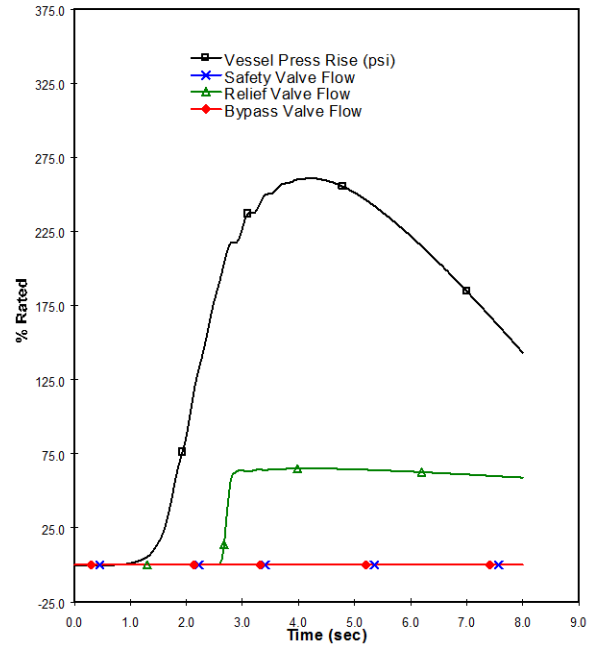
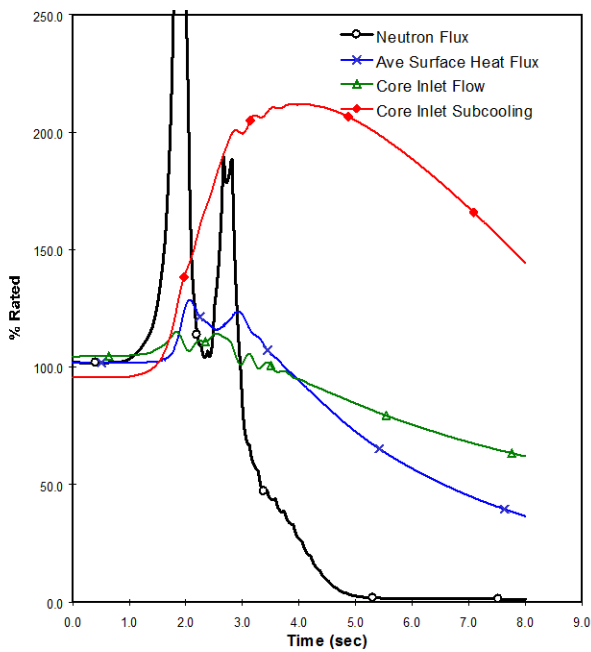
Revision: 25  
Figure: 15-25  
Page: 1 of 1

