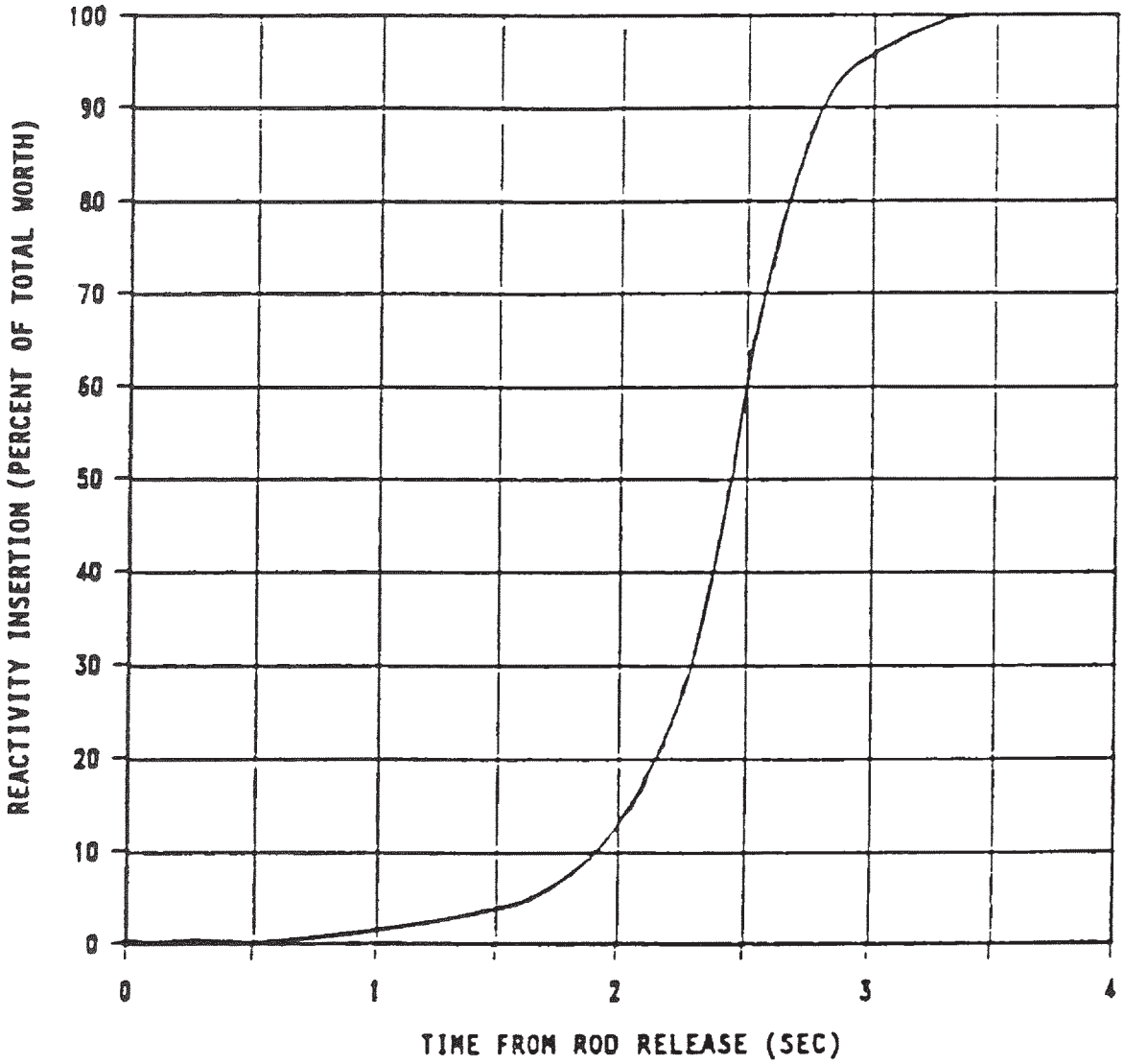
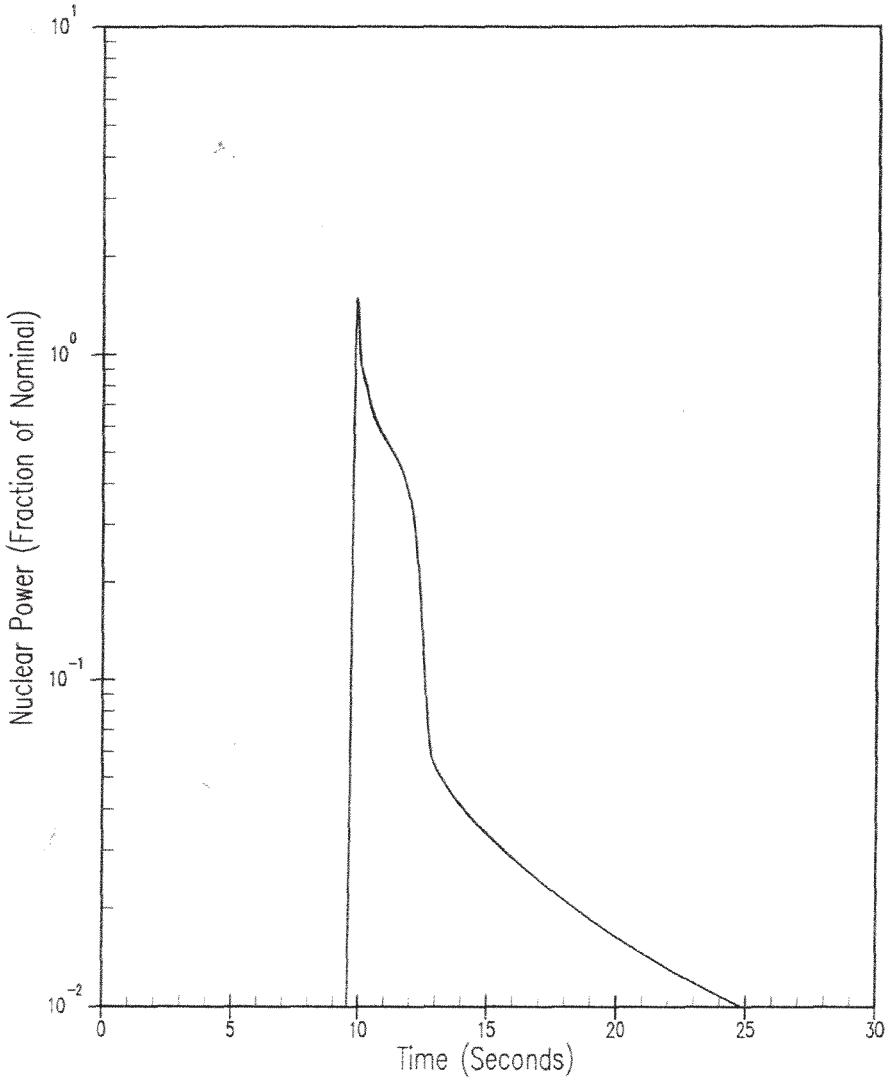
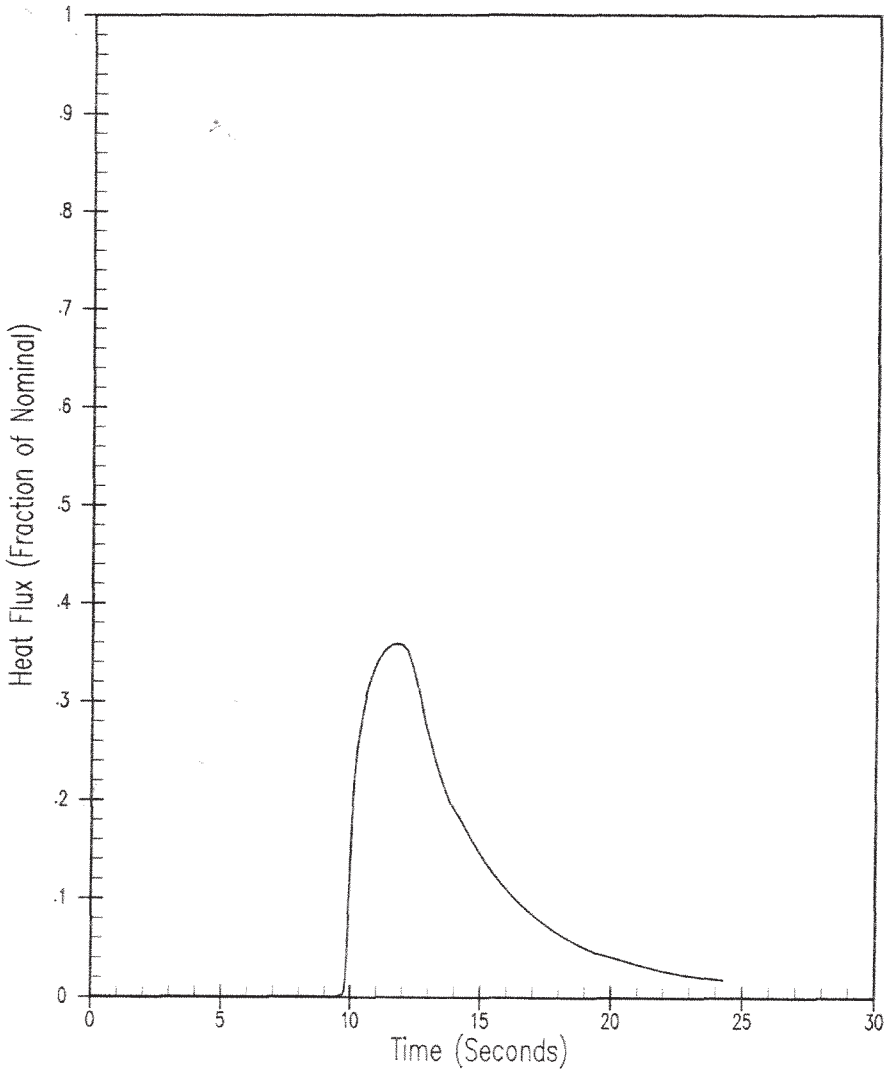


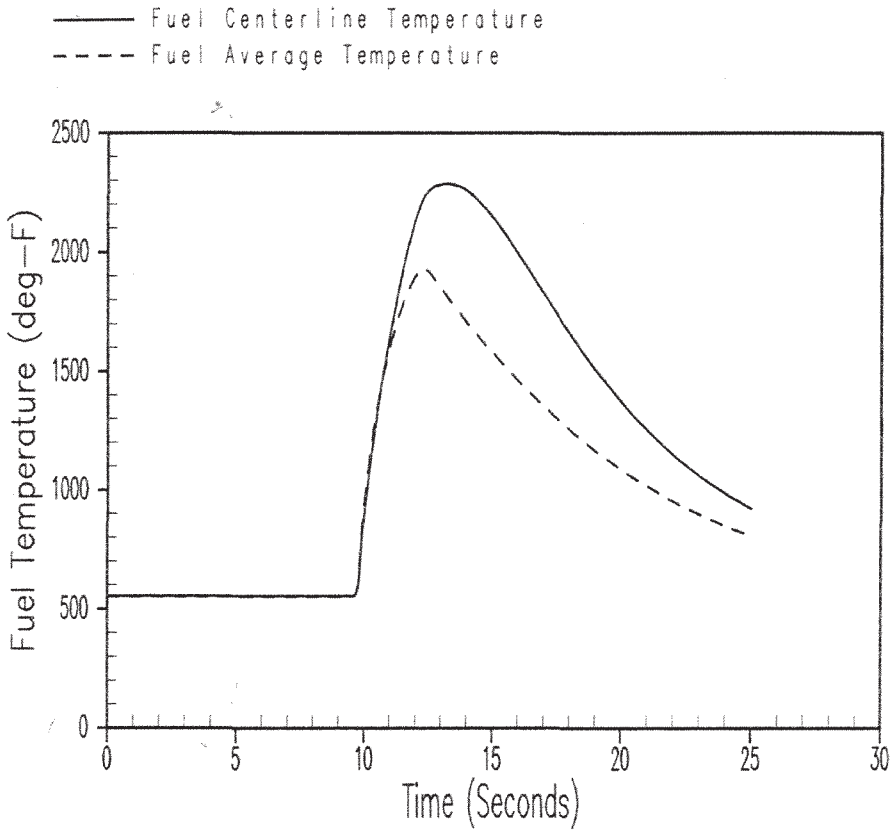
INDIAN POINT UNIT No. 2	
UFSAR FIGURE 14.0–1 REACTIVITY INSERTION vs TIME FOR REACTOR TRIP	
MIC. No. 1999MC3969	REV. No. 17A



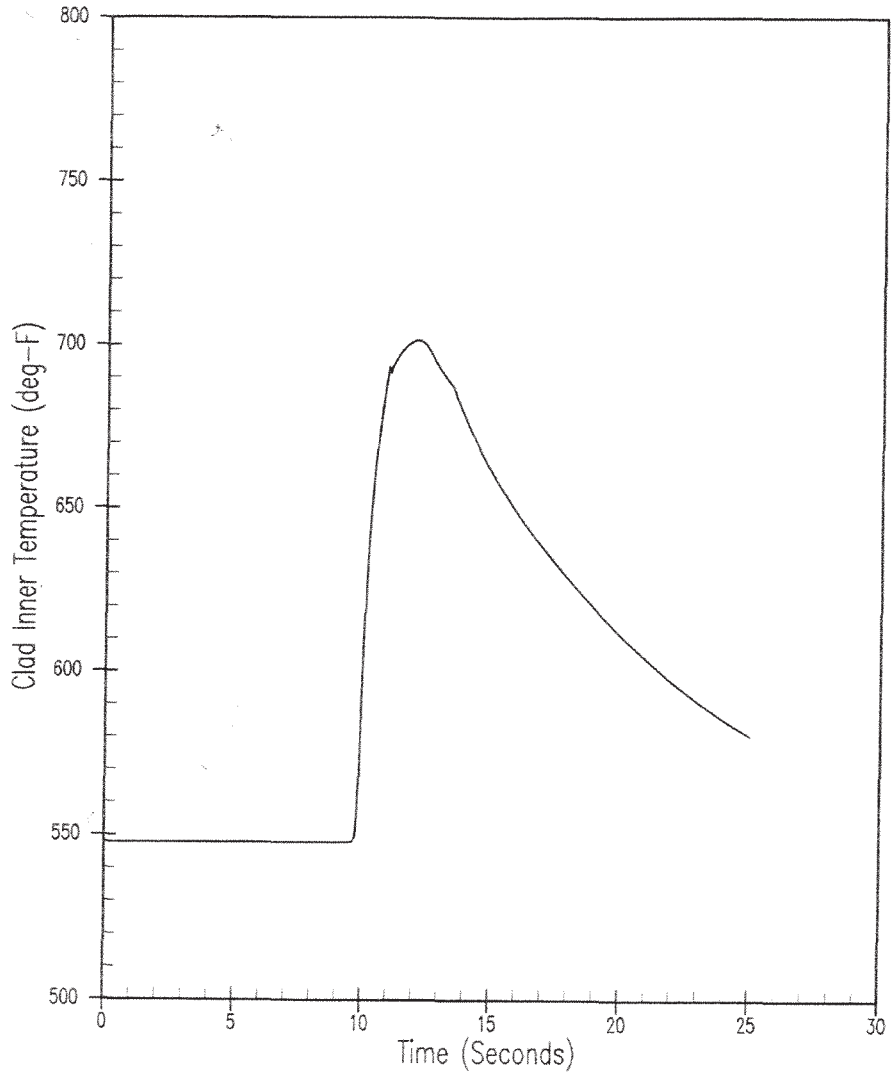
INDIAN POINT UNIT No. 2	
UNCONTROLLED RCCA WITHDRAWAL FROM A SUBCRITICAL CONDITION NUCLEAR POWER vs TIME	
UFSAR FIGURE 14.1-1	REV. No. 19



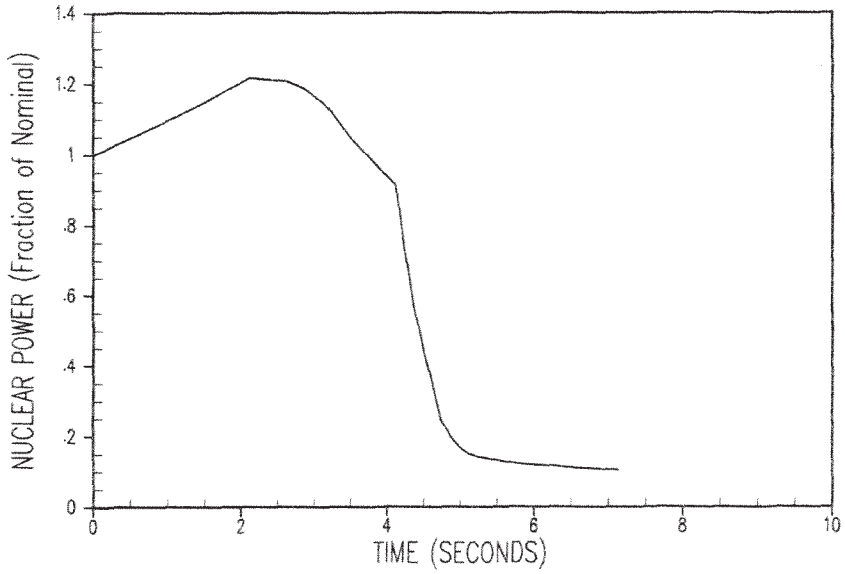
INDIAN POINT UNIT No. 2	
UNCONTROLLED RCCA WITHDRAWAL FROM A SUBCRITICAL CONDITION HEAT FLUX vs TIME, AVG. CHANNEL	
UFSAR FIGURE 14.1-2	REV. No. 19