## CLOSURE OF ALL MSIV, FLUX SCRAM, UNIT 2 – CYCLE 22

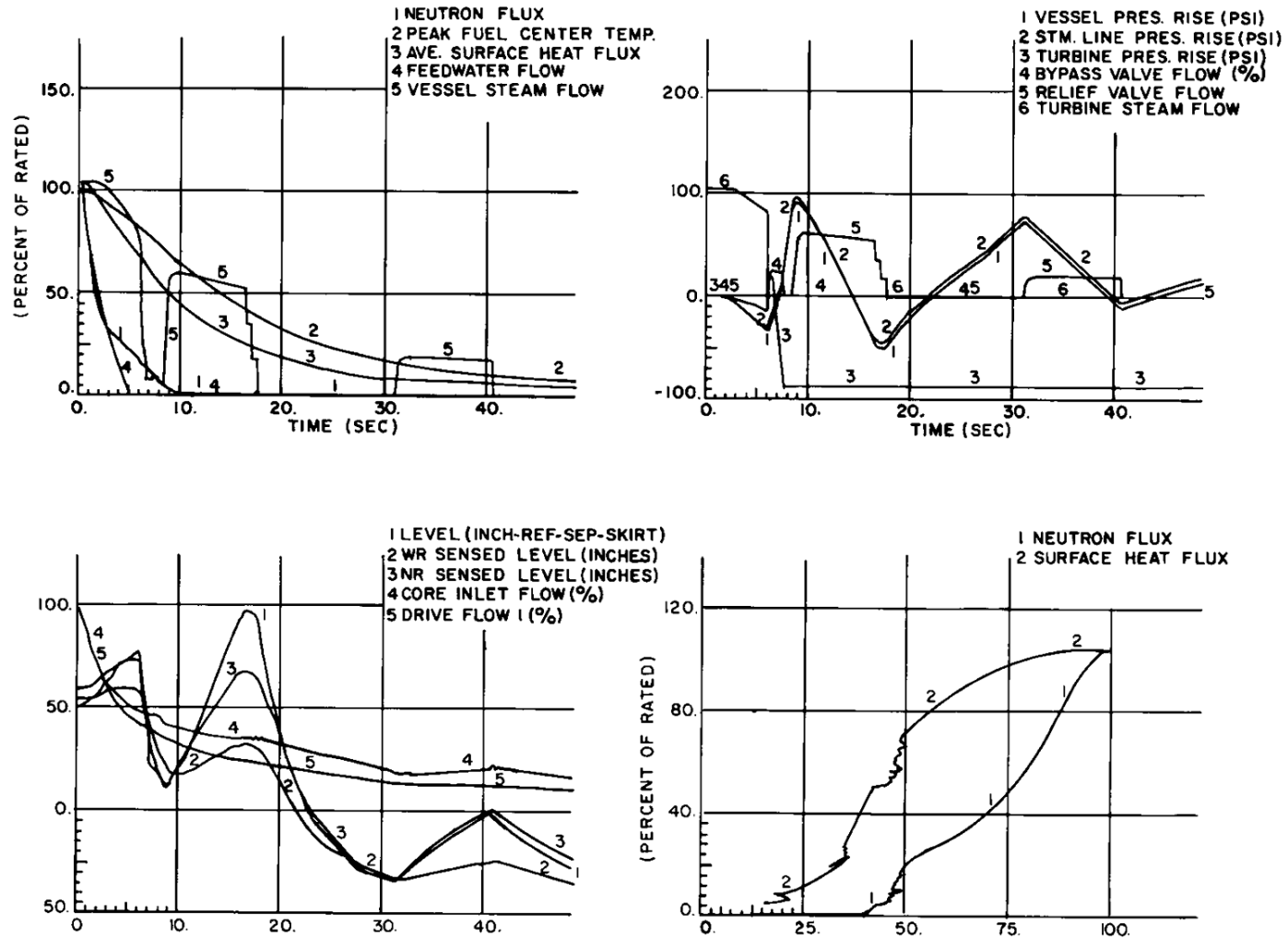


BRK2 CY22 ASME MSIV 102P104.5F 20591.4X HBB TSSS  
11/10/14 10:30:27 NGS=15780, JOB ID=24769

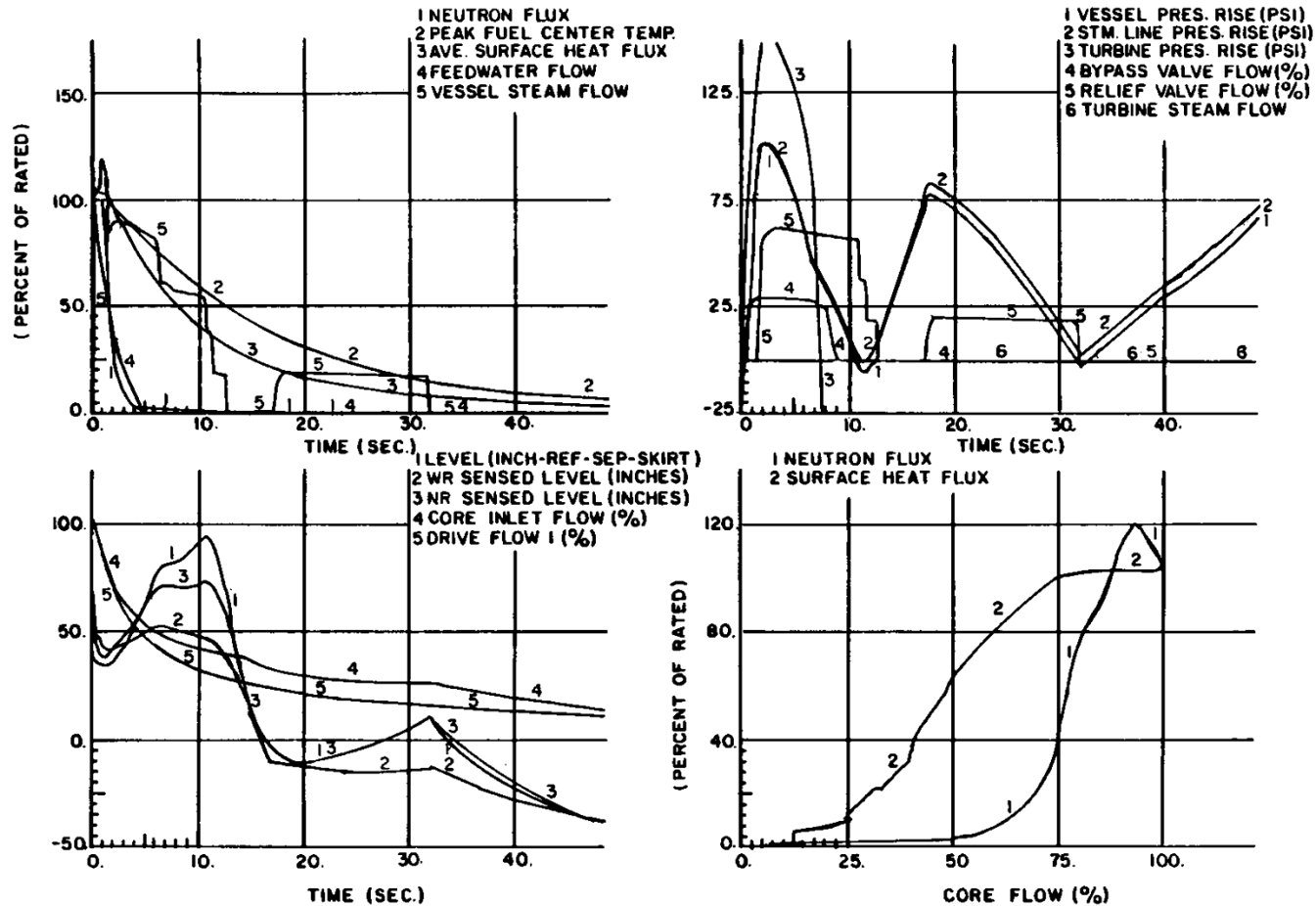
## EXTENDED POWER UPRATE MSIV CLOSURE WITH FLUX SCRAM (102 PERCENT INITIAL POWER)



## LOSS OF AUXILIARY POWER (TRANSFORMER) WITH 25 PERCENT BYPASS, UNIT 2 – CYCLE 1

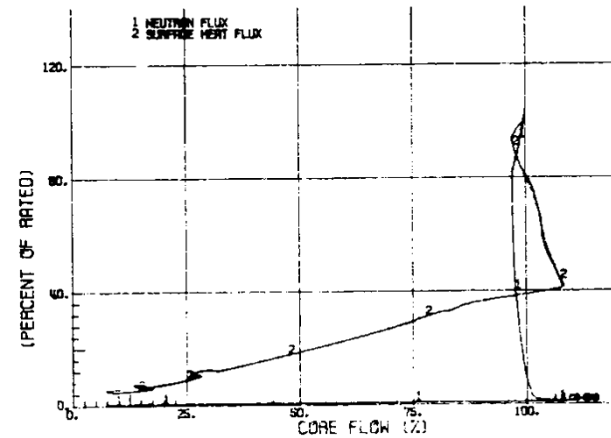
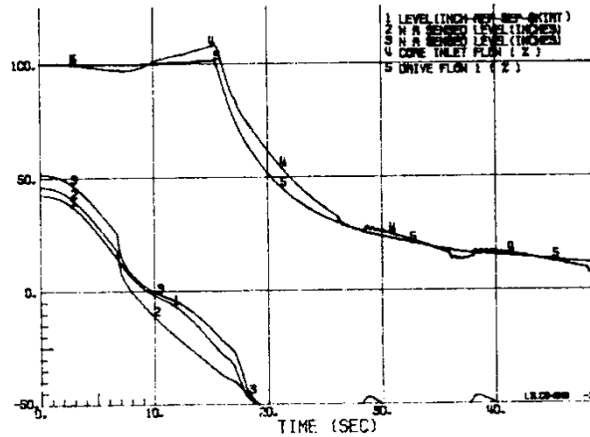
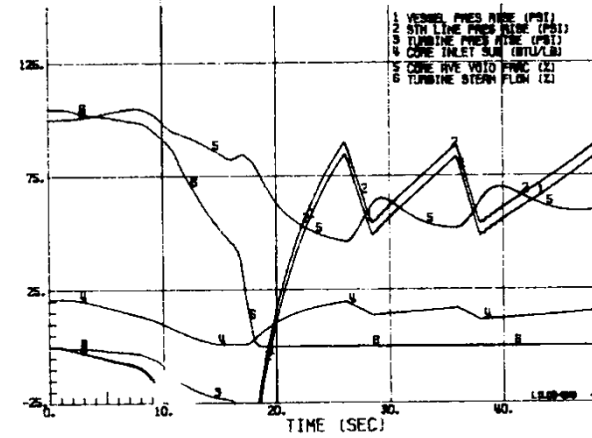
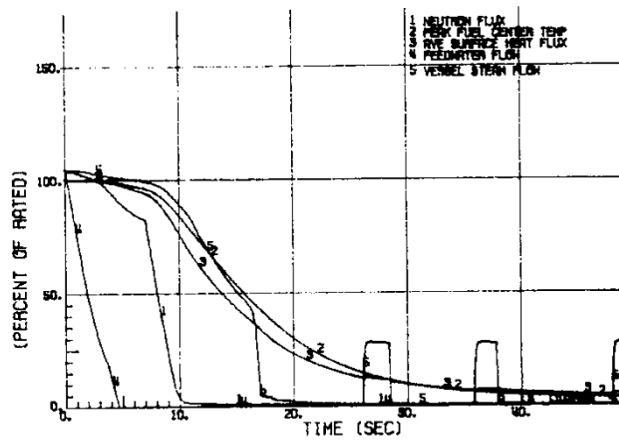