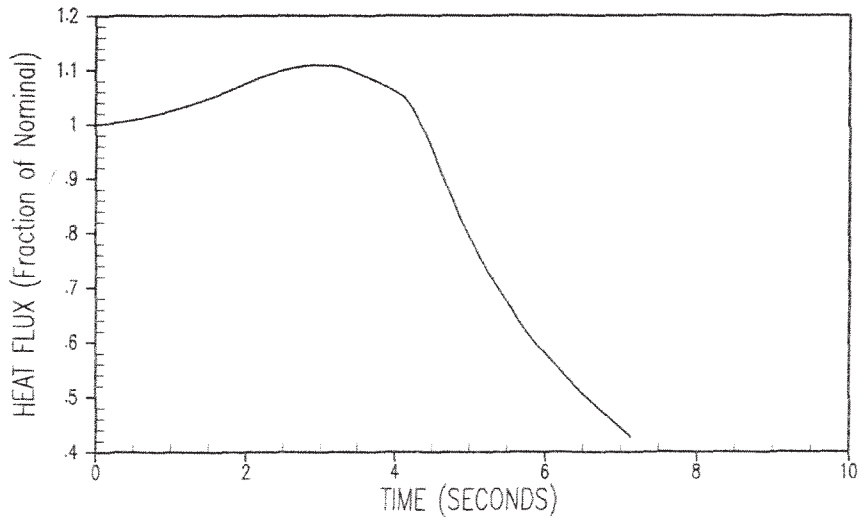


INDIAN POINT UNIT No. 2	
UNCONTROLLED RCCA WITHDRAWAL FROM A SUBCRITICAL CONDITION FUEL AVERAGE TEMPERATURE vs TIME AT HOT SPOT	
UFSAR FIGURE 14.1-3	REV. No. 19

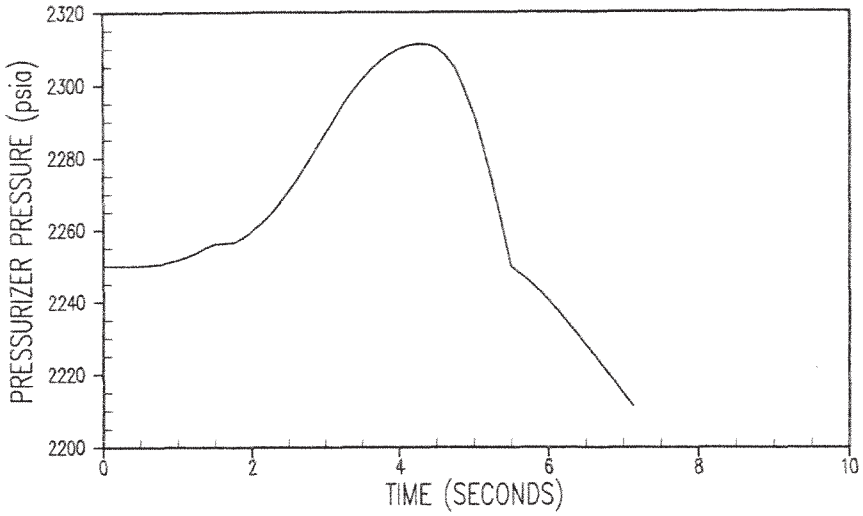


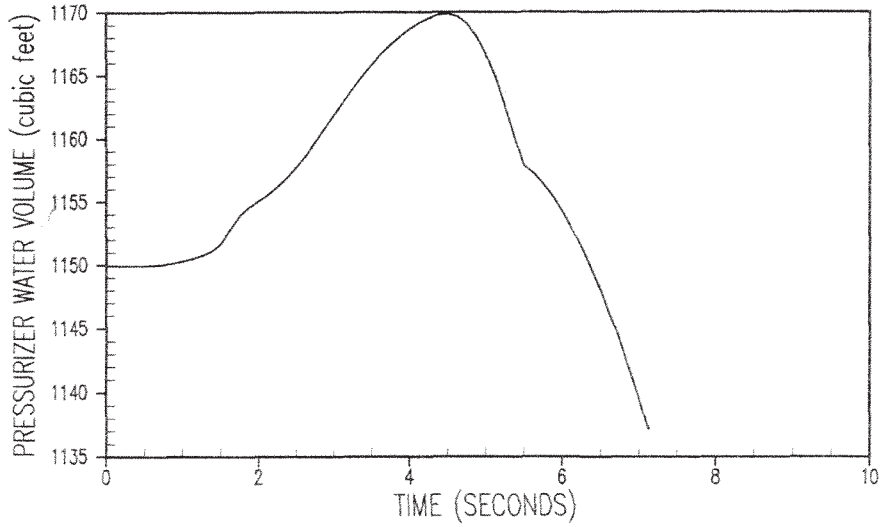
INDIAN POINT UNIT No. 2	
UNCONTROLLED RCCA WITHDRAWAL FROM A SUBCRITICAL CONDITION CLAD INNER TEMPERATURE vs TIME AT HOT SPOT	
UFSAR FIGURE 14.1-4	REV. No. 19



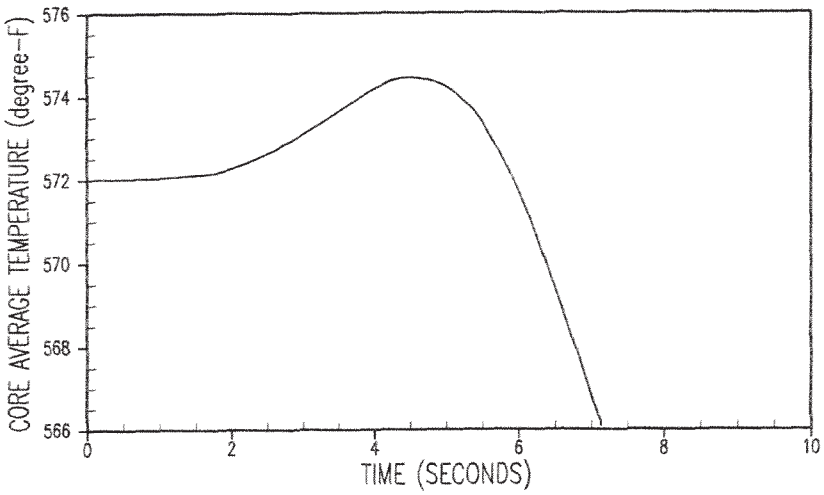


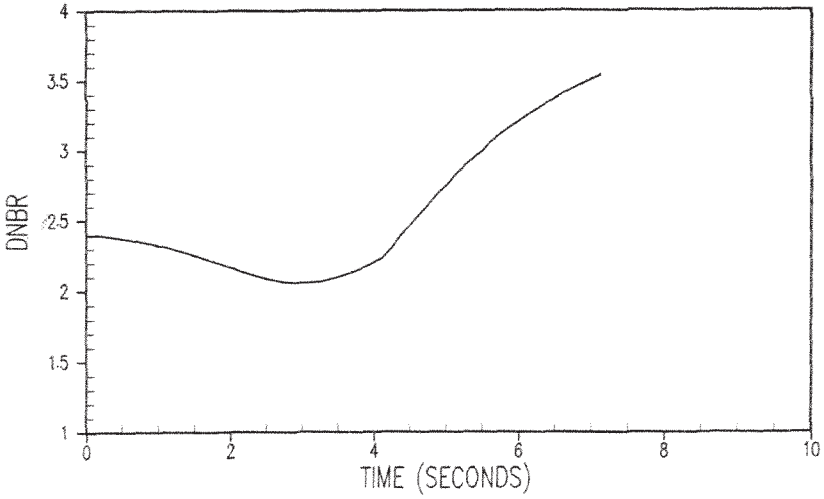
INDIAN POINT UNIT No. 2	
UNCONTROLLED RCCA BANK WITHDRAWAL FROM FULL POWER WITH MINIMUM REACTIVITY FEEDBACK (70 pcm/sec WITHDRAWAL RATE), NUCLEAR POWER AND CORE HEAT FLUX vs TIME	
UFSAR FIGURE 14.1-5	REV. No. 19



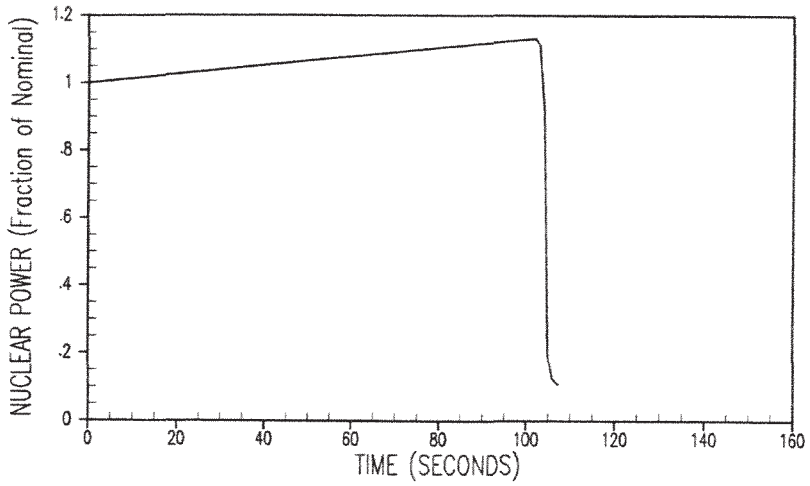


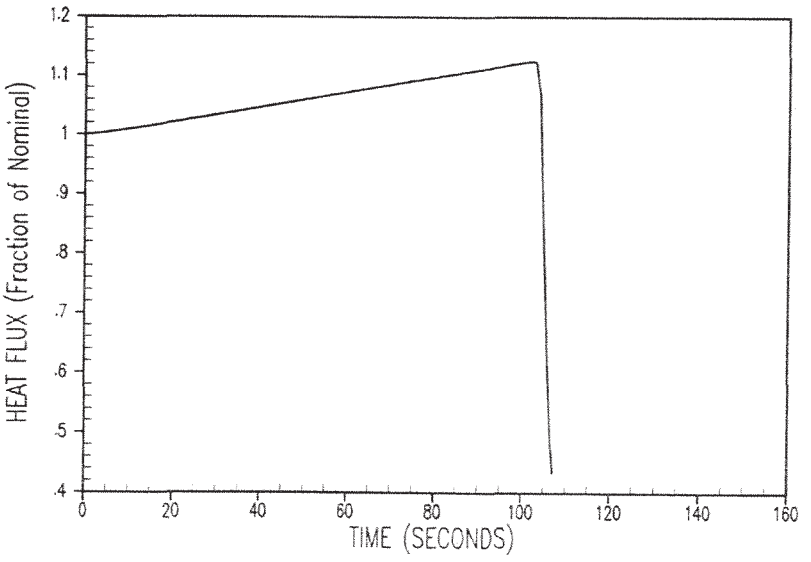
INDIAN POINT UNIT No. 2	
UNCONTROLLED RCCA BANK WITHDRAWAL FROM FULL POWER WITH MINIMUM REACTIVITY FEEDBACK (70 pcm/sec WITHDRAWAL RATE), PRESSURIZER PRESSURE AND WATER VOLUME vs TIME	
UFSAR FIGURE 14.1-6	REV. No. 19



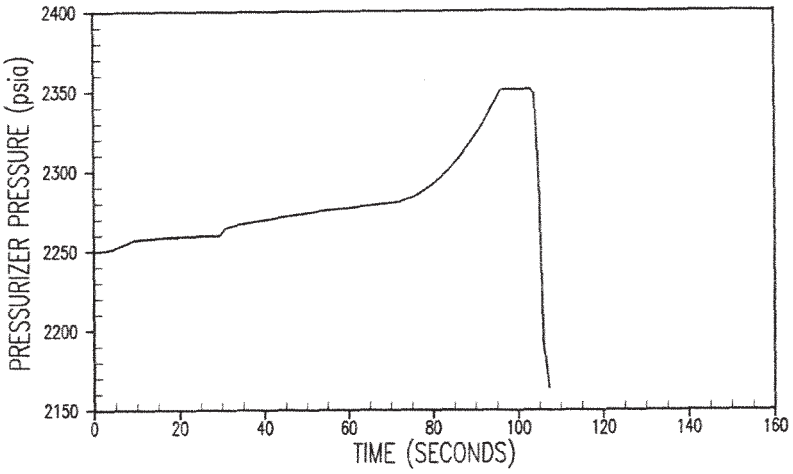


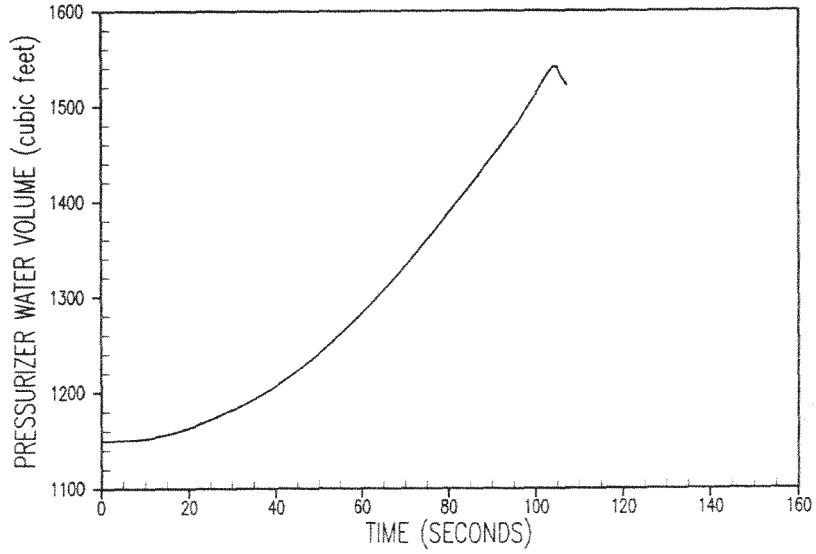
INDIAN POINT UNIT No. 2	
UNCONTROLLED RCCA BANK WITHDRAWAL FROM FULL POWER WITH MINIMUM REACTIVITY FEEDBACK (70 pcm/sec WITHDRAWAL RATE), CORE WATER AVERAGE TEMPERATURE AND DNBR vs TIME	
UFSAR FIGURE 14.1-7	REV. No. 19



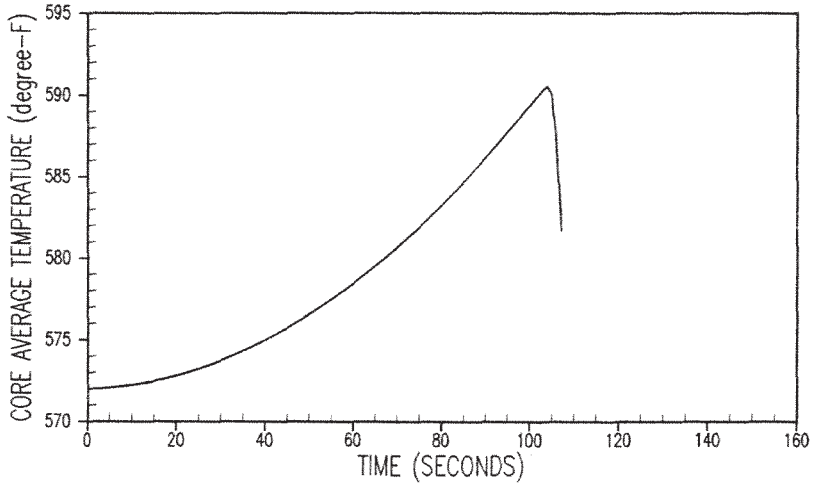


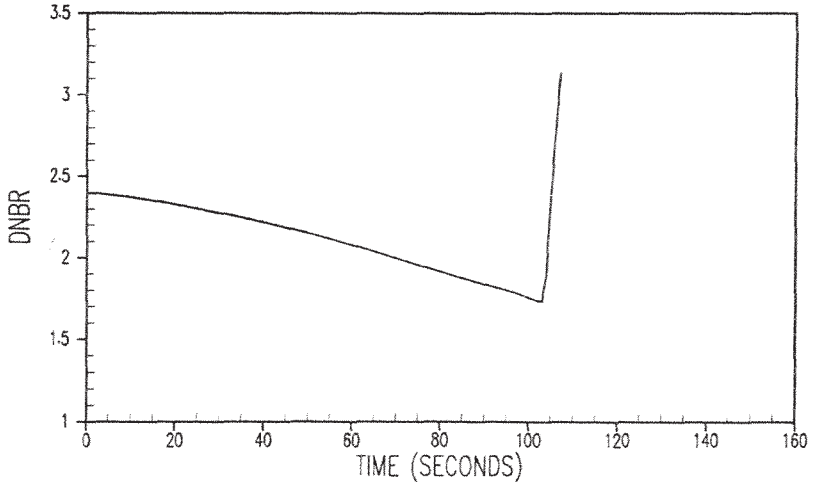
INDIAN POINT UNIT No. 2	
UNCONTROLLED RCCA BANK WITHDRAWAL FROM FULL POWER WITH MINIMUM REACTIVITY FEEDBACK (1 pcm/sec WITHDRAWAL RATE), NUCLEAR POWER AND CORE HEAT FLUX vs TIME	
UFSAR FIGURE 14.1-8	REV. No. 19



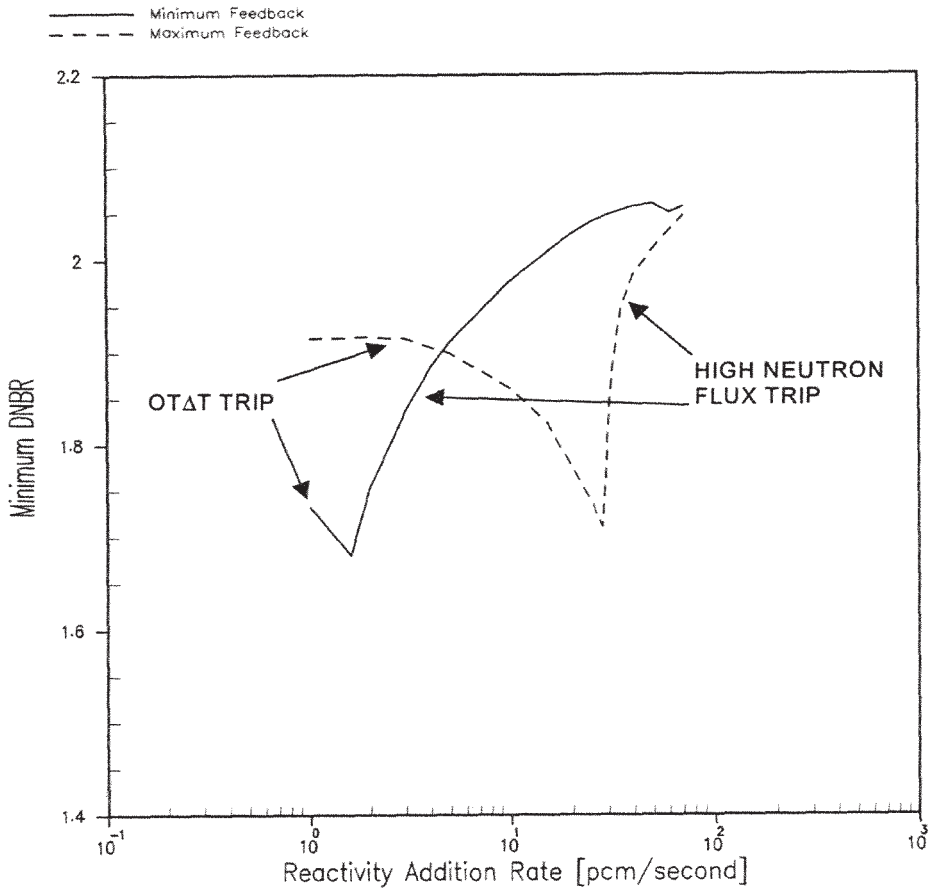


INDIAN POINT UNIT No. 2	
UNCONTROLLED RCCA BANK WITHDRAWAL FROM FULL POWER WITH MINIMUM REACTIVITY FEEDBACK (1 pcm/sec WITHDRAWAL RATE), PRESSURIZER PRESSURE AND WATER VOLUME vs TIME	
UFSAR FIGURE 14.1-9	REV. No. 19

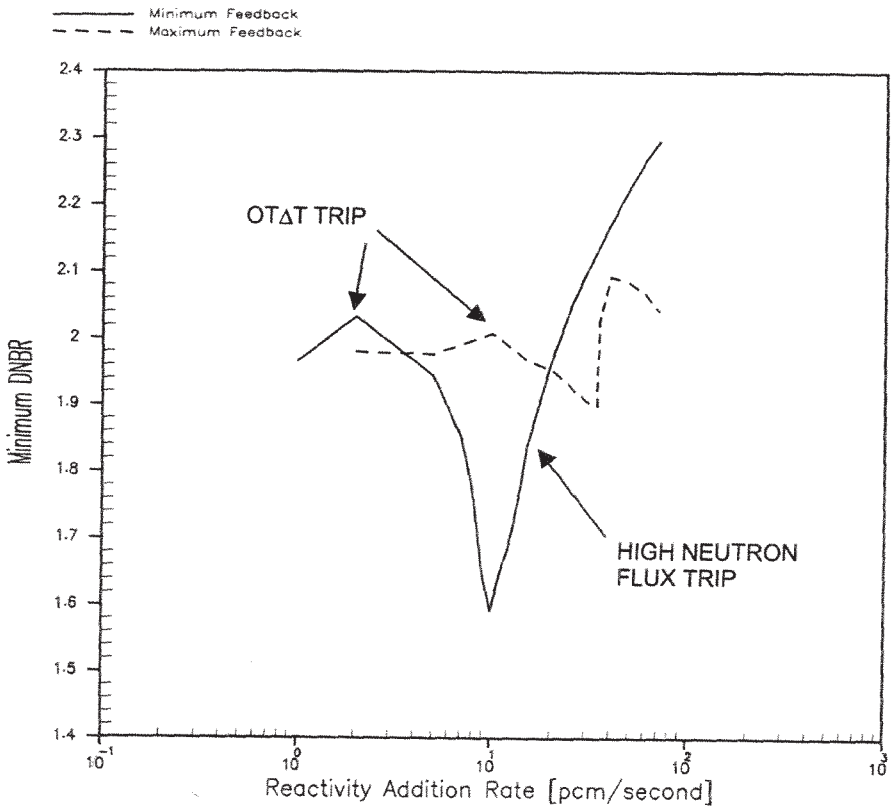




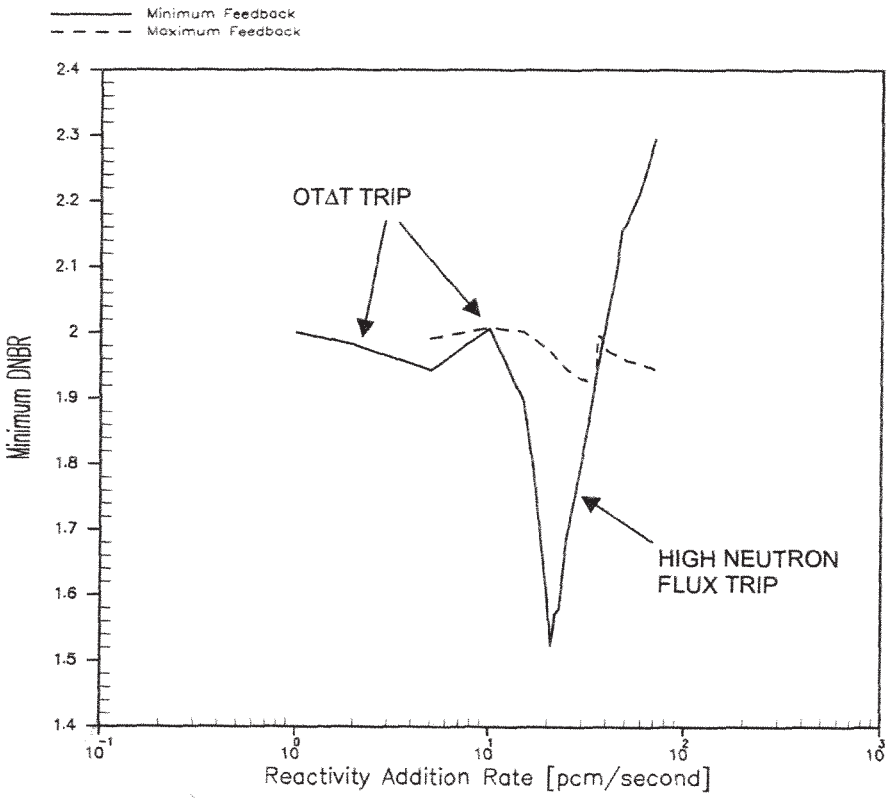
INDIAN POINT UNIT No. 2	
UNCONTROLLED RCCA BANK WITHDRAWAL FROM FULL POWER WITH MINIMUM REACTIVITY FEEDBACK (1 pcm/sec WITHDRAWAL RATE), CORE WATER AVERAGE TEMPERATURE AND DNBR vs TIME	
UFSAR FIGURE 14.1-10	REV. No. 19



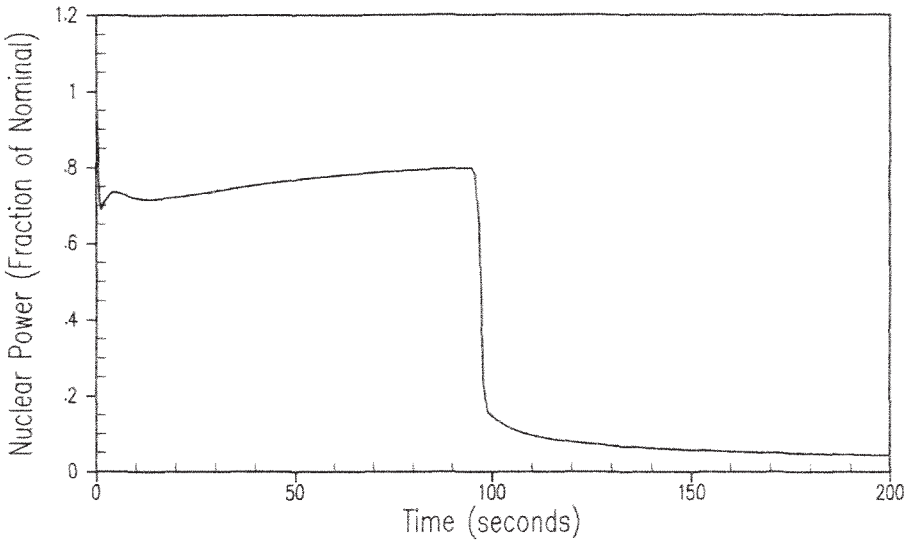
INDIAN POINT UNIT No. 2	
MINIMUM DNBR VERSUS REACTIVITY INSERTION RATE, ROD WITHDRAWAL FROM 100 PERCENT POWER	
UFSAR FIGURE 14.1-11	REV. No. 19

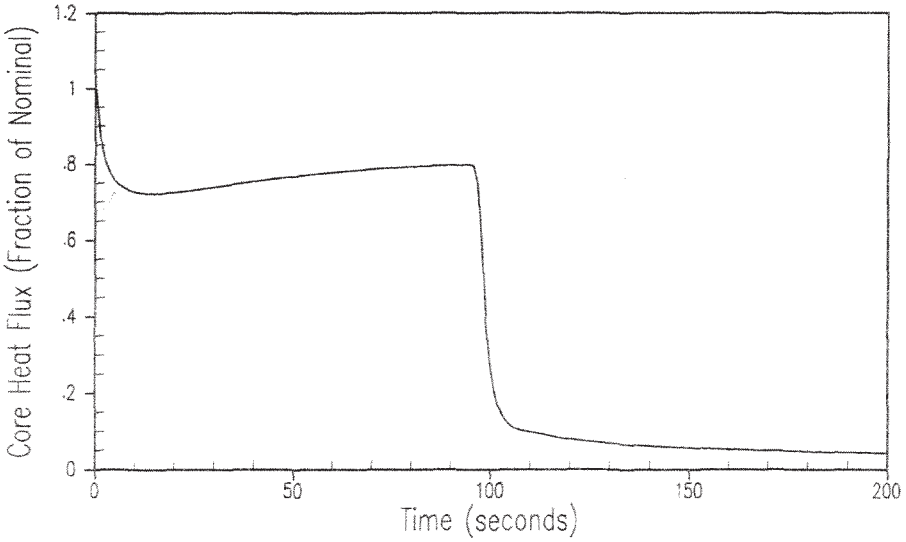


INDIAN POINT UNIT No. 2	
MINIMUM DNBR VERSUS REACTIVITY INSERTION RATE, ROD WITHDRAWAL FROM 60 PERCENT POWER	
UFSAR FIGURE 14.1-12	REV. No. 19

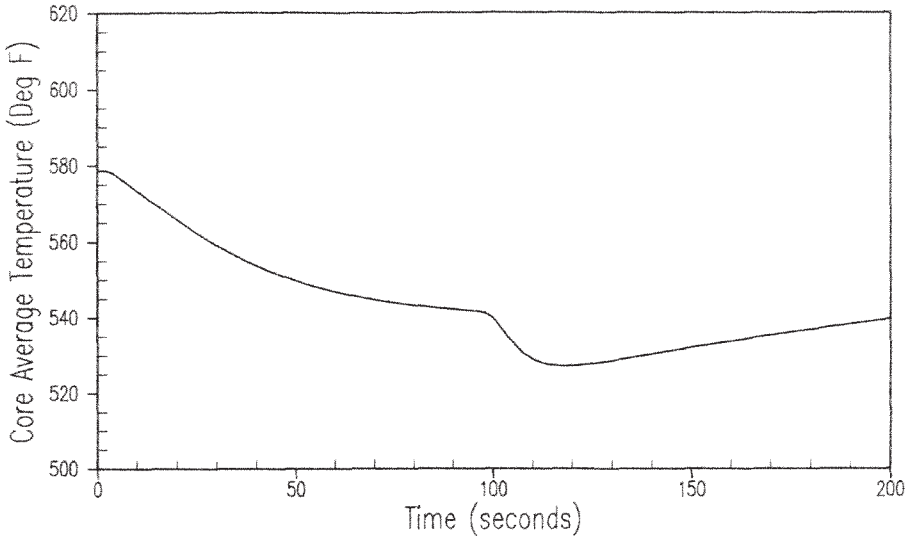


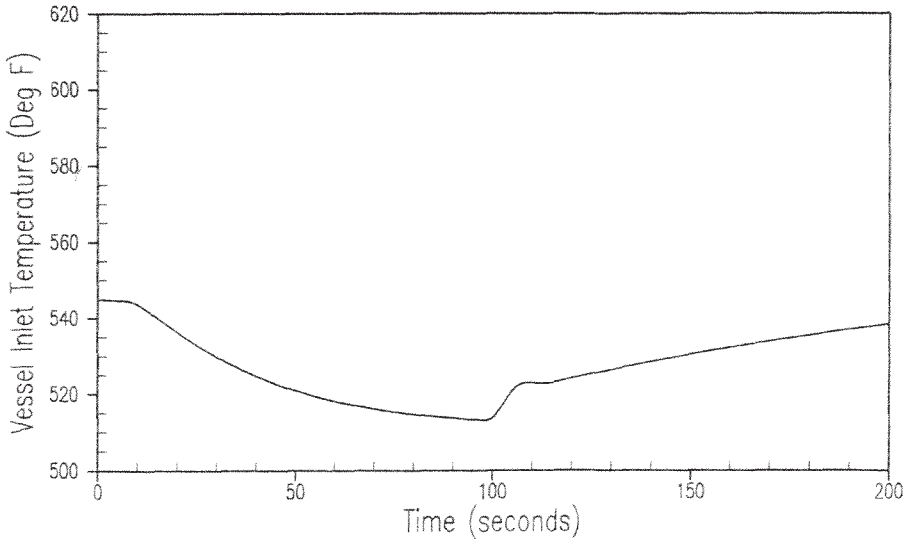
INDIAN POINT UNIT No. 2	
MINIMUM DNBR VERSUS REACTIVITY INSERTION RATE, ROD WITHDRAWAL FROM 10 PERCENT POWER	
UFSAR FIGURE 14.1–13	REV. No. 19



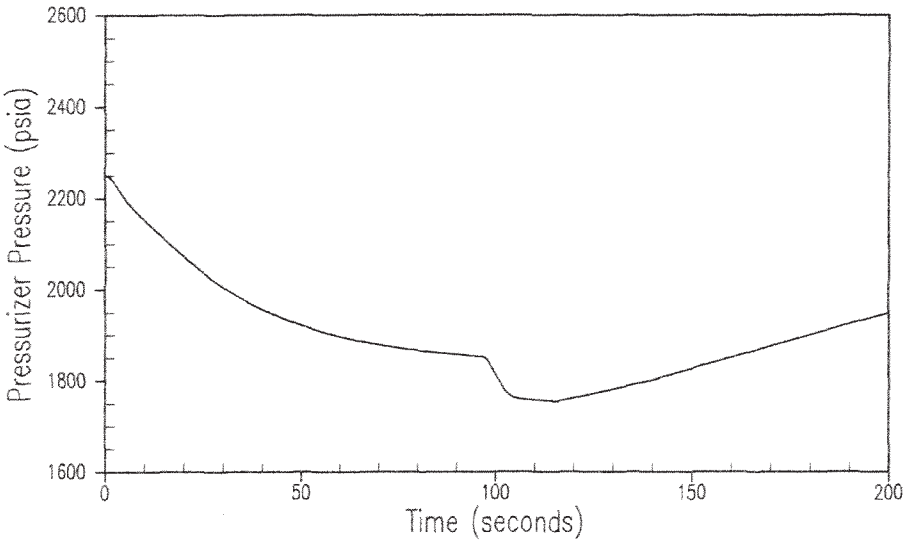


INDIAN POINT UNIT No. 2	
DROPPED ROD INCIDENT MANUAL ROD CONTROL NUCLEAR POWER AND CORE HEAT FLUX AT BOL (SMALL NEGATIVE MTC) FOR DROPPED RCCA OF WORTH – 400 PCM	
UFSAR FIGURE 14.1–14	REV. No. 19