## LOSS OF AUXILIARY POWER (ALL GRID CONNECTIONS) WITH 25 PERCENT BYPASS, UNIT 2 – CYCLE 1

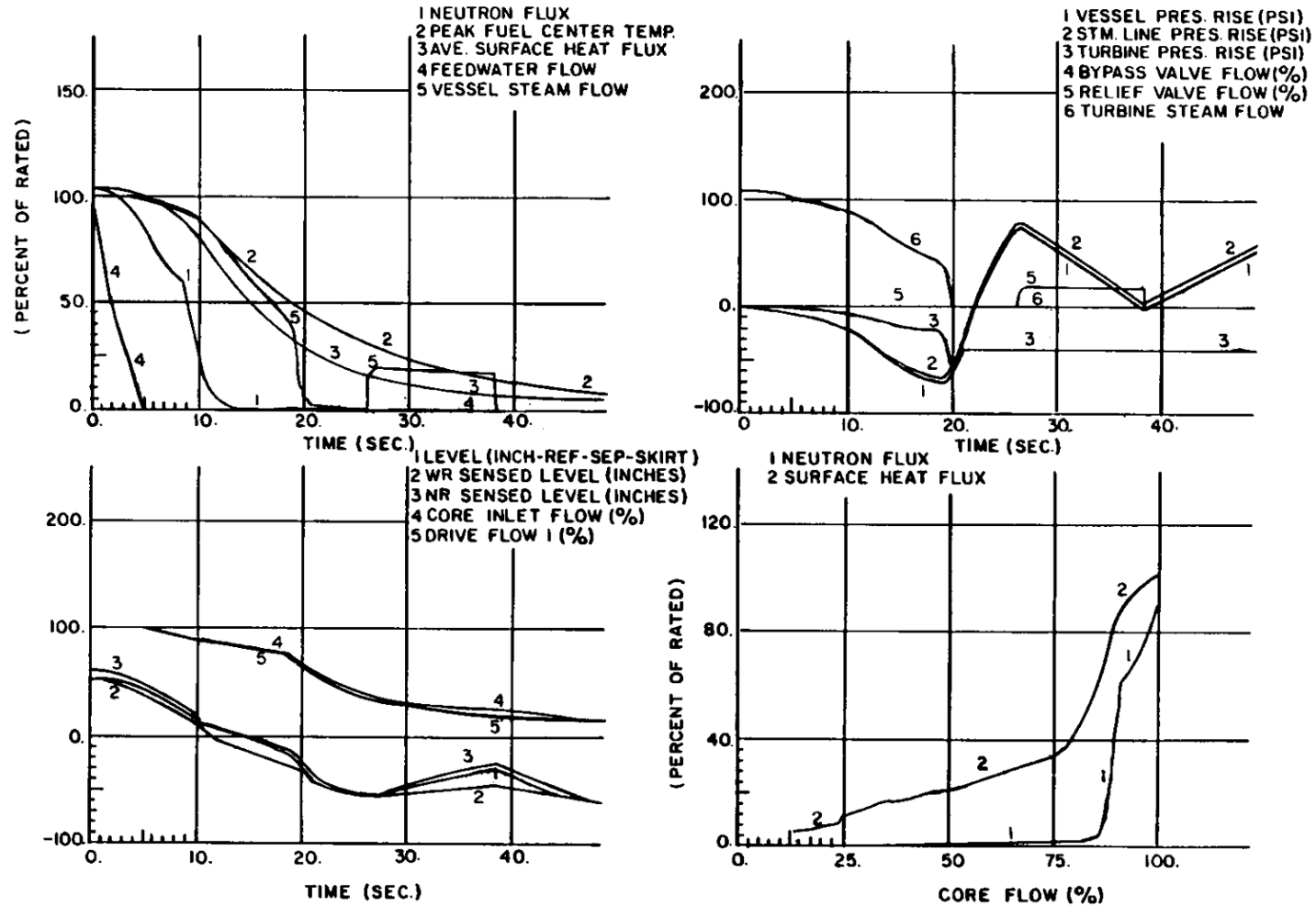




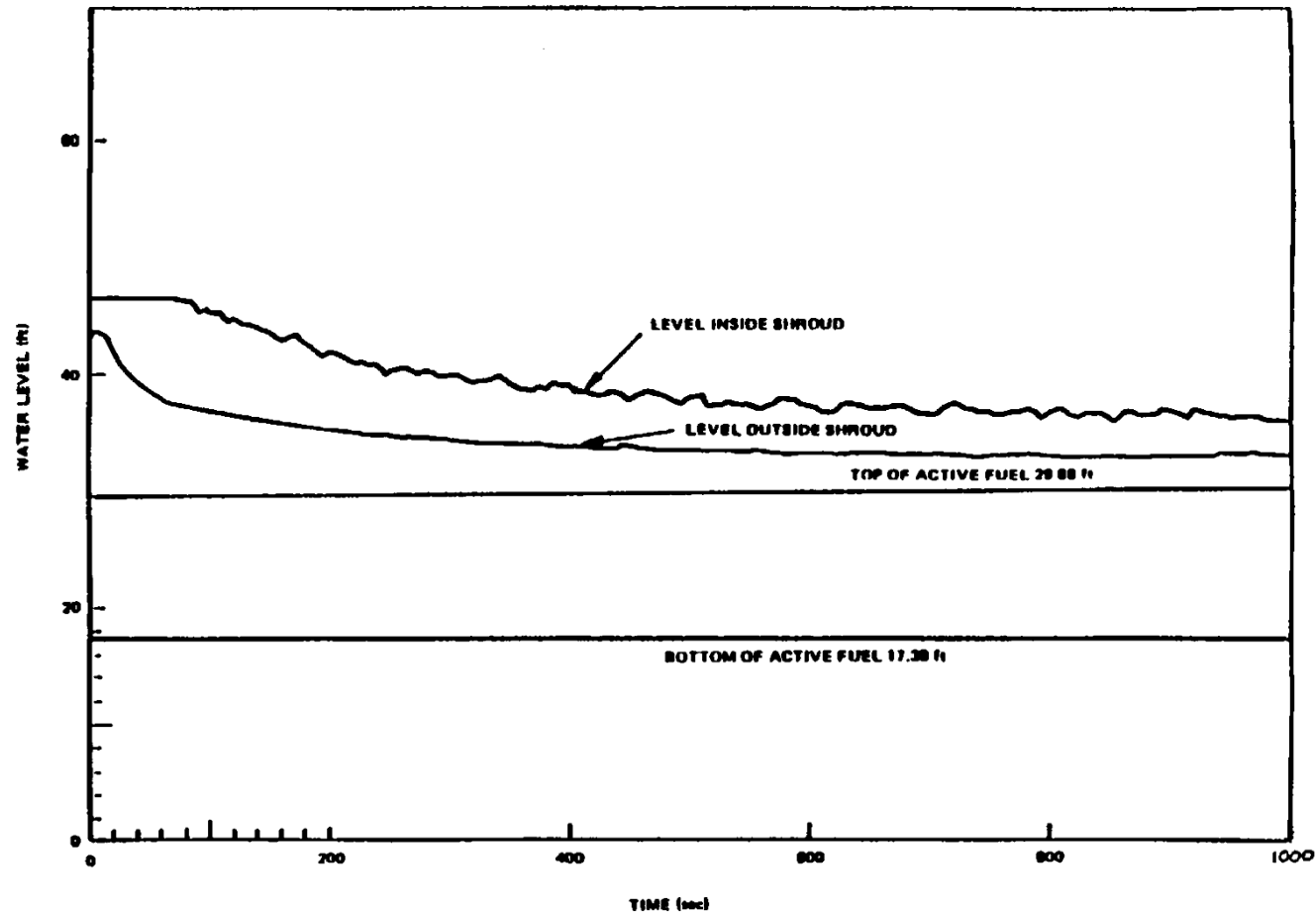
## LOSS OF FEEDWATER FLOW, UNIT 1 – CYCLE 1



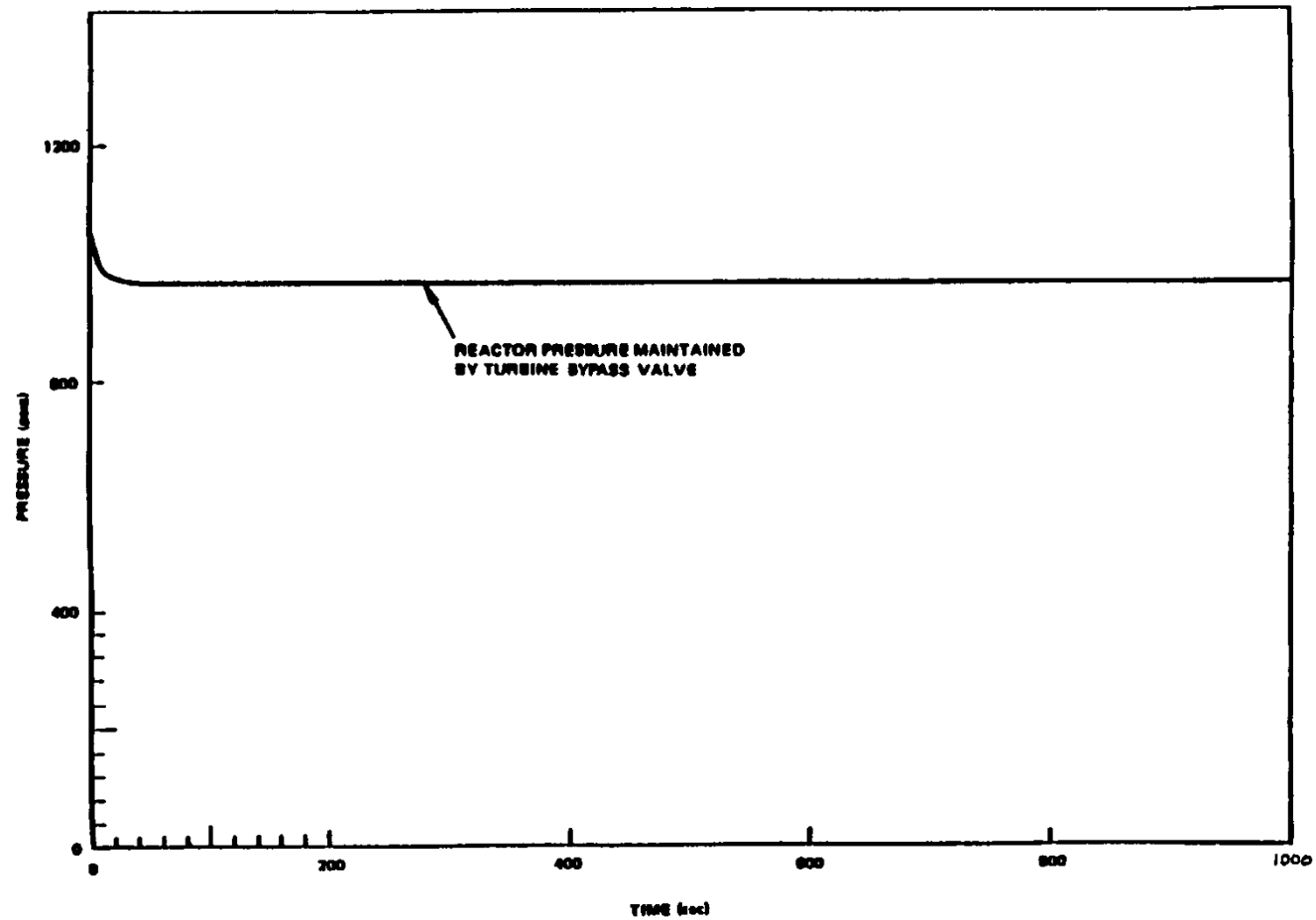
## LOSS OF FEEDWATER FLOW, UNIT 2 - CYCLE 1



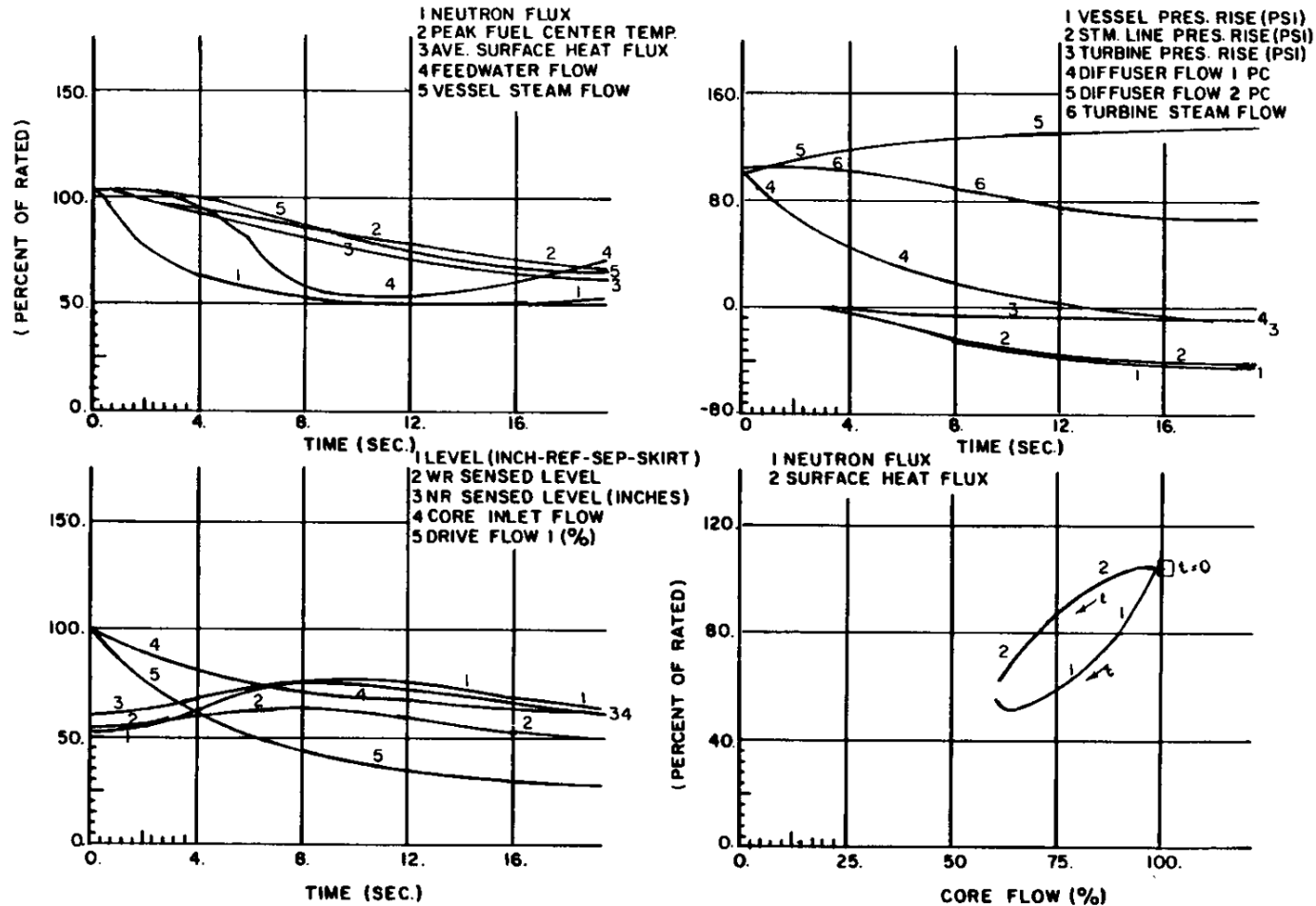
## WATER LEVEL RESPONSE WITH REACTOR CORE ISOLATION COOLING FOR LOSS OF FEEDWATER FLOW EVENT AT ORIGINAL POWER



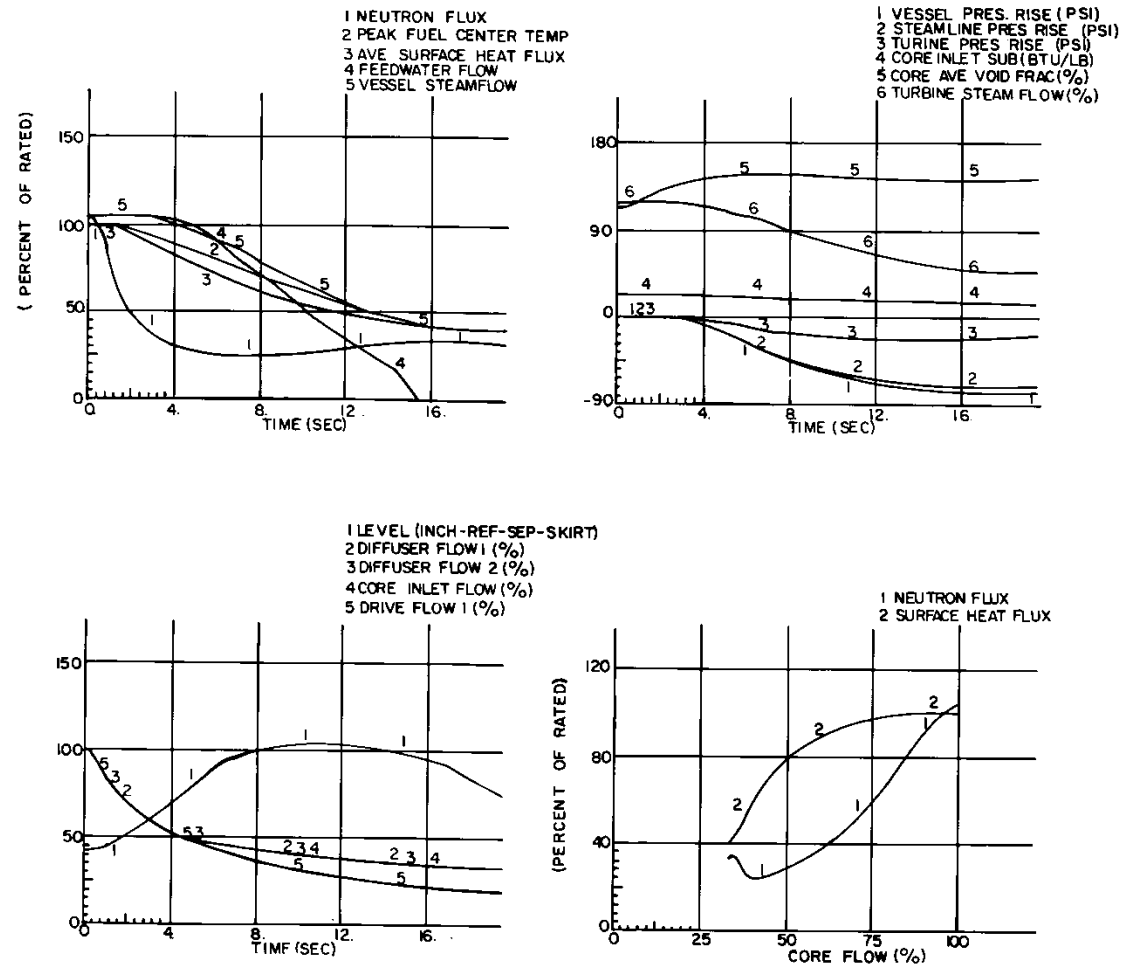
**PRESSURE RESPONSE WITH REACTOR CORE ISOLATION COOLING  
FOR LOSS OF FEEDWATER FLOW EVENT AT ORIGINAL POWER**