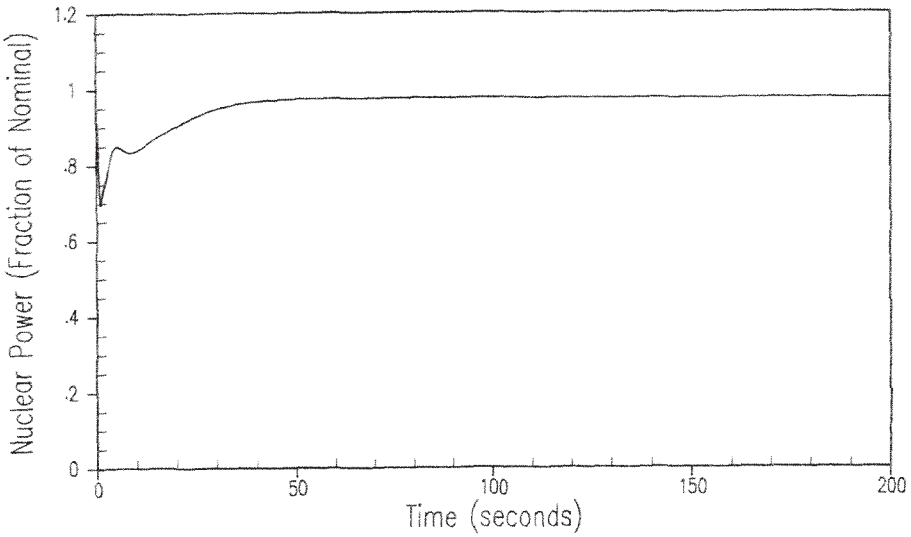


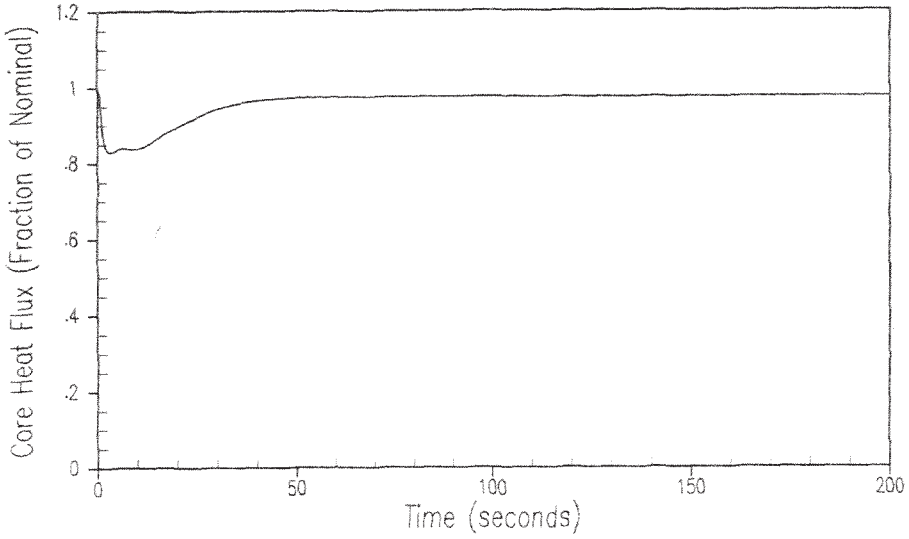


INDIAN POINT UNIT No. 2	
DROPPED ROD INCIDENT MANUAL ROD CONTROL CORE AVERAGE AND VESSEL INLET TEMPERATURE AT BOL (SMALL NEGATIVE MTC) FOR DROPPED RCCA OF WORTH – 400 PCM	
UFSAR FIGURE 14.1–15	REV. No. 19

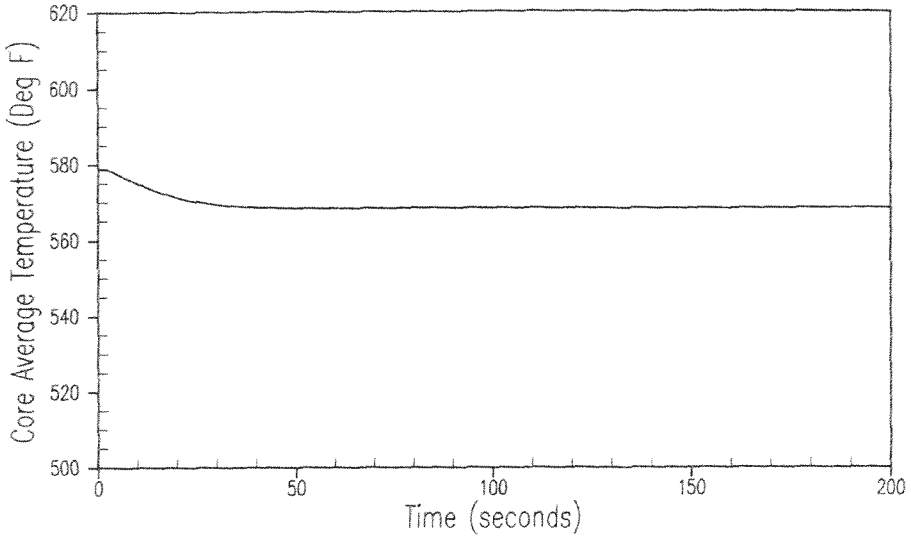


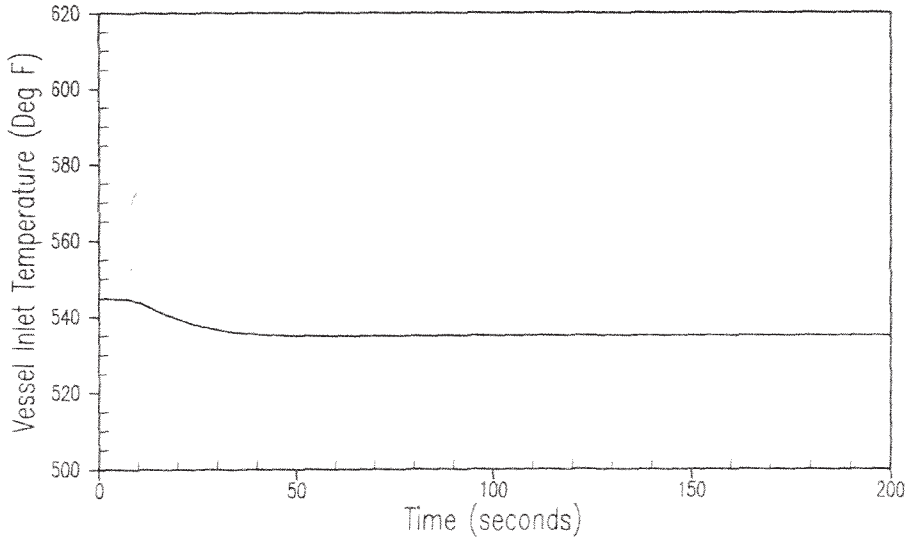
INDIAN POINT UNIT No. 2	
DROPPED ROD INCIDENT MANUAL ROD CONTROL PRESSURIZER PRESSURE AT BOL (SMALL NEGATIVE MTC) FOR DROPPED RCCA OF WORTH – 400 PCM	
UFSAR FIGURE 14.1–16	REV. No. 19



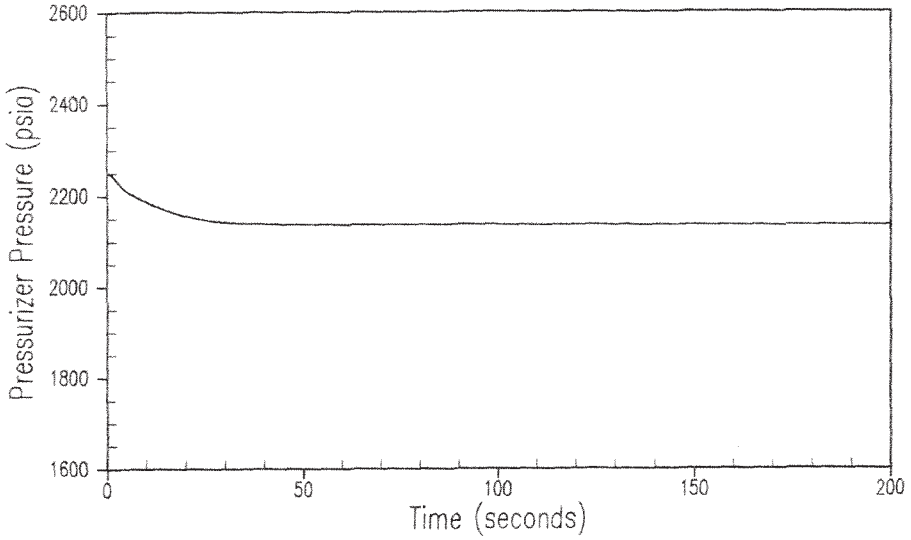


INDIAN POINT UNIT No. 2	
DROPPED ROD INCIDENT MANUAL ROD CONTROL NUCLEAR POWER AND CORE HEAT FLUX AT EOL (LARGE NEGATIVE MTC) FOR DROPPED RCCA OF WORTH – 400 PCM	
UFSAR FIGURE 14.1–17	REV. No. 19

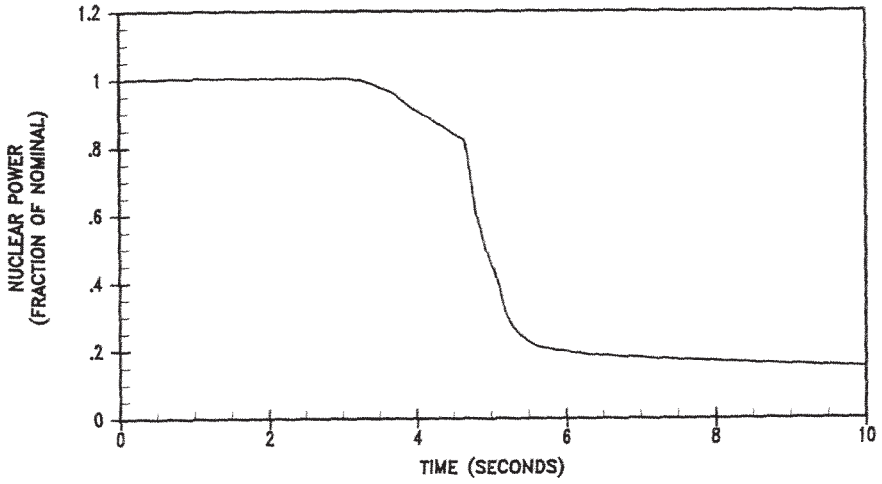


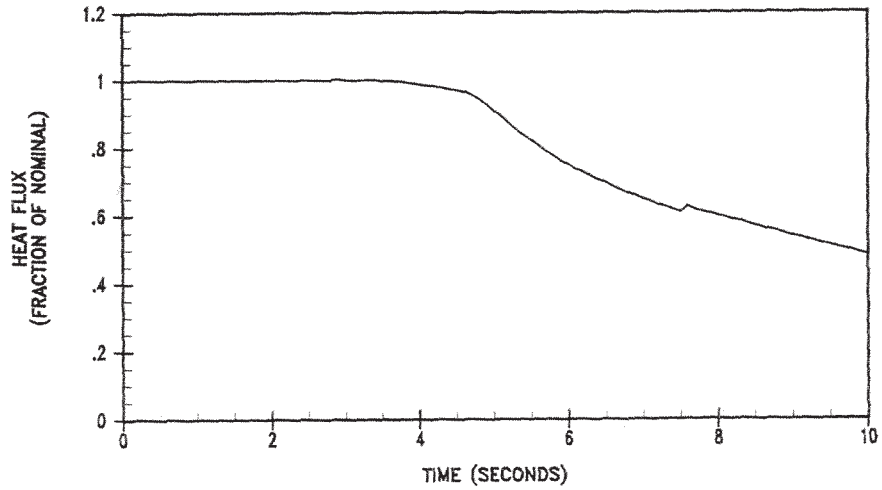


INDIAN POINT UNIT No. 2	
DROPPED ROD INCIDENT MANUAL ROD CONTROL CORE AVERAGE AND VESSEL INLET TEMPERATURE AT EOL (LARGE NEGATIVE MTC) FOR DROPPED RCCA OF WORTH – 400 PCM	
UFSAR FIGURE 14.1–18	REV. No. 19

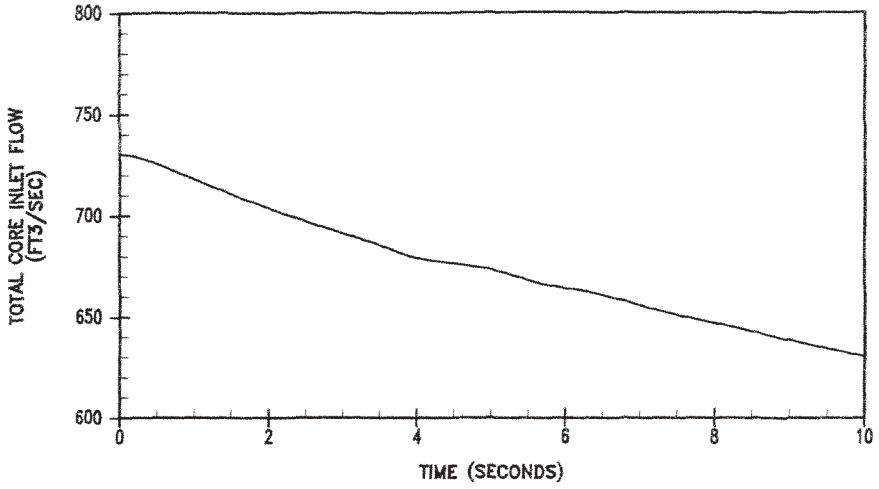


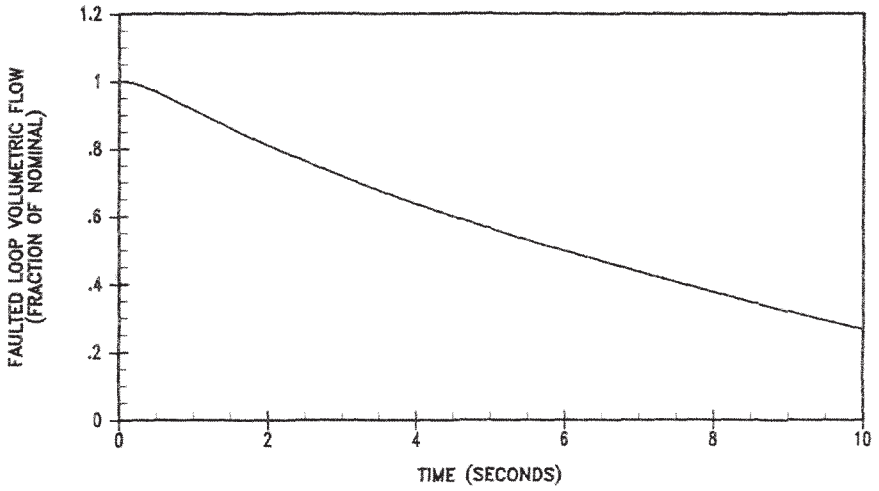
INDIAN POINT UNIT No. 2	
DROPPED ROD INCIDENT MANUAL ROD CONTROL PRESSURIZER PRESSURE AT EOL (LARGE NEGATIVE MTC) FOR DROPPED RCCA OF WORTH – 400 PCM	
UFSAR FIGURE 14.1–19	REV. No. 19



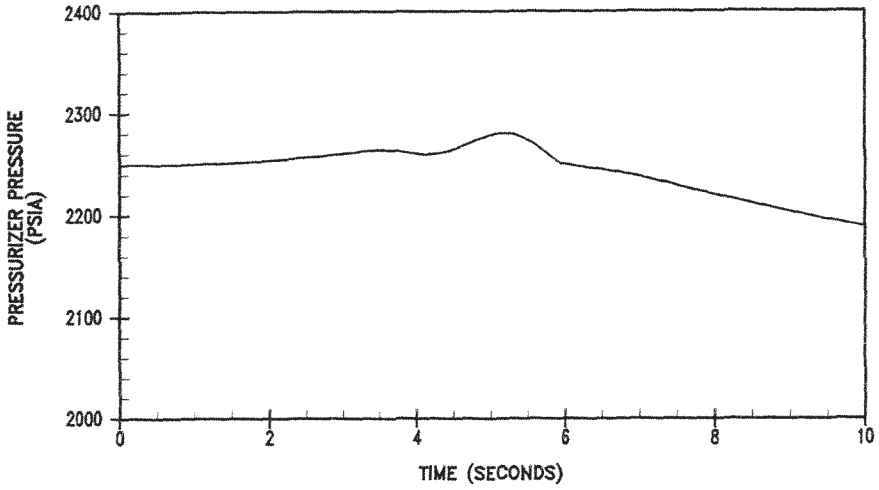


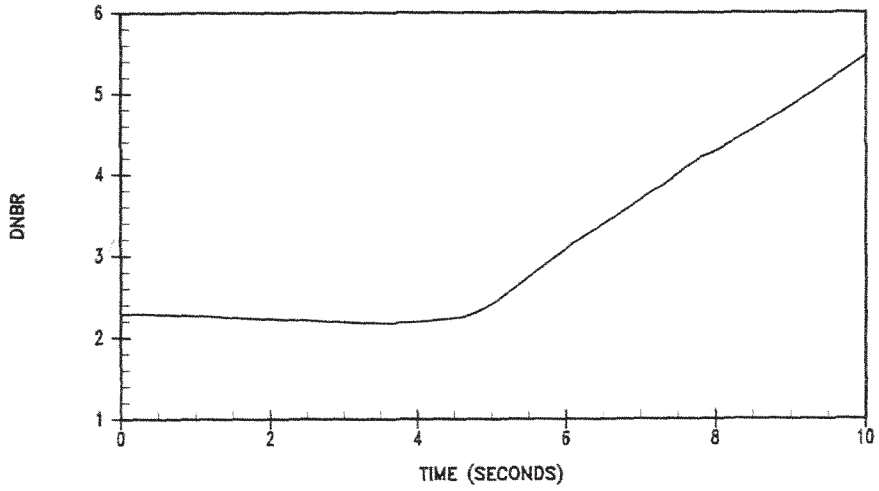
INDIAN POINT UNIT No. 2	
LOSS OF ONE PUMP OUT OF FOUR NUCLEAR POWER AND CORE HEAT FLUX vs TIME	
UFSAR FIGURE 14.1-20	REV. No. 19