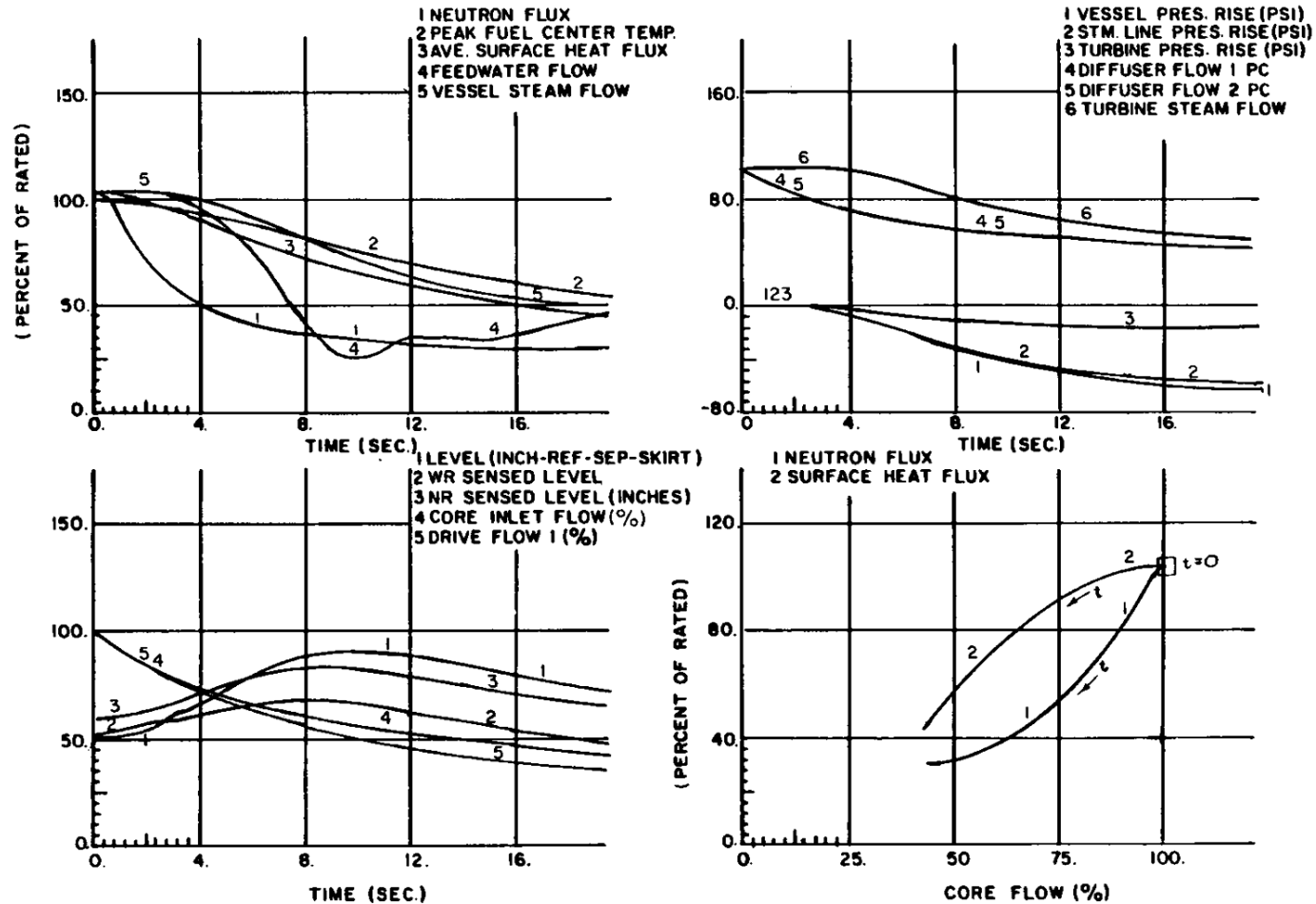
## TRIP OF ONE RECIRCULATION PUMP, UNIT 2 – CYCLE 1



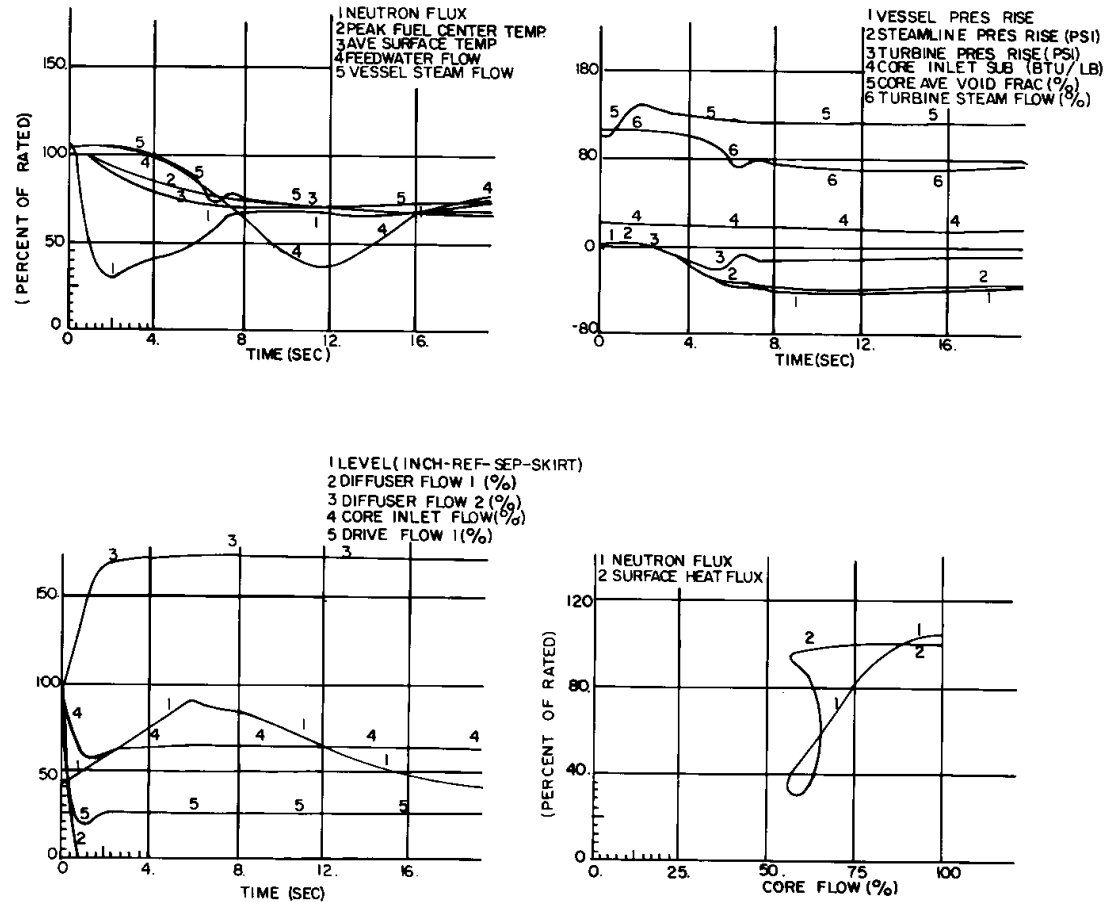
## TRIP OF BOTH RECIRCULATION PUMPS, UNIT 1 – CYCLE 1