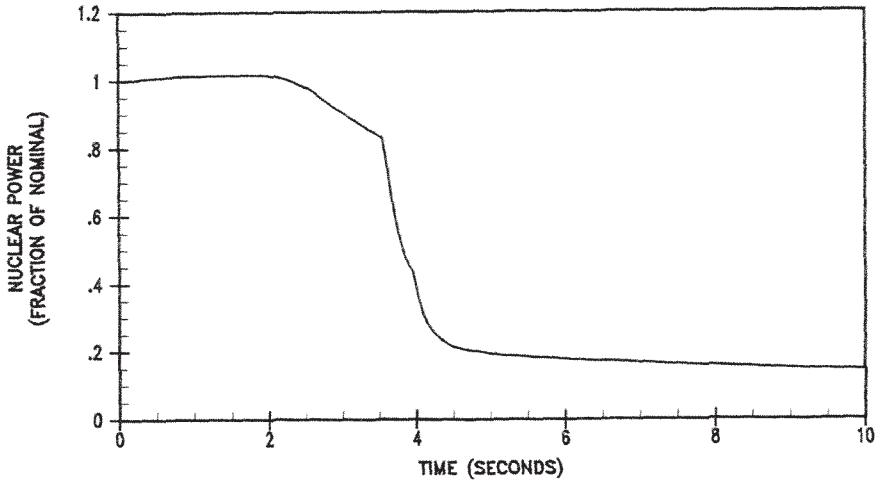


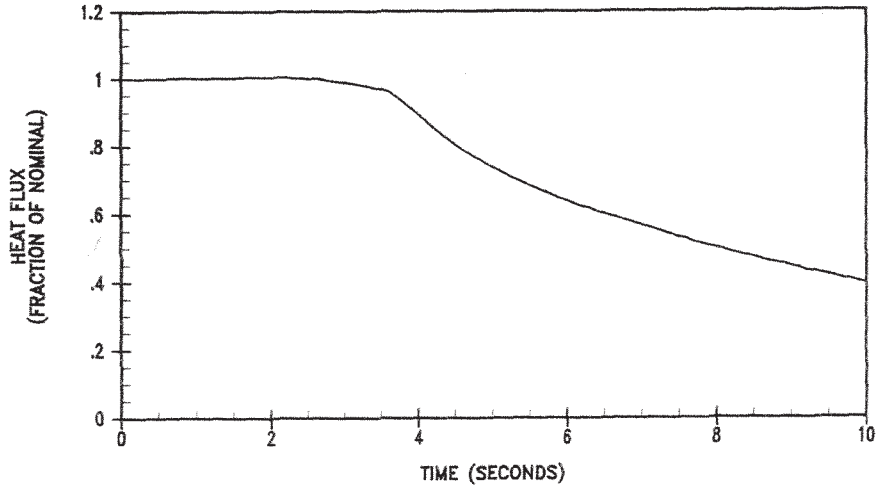
INDIAN POINT UNIT No. 2	
LOSS OF ONE PUMP OUT OF FOUR TOTAL CORE FLOW AND FAULTED LOOP FLOW vs TIME	
UFSAR FIGURE 14.1-21	REV. No. 19



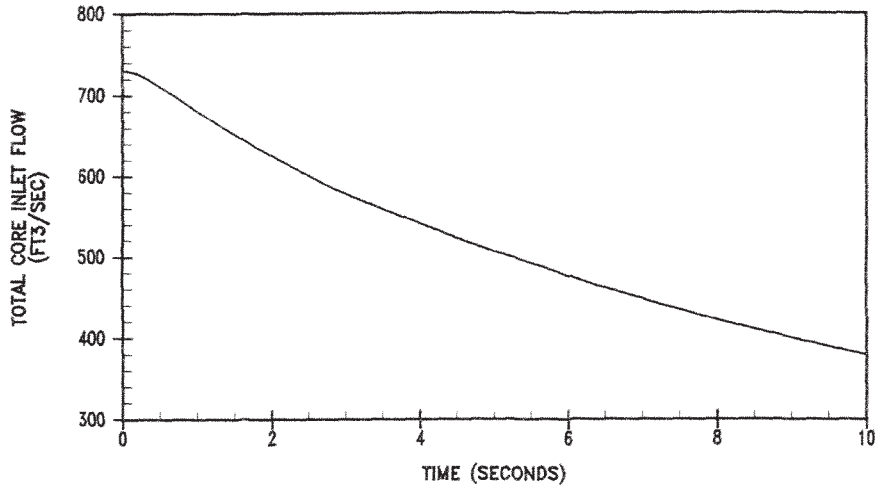


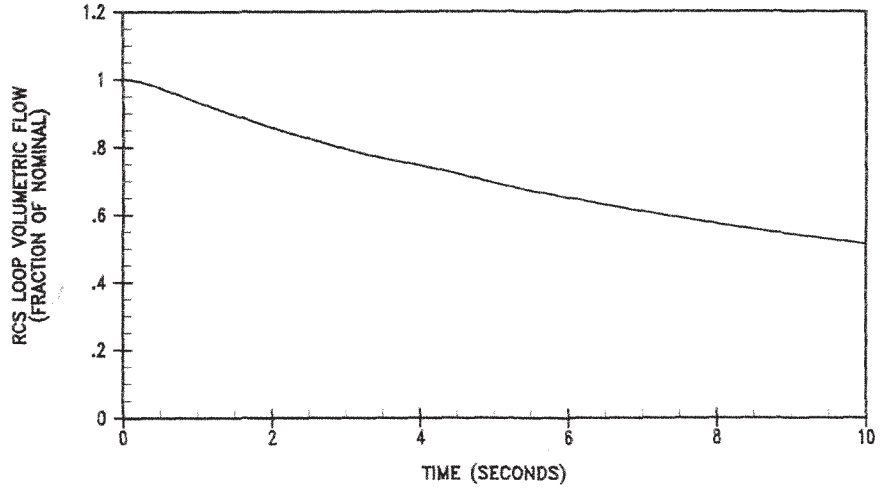
INDIAN POINT UNIT No. 2	
LOSS OF ONE PUMP OUT OF FOUR PRESSURIZER PRESSURE AND DNBR vs TIME	
UFSAR FIGURE 14.1-22	REV. No. 19



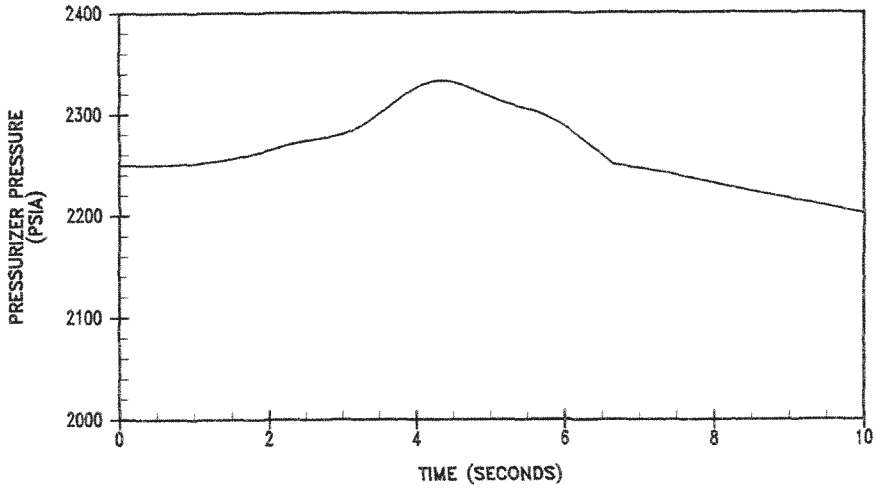


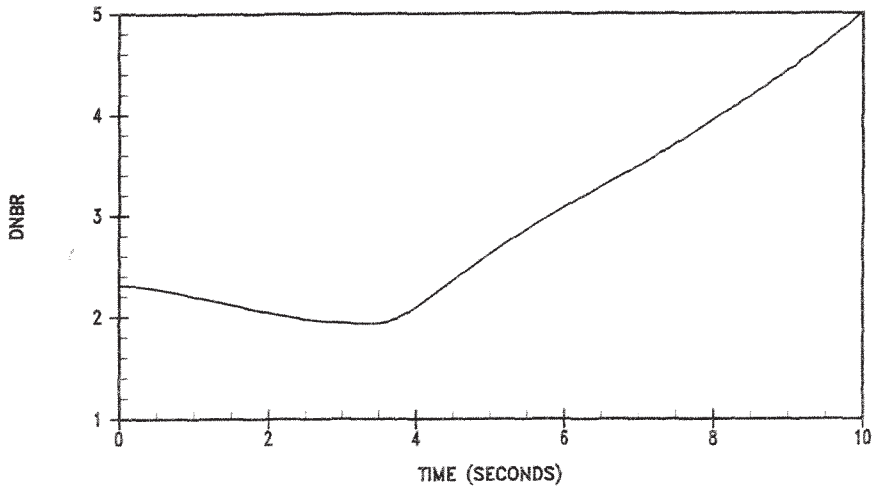
INDIAN POINT UNIT No. 2	
FOUR PUMP LOSS OF FLOW – UNDERVOLTAGE NUCLEAR POWER AND CORE HEAT FLUX vs TIME	
UFSAR FIGURE 14.1–23	REV. No. 19



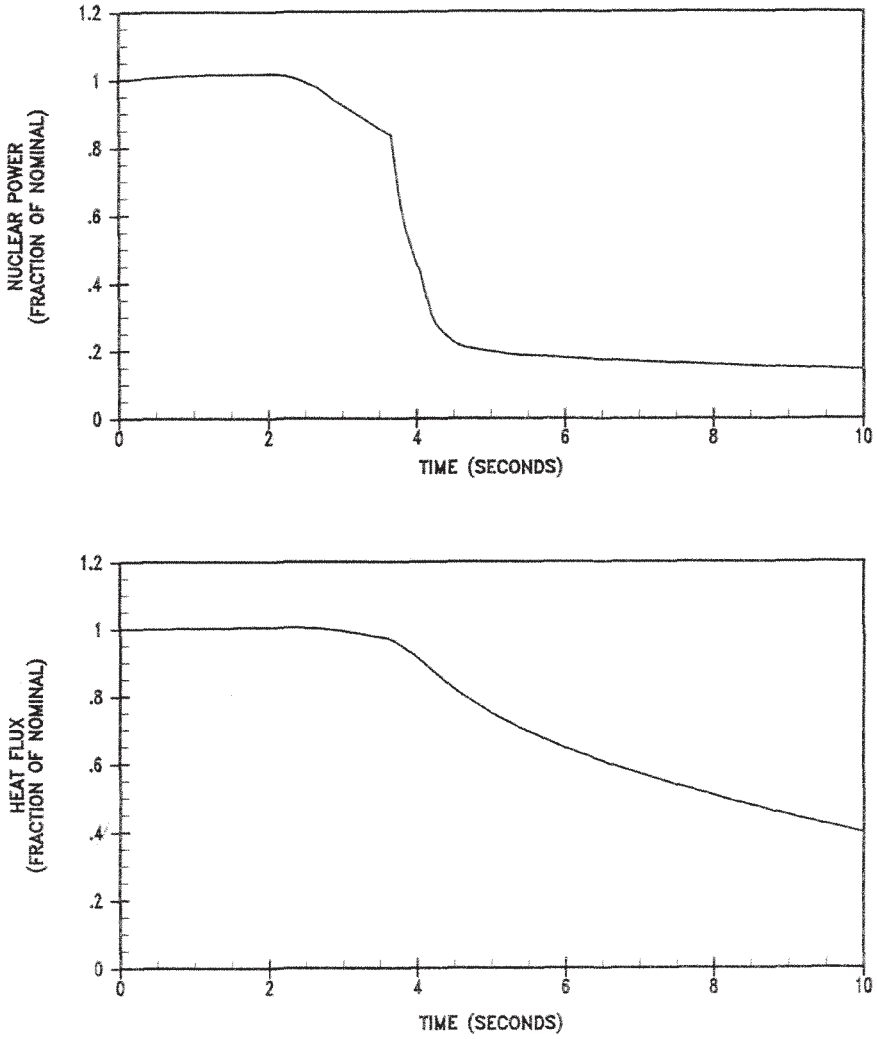


INDIAN POINT UNIT No. 2	
FOUR PUMP LOSS OF FLOW – UNDERVOLTAGE TOTAL CORE FLOW AND RCS LOOP FLOW vs TIME	
UFSAR FIGURE 14.1–24	REV. No. 19

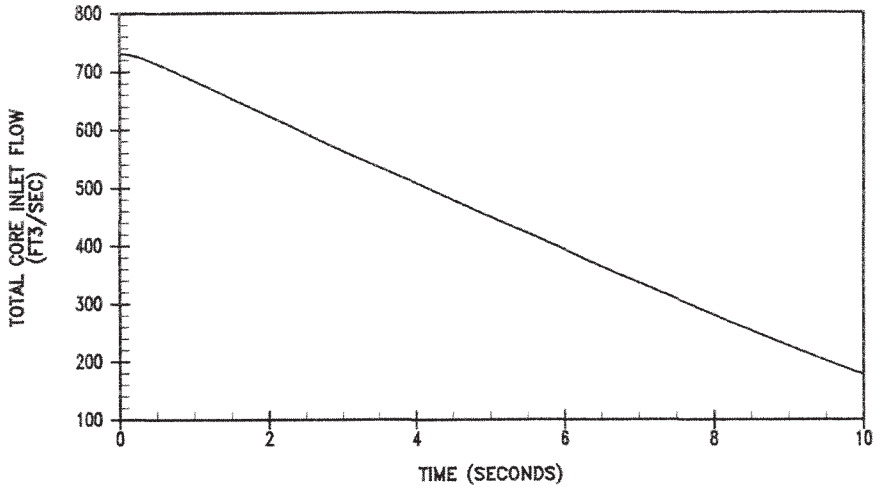


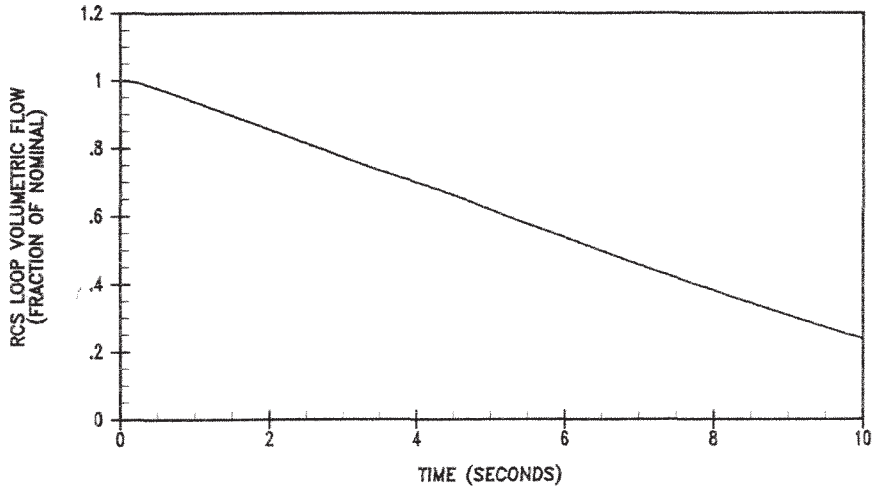


INDIAN POINT UNIT No. 2	
FOUR PUMP LOSS OF FLOW – UNDERVOLTAGE PRESSURIZER PRESSURE AND DNBR vs TIME	
UFSAR FIGURE 14.1–25	REV. No. 19