## TRIP OF BOTH RECIRCULATION PUMPS, UNIT 2 – CYCLE 1

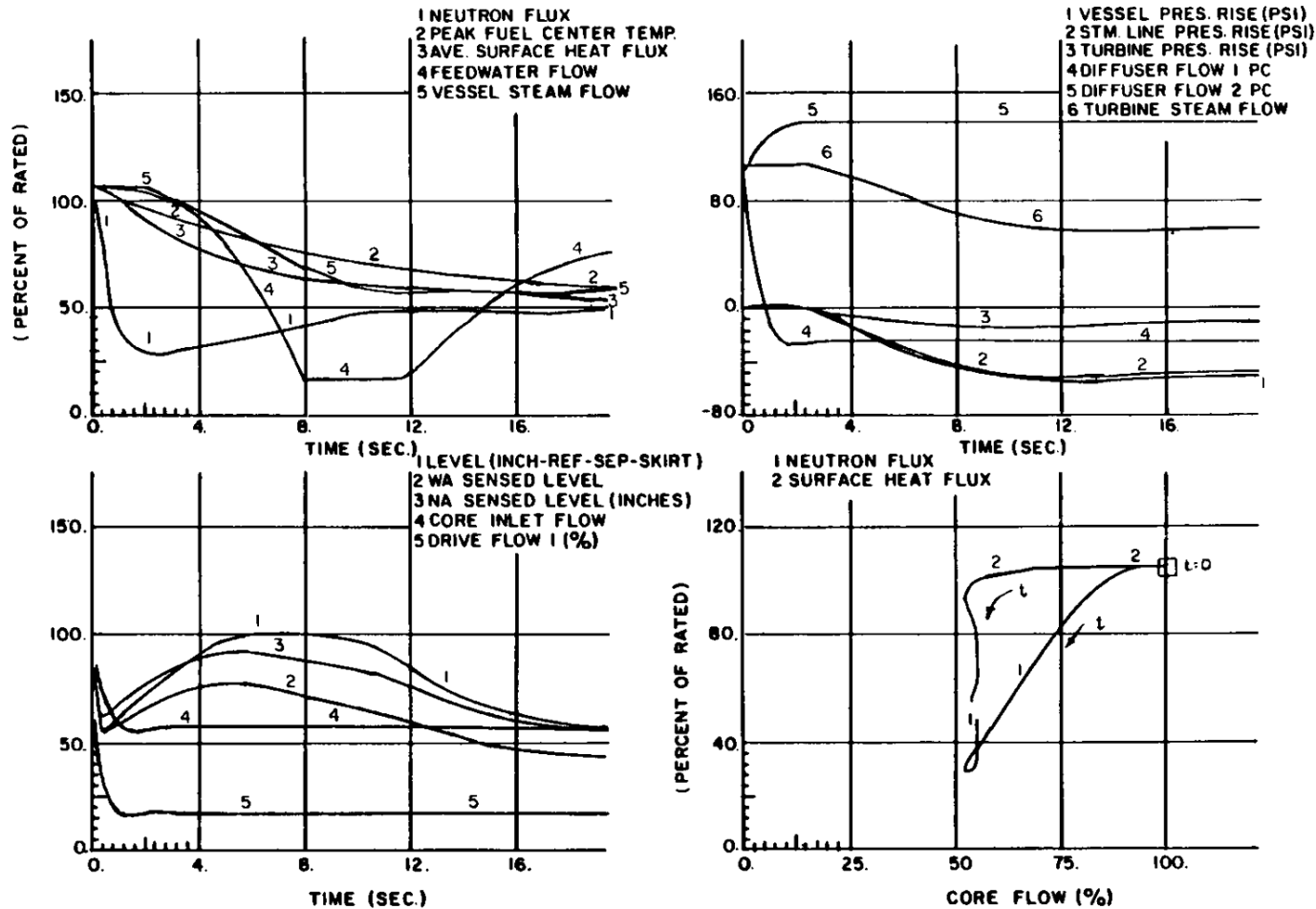


## SEIZURE OF ONE RECIRCULATION PUMP, UNIT 1 – CYCLE 1

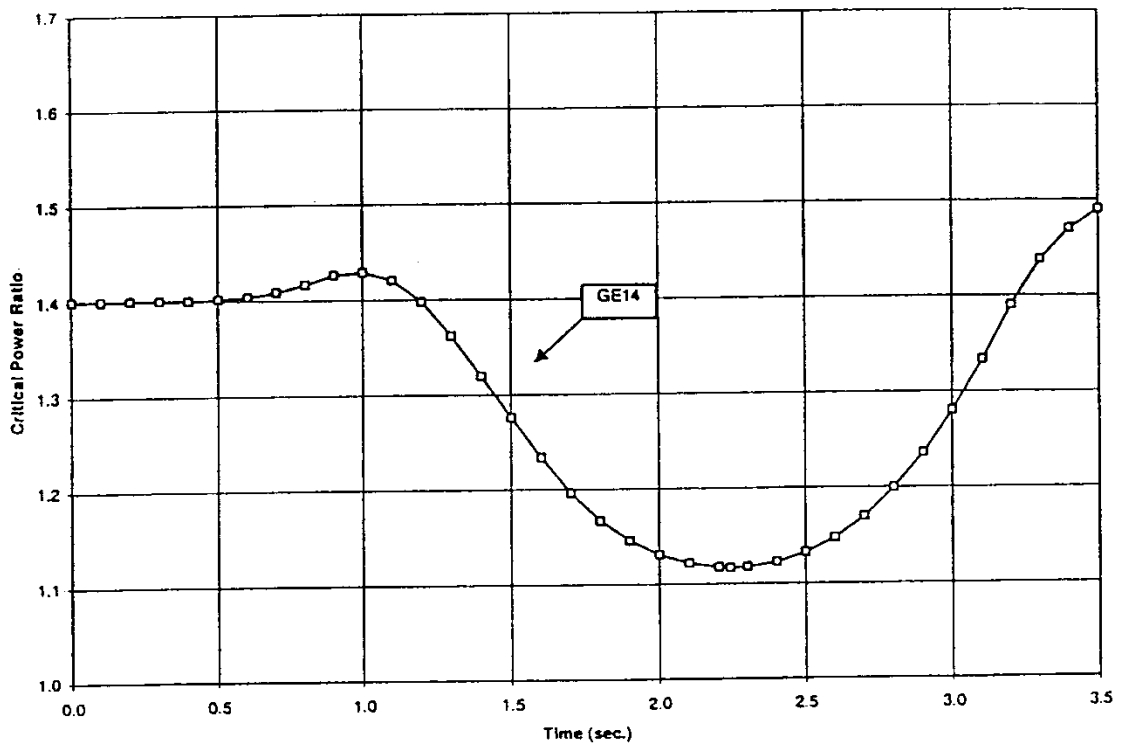




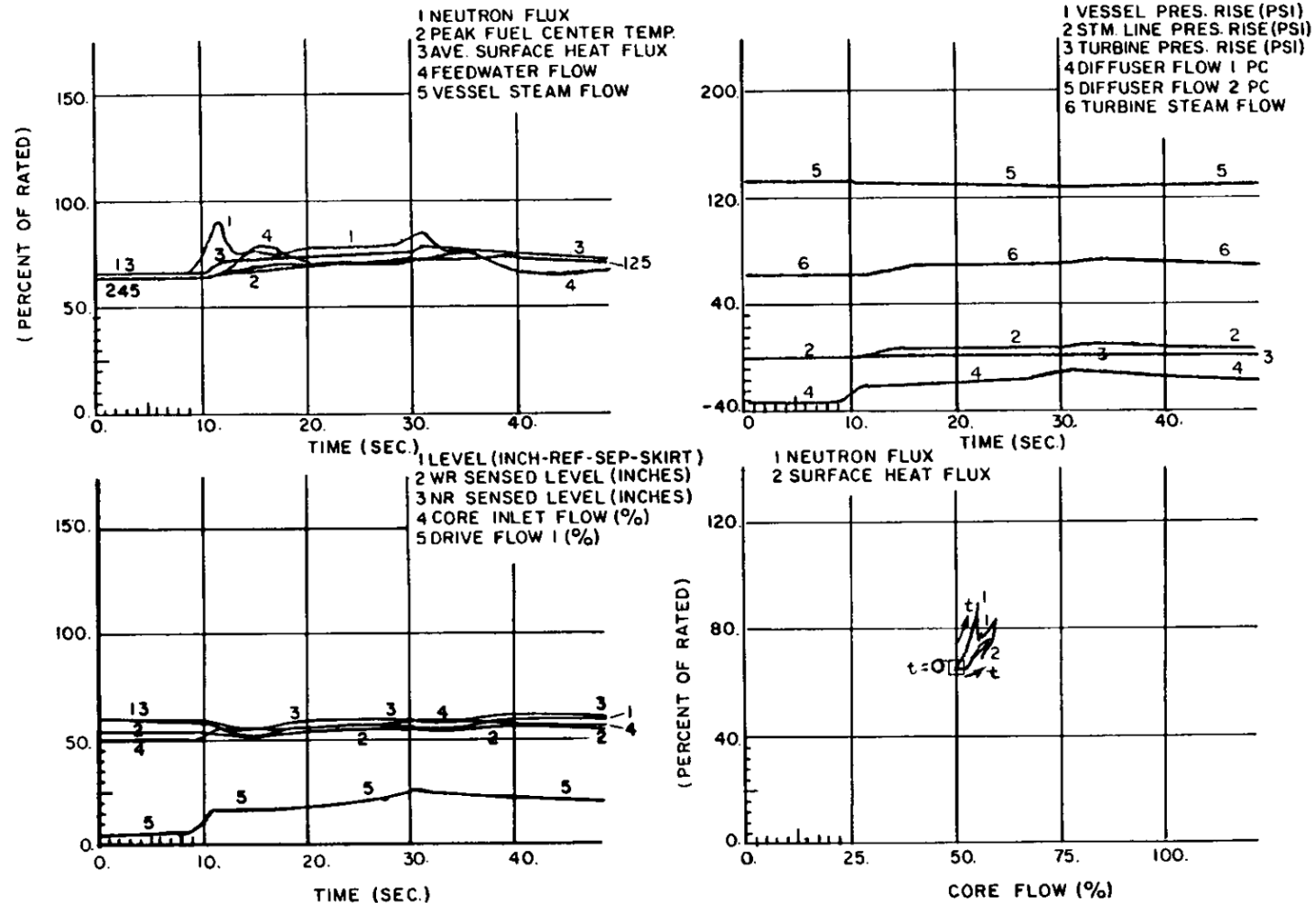
## SEIZURE OF ONE RECIRCULATION PUMP, UNIT 2 – CYCLE 1



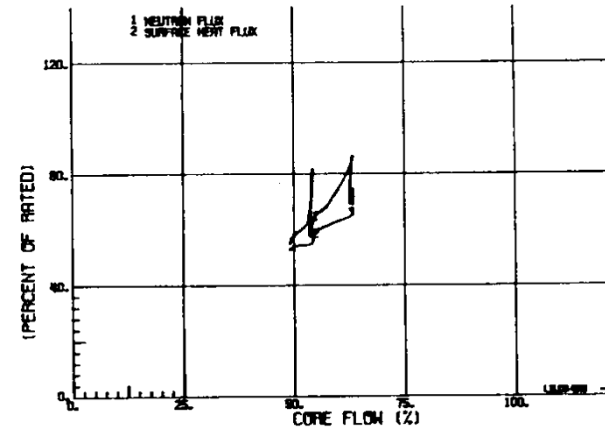
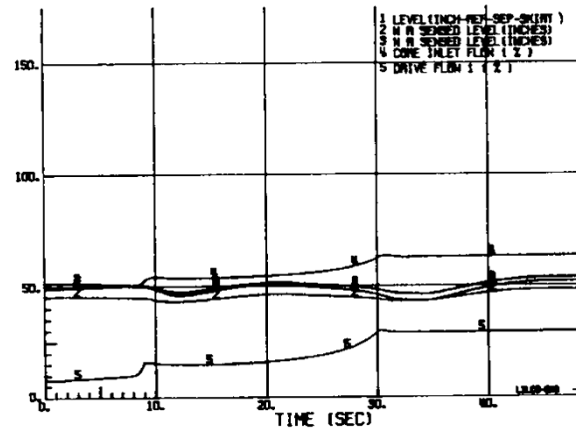
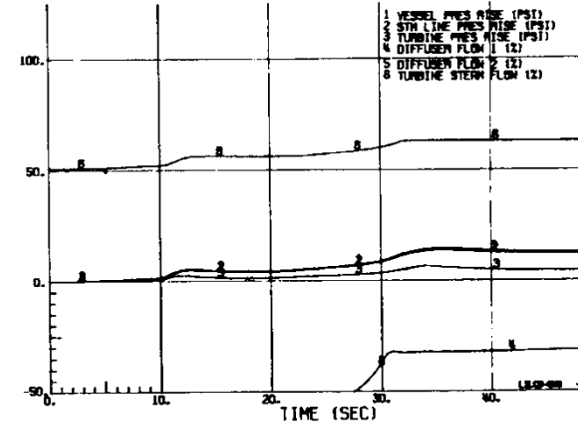
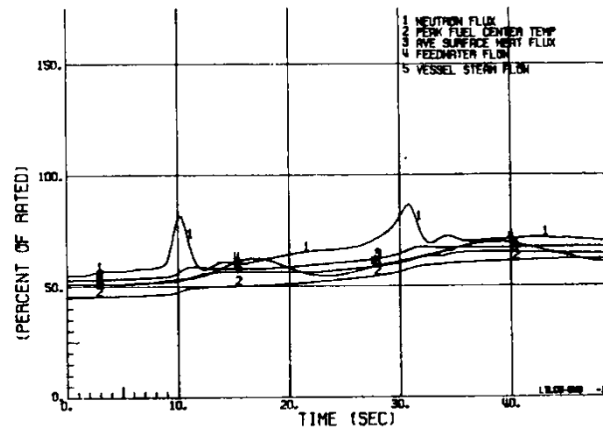
## SEIZURE OF OPERATING RECIRCULATION PUMP SINGLE LOOP OPERATION