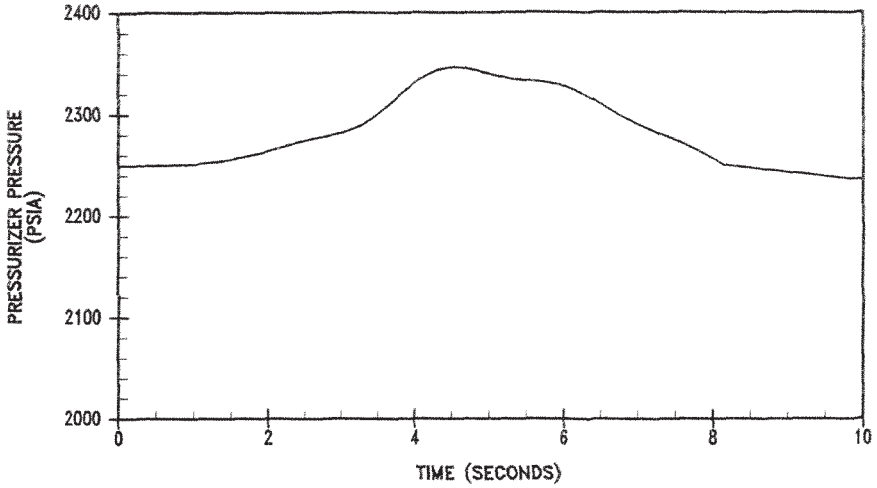


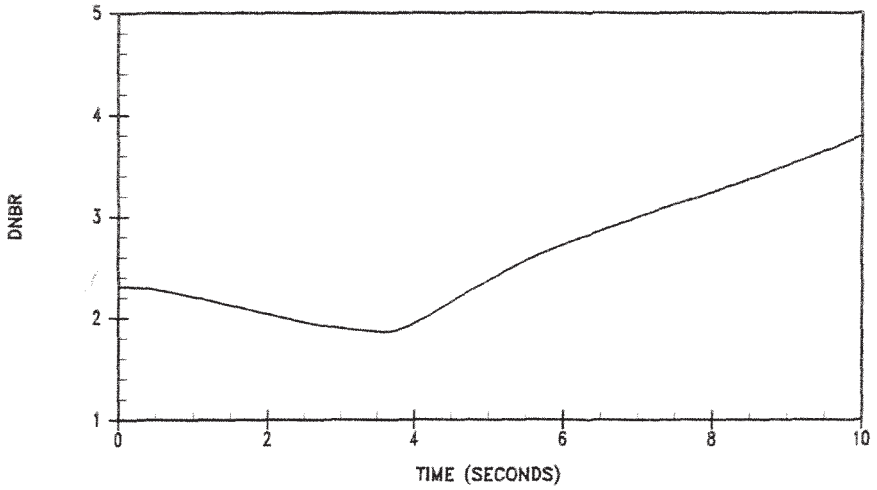
INDIAN POINT UNIT No. 2	
FOUR PUMP LOSS OF FLOW – UNDERFREQUENCY NUCLEAR POWER AND HEAT FLUX vs TIME	
UFSAR FIGURE 14.1–26	REV. No. 19



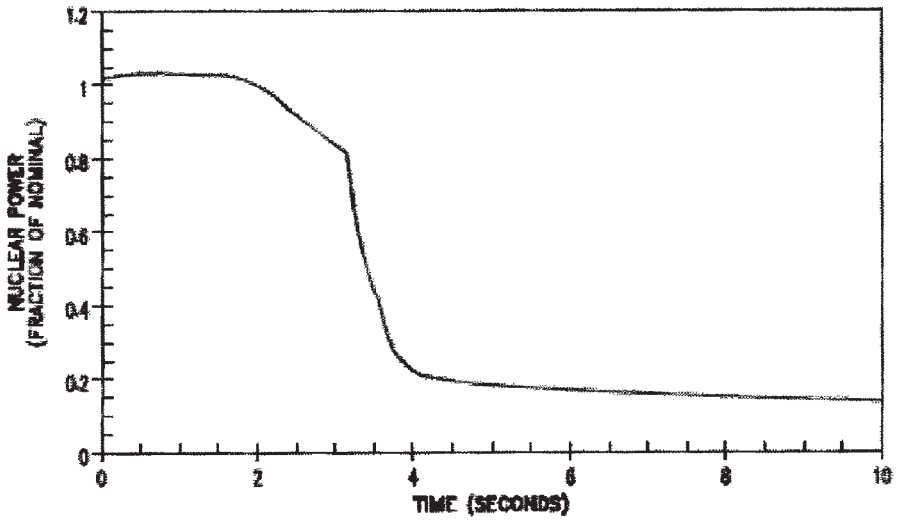


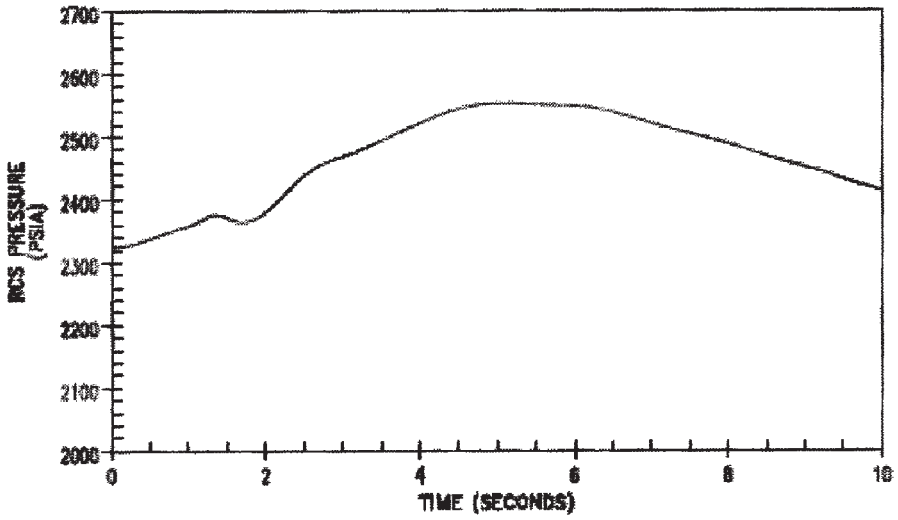
INDIAN POINT UNIT No. 2	
FOUR PUMP LOSS OF FLOW – UNDERFREQUENCY TOTAL CORE FLOW AND RCS LOOP FLOW vs TIME	
UFSAR FIGURE 14.1–27	REV. No. 19



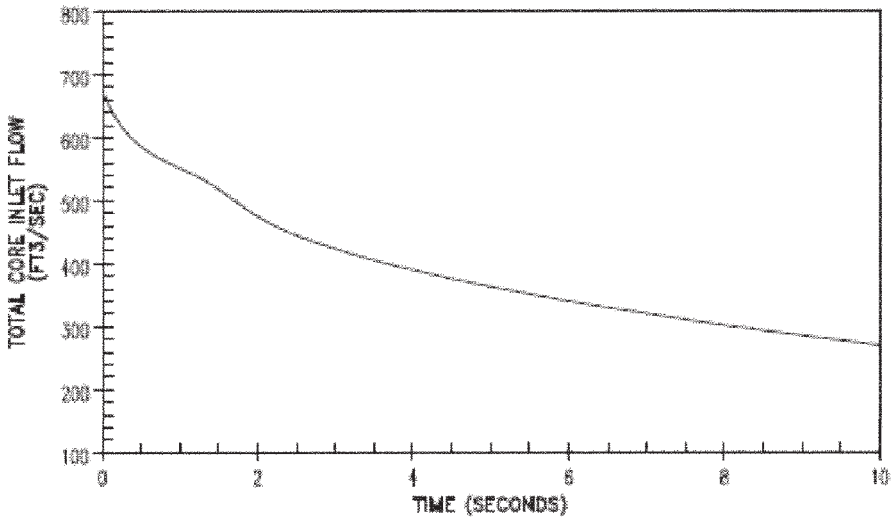


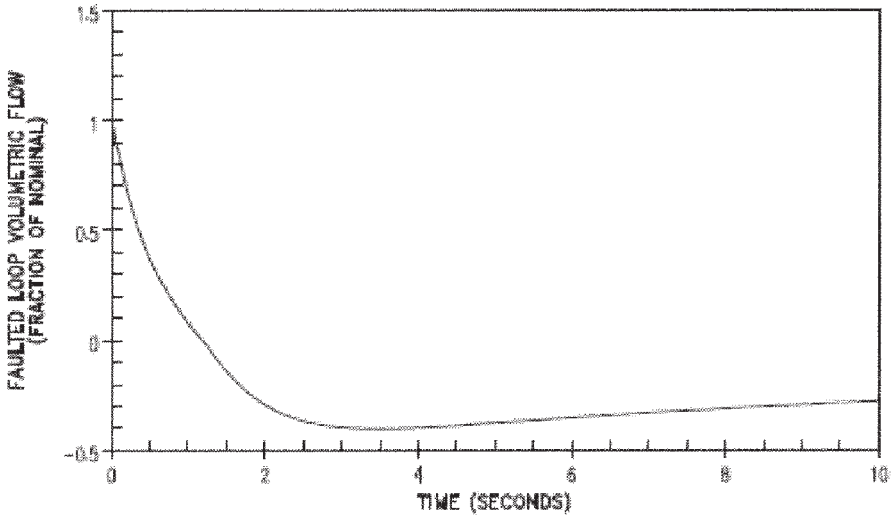
INDIAN POINT UNIT No. 2	
FOUR PUMP LOSS OF FLOW – UNDERFREQUENCY PRESSURIZER PRESSURE AND DNBR vs TIME	
UFSAR FIGURE 14.1–28	REV. No. 19



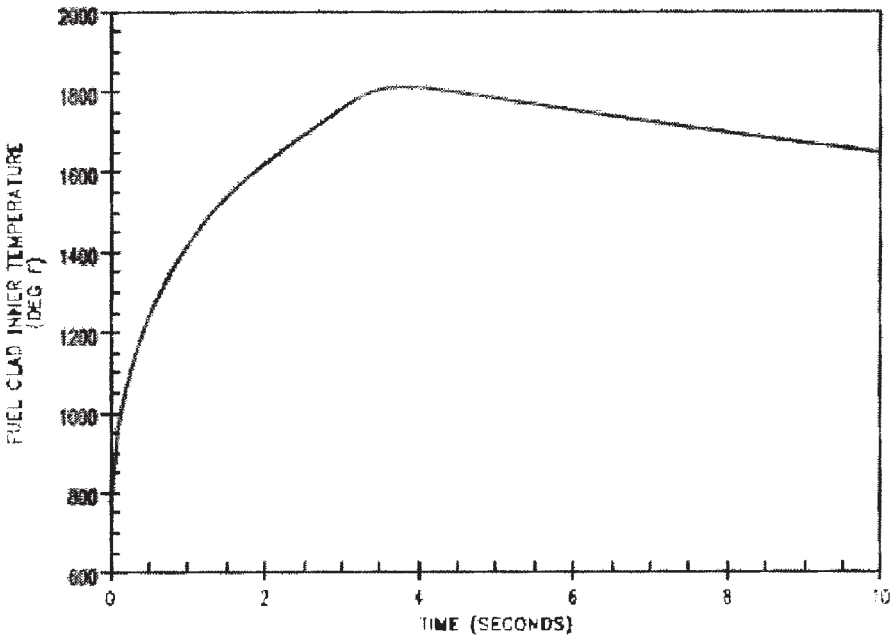


INDIAN POINT UNIT No. 2	
LOCKED ROTOR NUCLEAR POWER AND RCS PRESSURE vs TIME	
UFSAR FIGURE 14.1-29	REV. No. 22

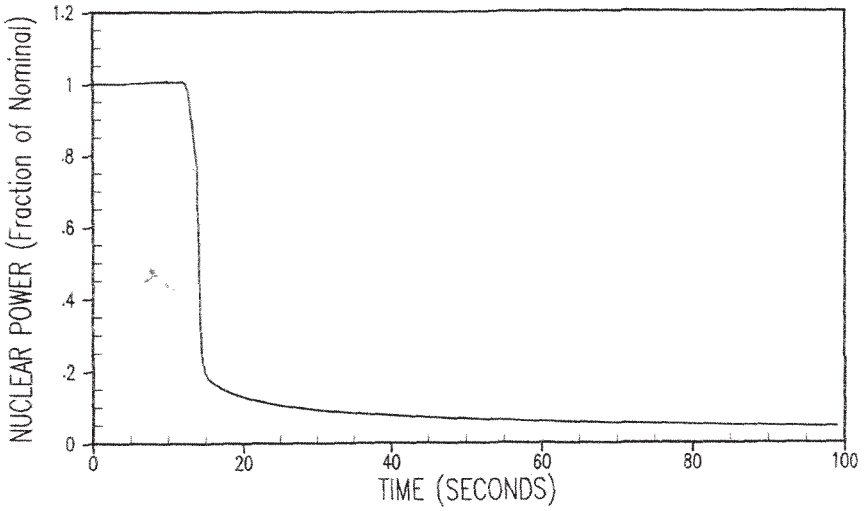


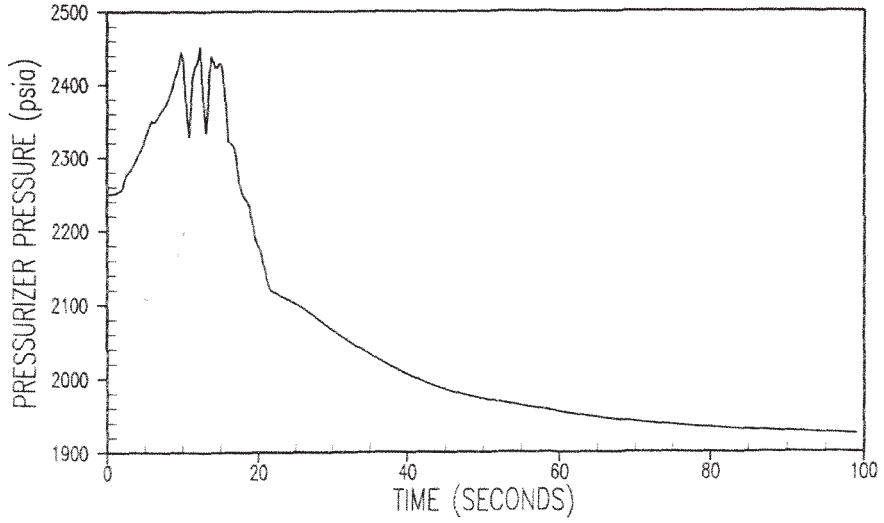


INDIAN POINT UNIT No. 2	
LOCKED ROTOR TOTAL CORE FLOW AND FAULTED LOOP FLOW vs TIME	
UFSAR FIGURE 14.1-30	REV. No. 22

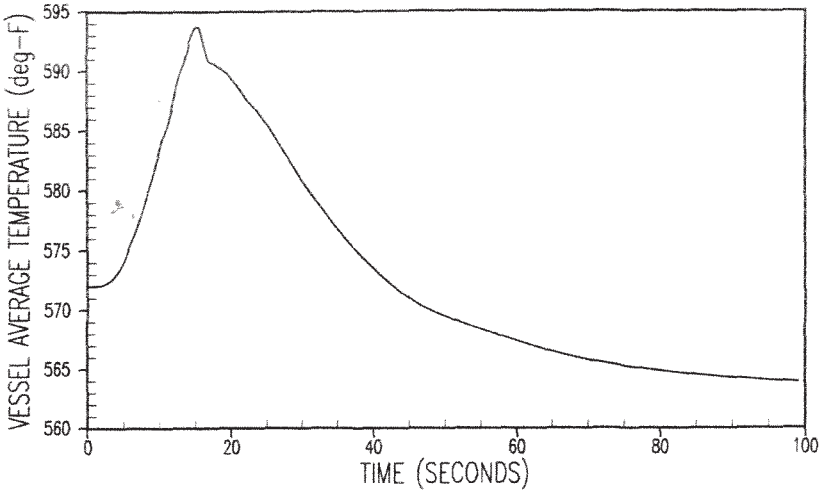


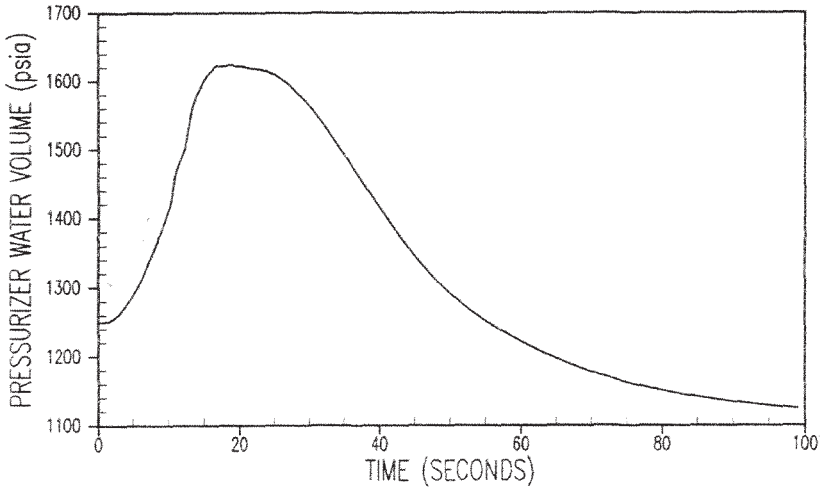
INDIAN POINT UNIT No. 2	
LOCKED ROTOR FUEL CLAD INNER TEMPERATURE vs TIME	
UFSAR FIGURE 14.1-30A	REV. No. 22