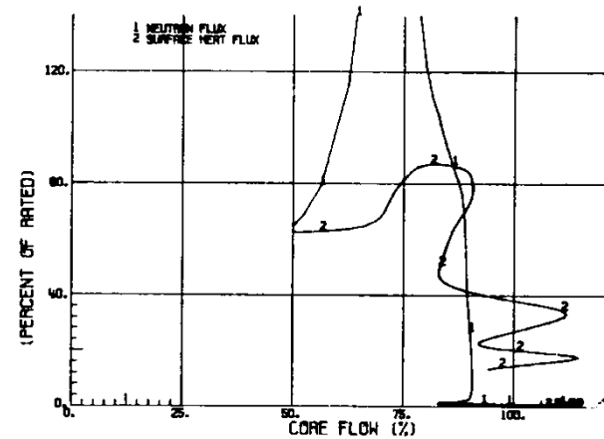


## ABNORMAL STARTUP OF IDLE RECIRCULATION PUMP, UNIT 2 – CYCLE 1

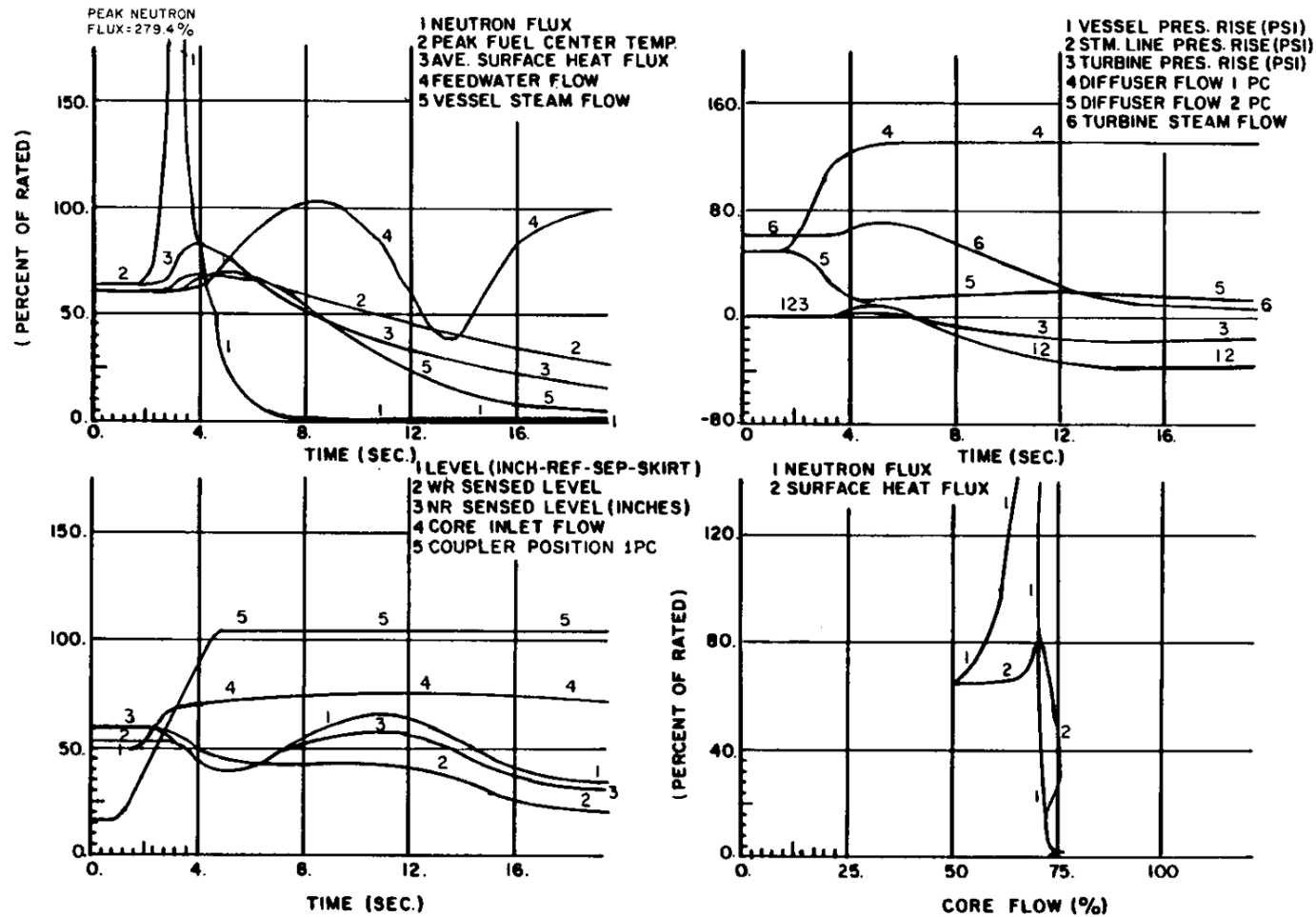


## ABNORMAL STARTUP OF IDLE RECIRCULATION PUMP, UNIT 1 – CYCLE 1

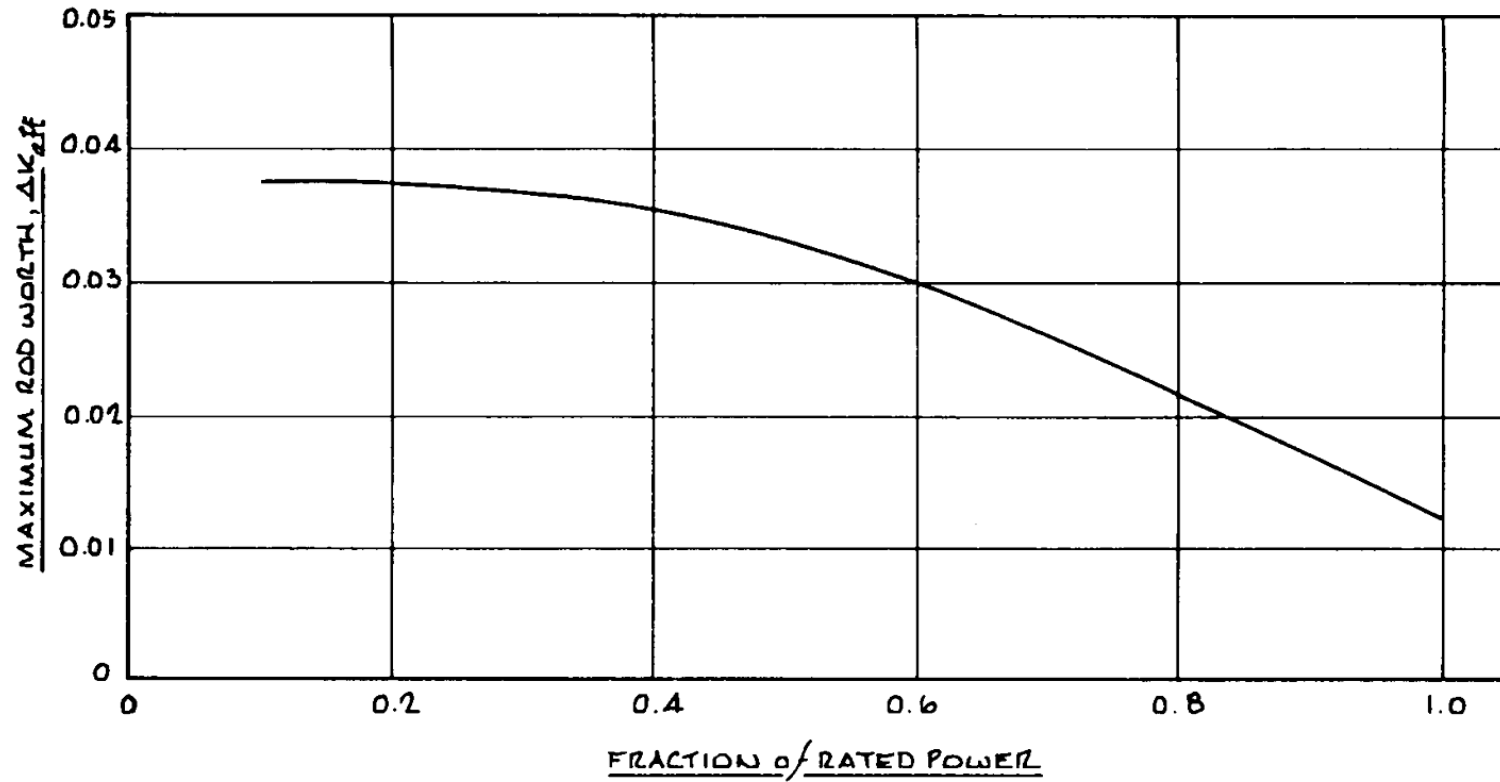




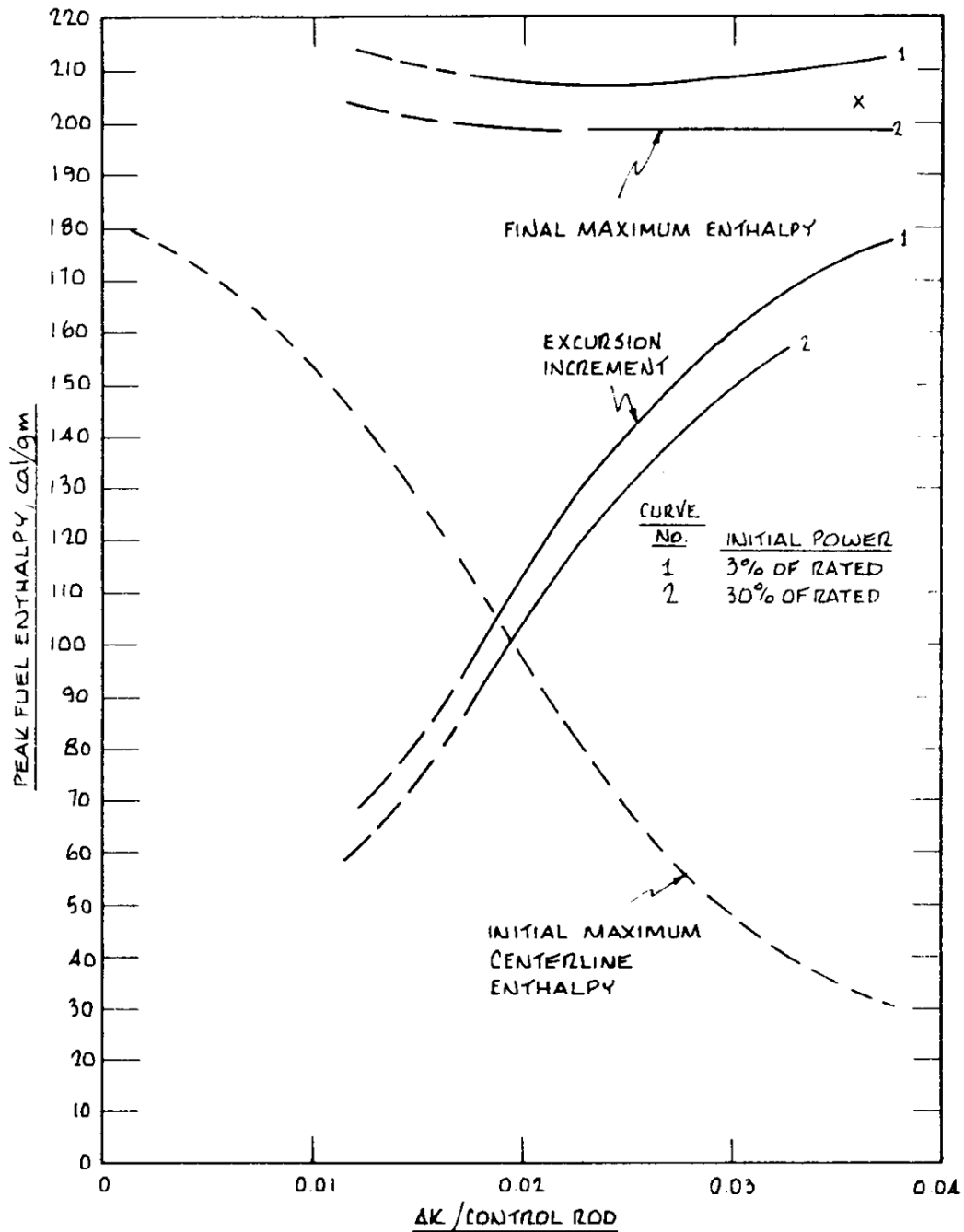
## RECIRCULATION FLOW CONTROL FAILURE - INCREASING FLOW, UNIT 2 – CYCLE 1



### MAXIMUM ROD WORTH VERSUS POWER LEVEL, UNIT 2 – CYCLE 1



## ROD DROP ACCIDENT (POWER RANGE) PEAK FUEL ENTHALPY, UNIT 2 – CYCLE 1





## MAIN STEAM LINE BREAK ACCIDENT BREAK LOCATION