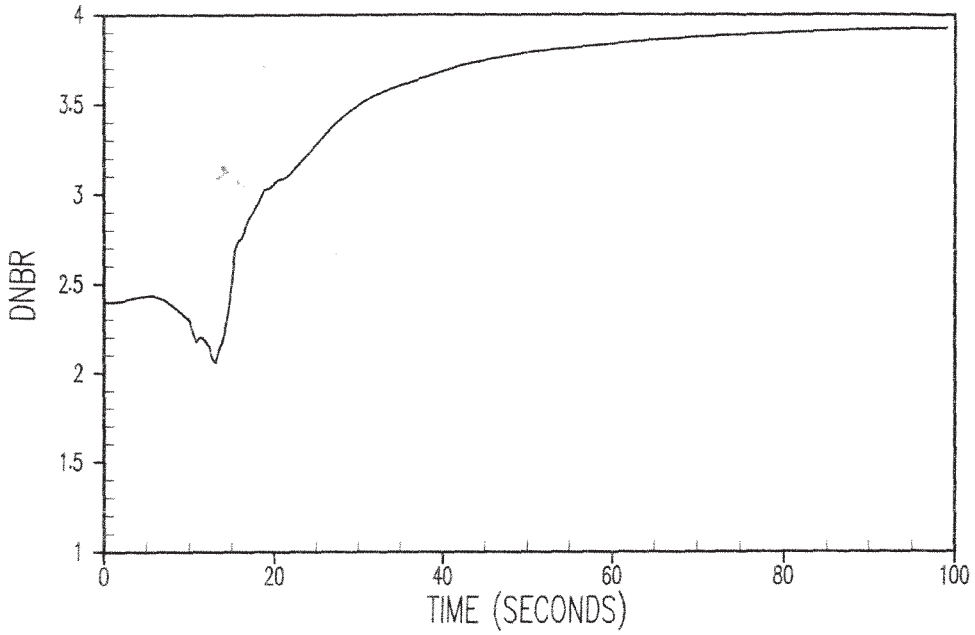


INDIAN POINT UNIT No. 2	
LOSS OF LOAD WITH PRESSURIZER SPRAY AND PORV, NUCLEAR POWER AND PRESSURIZER PRESSURE vs TIME	
UFSAR FIGURE 14.1-31	REV. No. 19

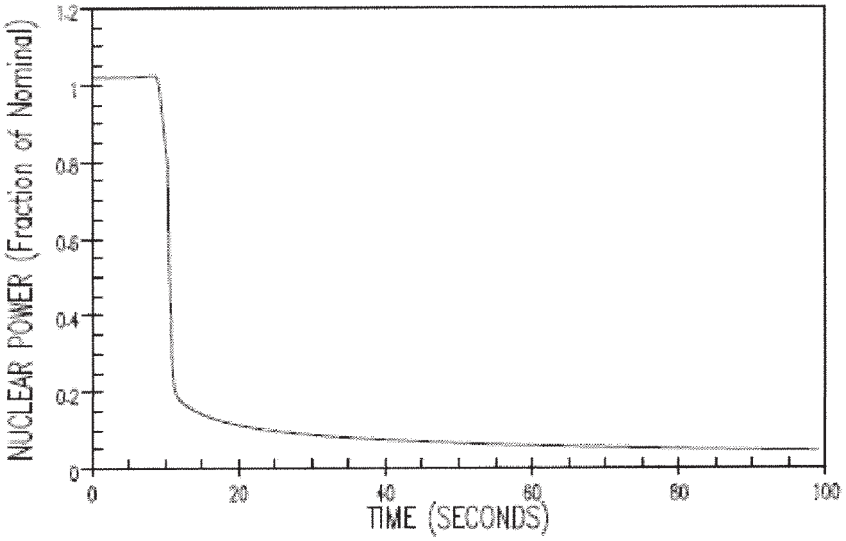


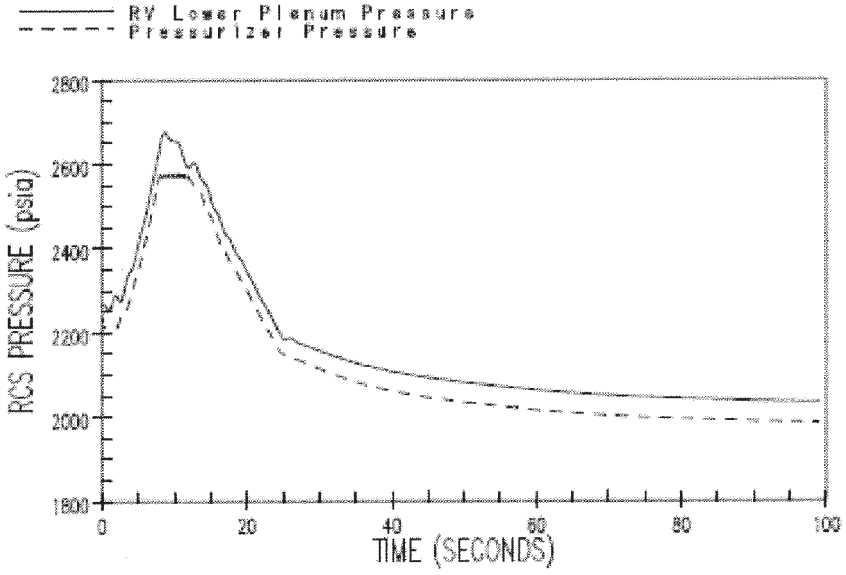


INDIAN POINT UNIT No. 2	
LOSS OF LOAD WITH PRESSURIZER SPRAY AND PORV, AVERAGE COOLANT TEMPERATURE AND PRESSURIZER WATER VOLUME vs TIME	
UFSAR FIGURE 14.1-32	REV. No. 19

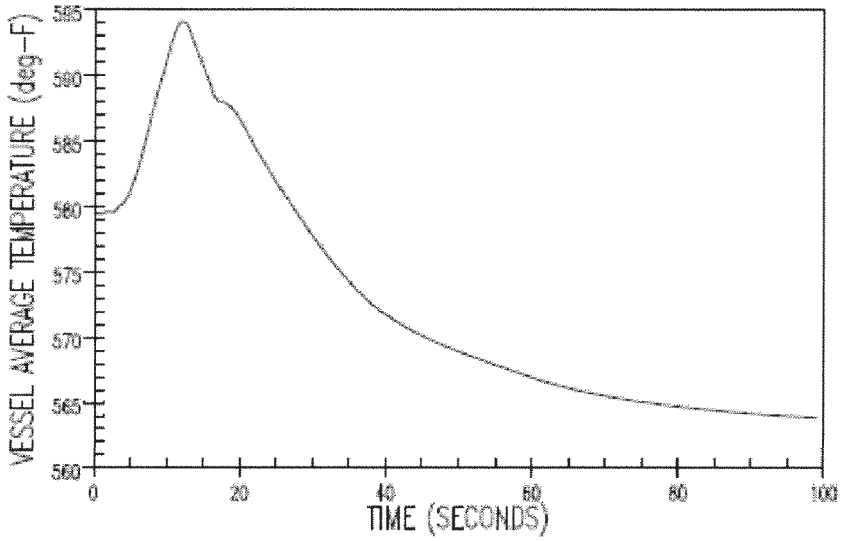


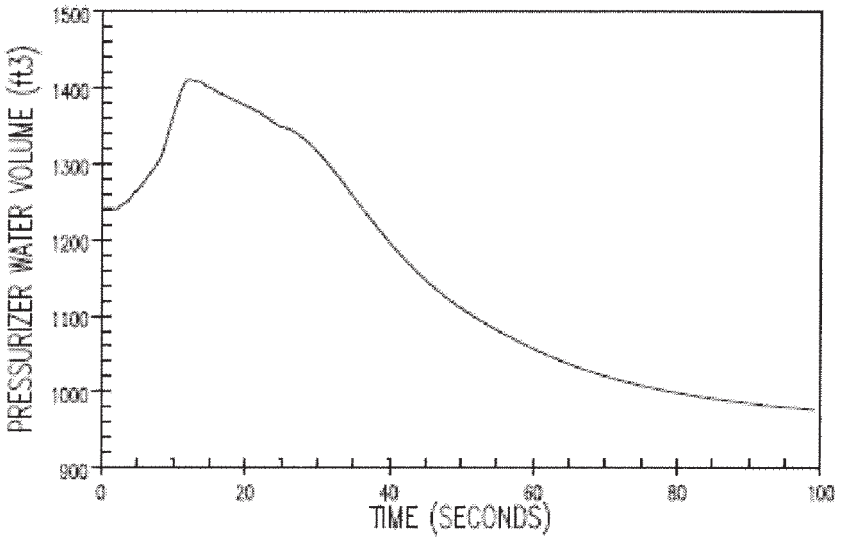
INDIAN POINT UNIT No. 2	
LOSS OF LOAD WITH PRESSURIZER SPRAY AND POWER OPERATED RELIEF VALVES DNBR vs TIME	
UFSAR FIGURE 14.1-33	REV. No. 19



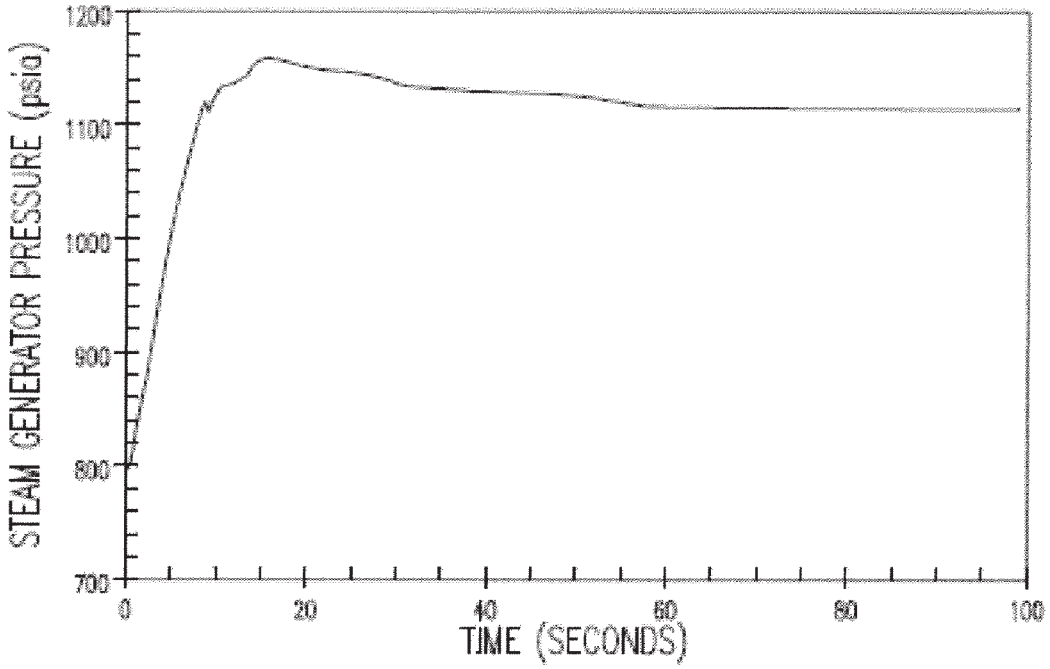


INDIAN POINT UNIT No. 2	
LOSS OF LOAD WITHOUT PRESSURIZER SPRAY AND PORV, NUCLEAR POWER AND PRESSURIZER PRESSURE vs TIME	
UFSAR FIGURE 14.1–37	REV. No. 22

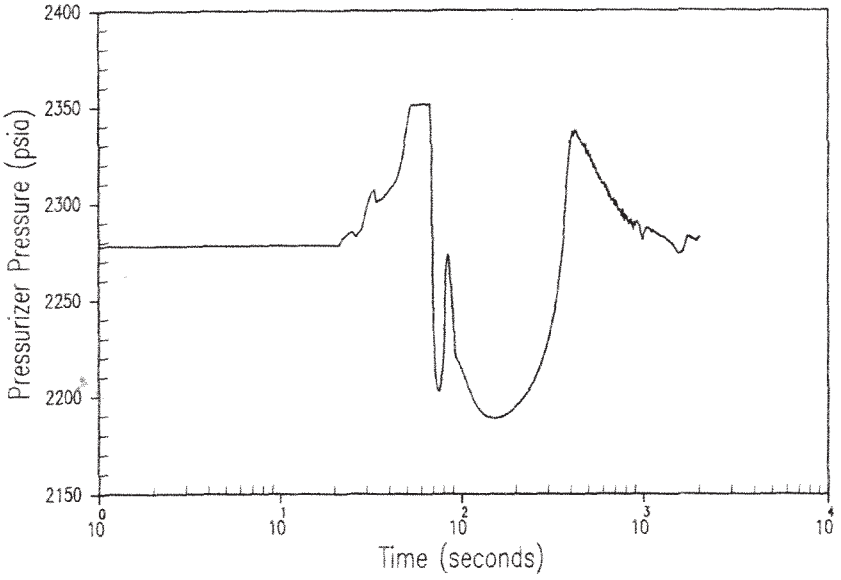


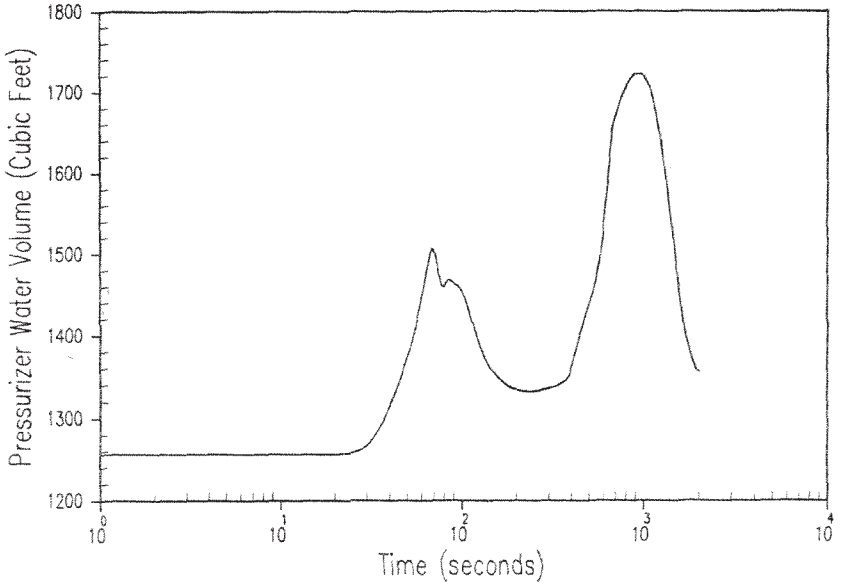


INDIAN POINT UNIT No. 2	
LOSS OF LOAD WITHOUT PRESSURIZER SPRAY AND POWER OPERATED RELIEF VALVES, AVERAGE COOLANT TEMPERATURE AND PRESSURIZER WATER VOLUME vs TIME	
UFSAR FIGURE 14.1-38	REV. No. 22

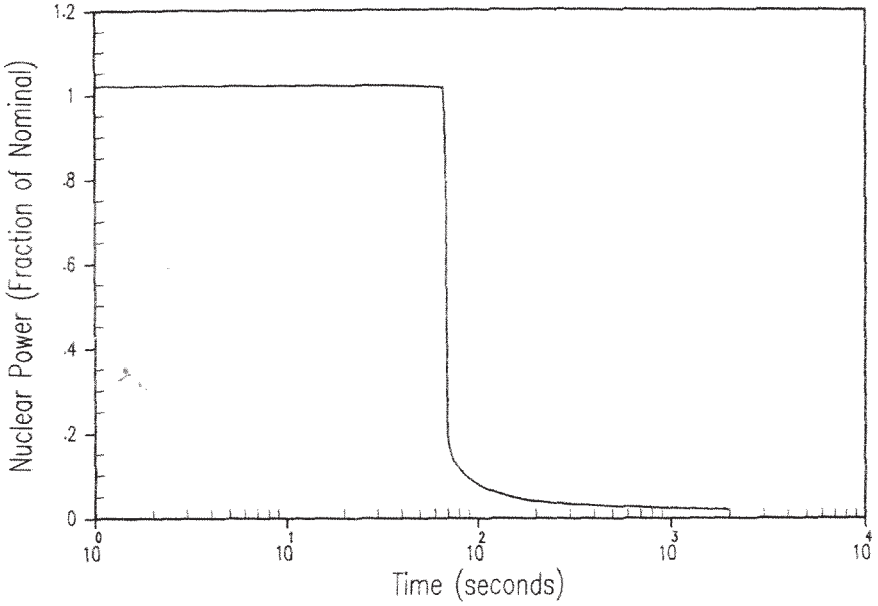


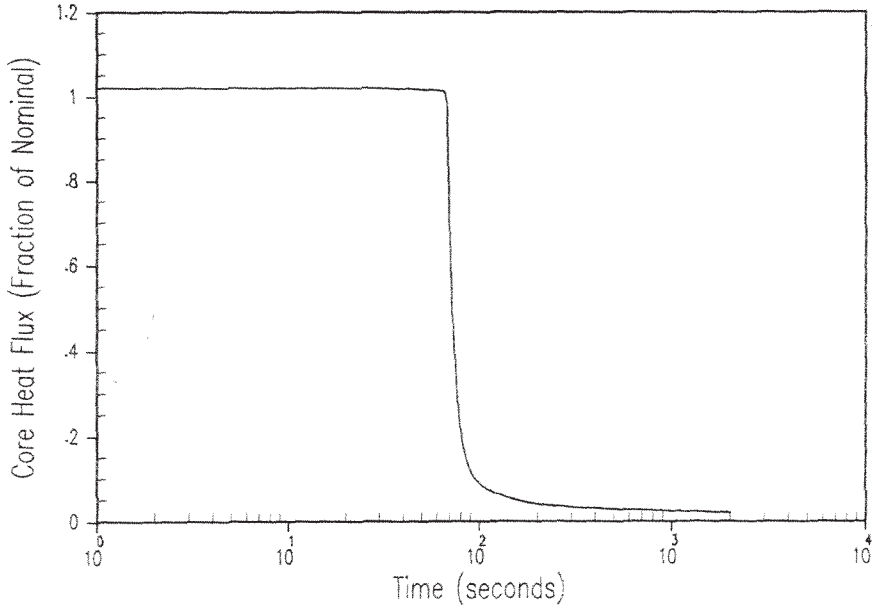
INDIAN POINT UNIT No. 2	
LOSS OF LOAD WITHOUT PRESSURIZER SPRAY AND POWER OPERATED RELIEF VALVES, STEAM PRESSURE, vs TIME	
UFSAR FIGURE 14.1–39	REV. No. 22



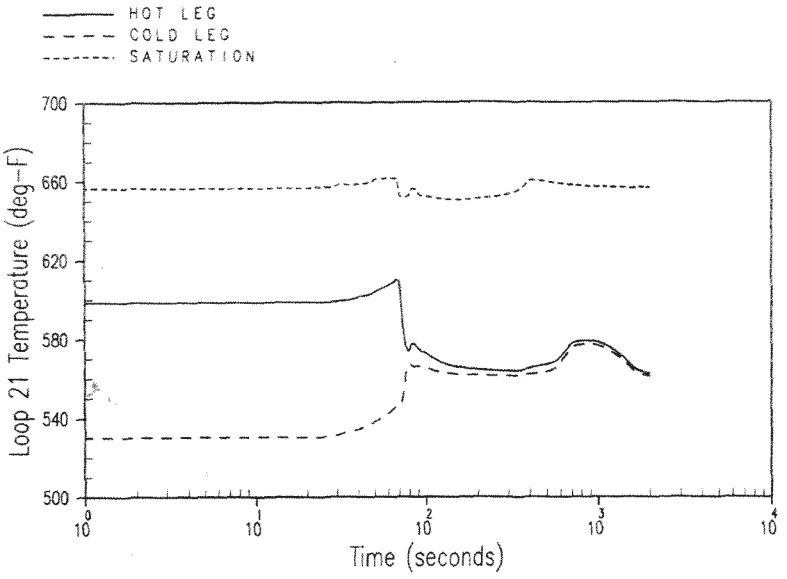


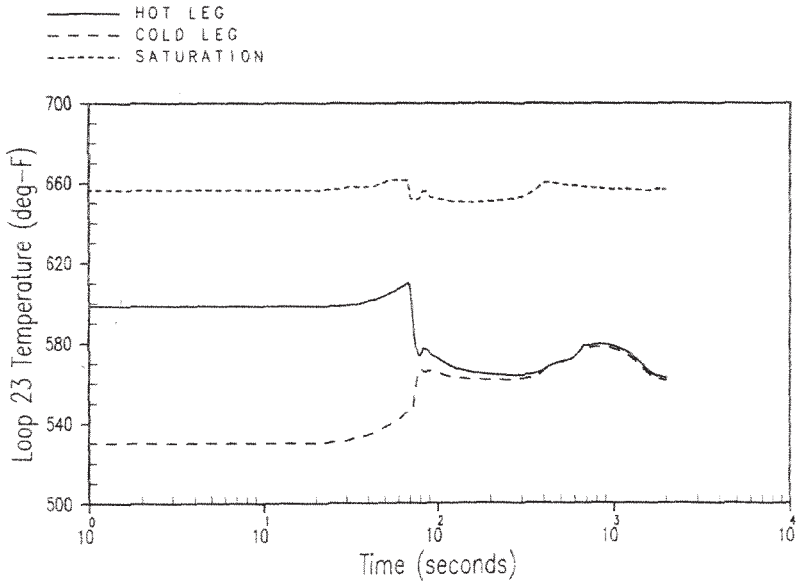
INDIAN POINT UNIT No. 2	
LOSS OF NORMAL FEEDWATER, OFFSITE POWER AVAILABLE, HIGH Tavg PROGRAM, PRESSURIZER PRESSURE AND PRESSURIZER WATER VOLUME vs TIME	
UFSAR FIGURE 14.1-43, sht.1	REV. No. 19



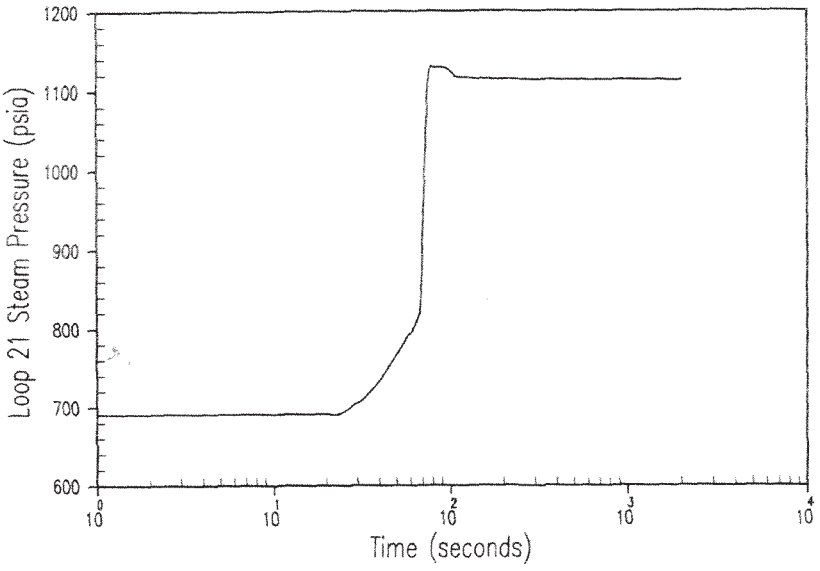


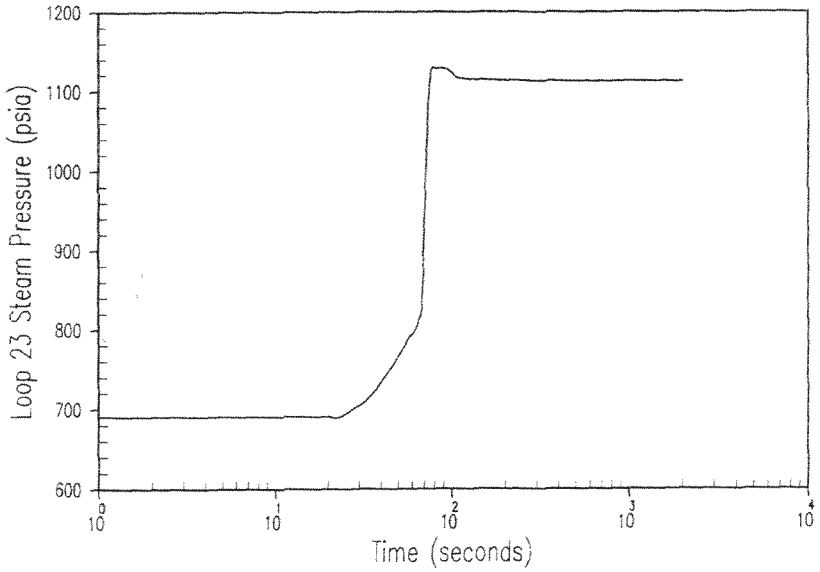
INDIAN POINT UNIT No. 2	
LOSS OF NORMAL FEEDWATER, OFFSITE POWER AVAILABLE, HIGH Tavg PROGRAM, NUCLEAR POWER AND CORE HEAT FLUX vs TIME	
UFSAR FIGURE 14.1-43, sht.2	REV. No. 19



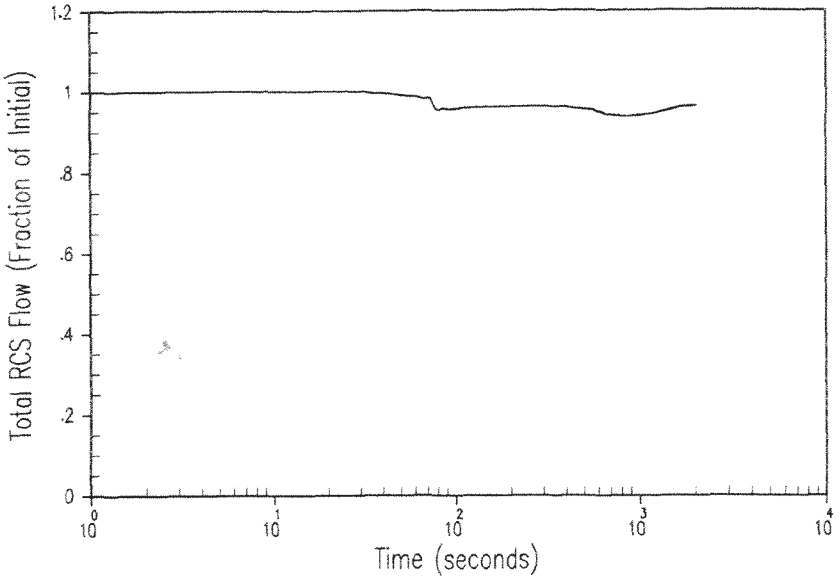


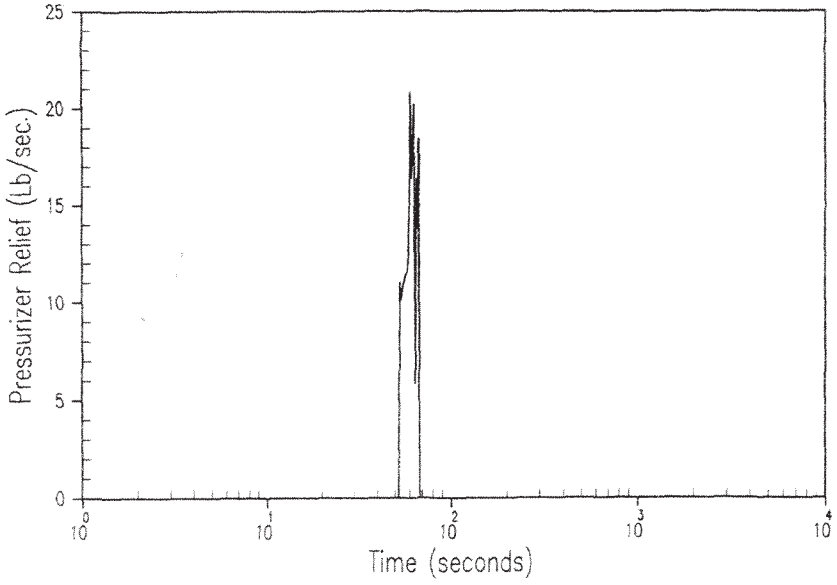
INDIAN POINT UNIT No. 2	
LOSS OF NORMAL FEEDWATER, OFFSITE POWER AVAILABLE, HIGH Tavg PROGRAM, LOOP 21 AND LOOP 23 TEMPERATURE vs TIME	
UFSAR FIGURE 14.1-43, sht.3	REV. No. 19



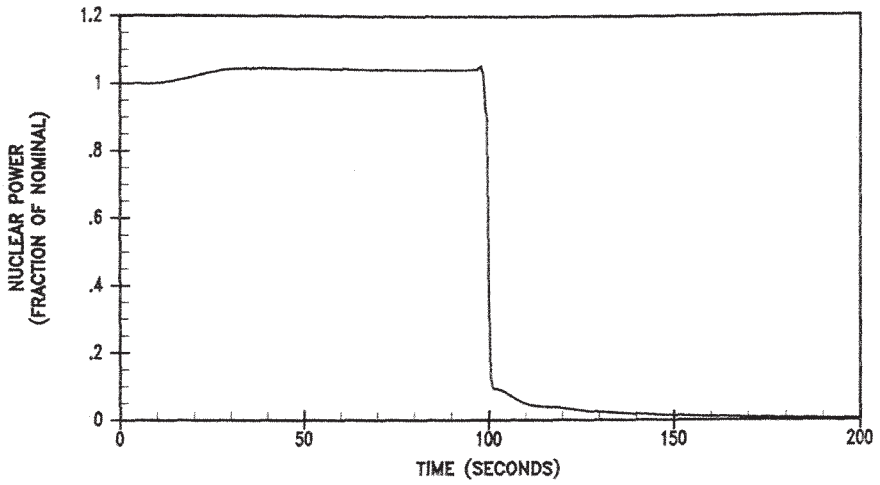


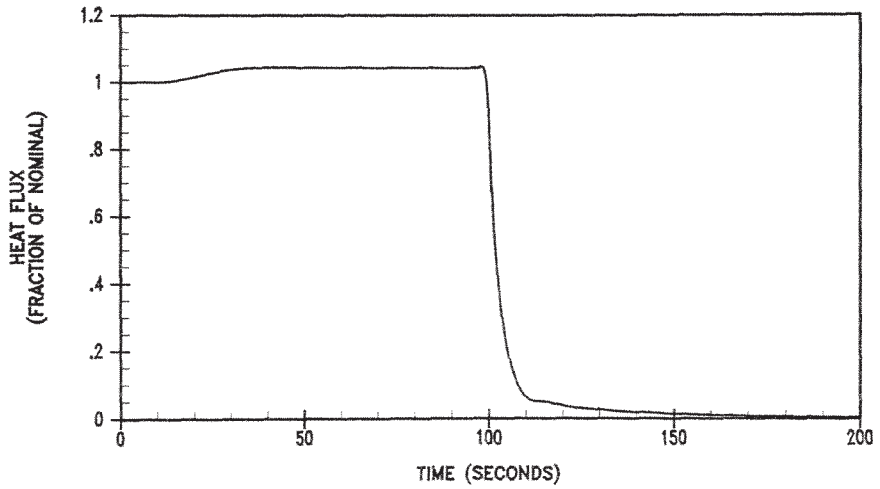
INDIAN POINT UNIT No. 2	
LOSS OF NORMAL FEEDWATER, OFFSITE POWER AVAILABLE, HIGH Tavg PROGRAM, STEAM GENERATOR 21 AND STEAM GENERATOR 23 PRESSURE vs TIME	
UFSAR FIGURE 14.1-43, sht.4	REV. No. 19



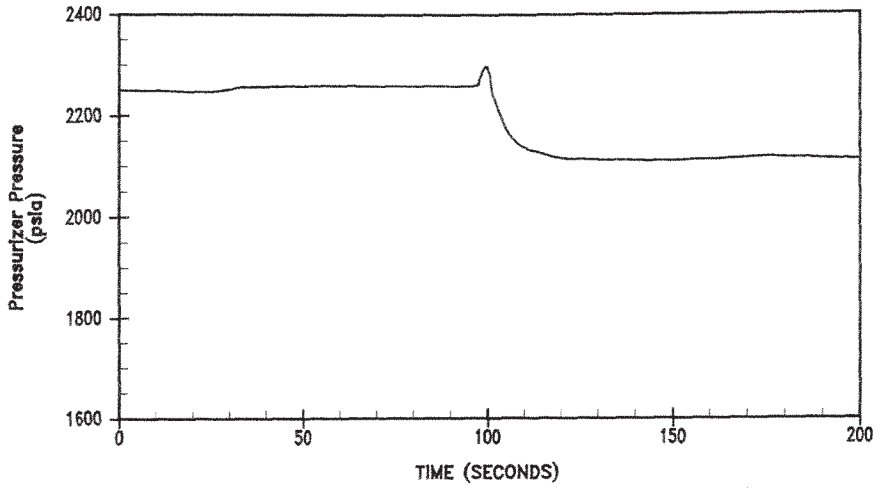


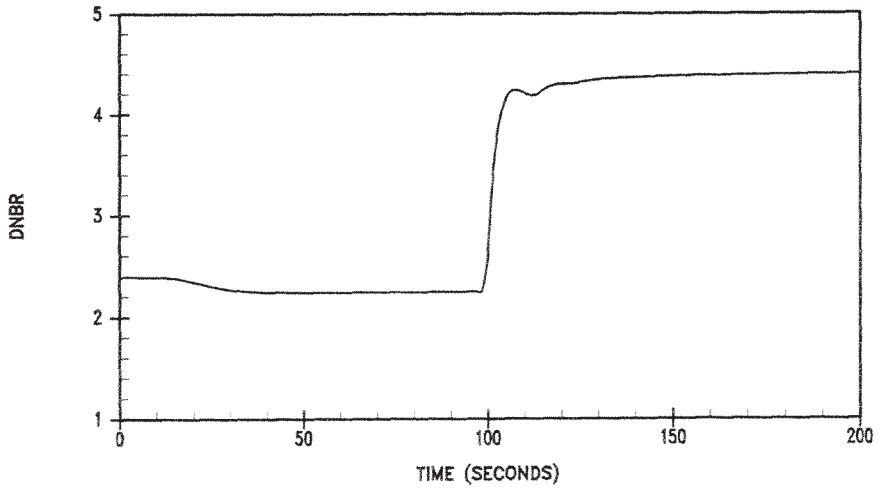
INDIAN POINT UNIT No. 2	
LOSS OF NORMAL FEEDWATER, OFFSITE POWER AVAILABLE, HIGH Tavg PROGRAM ,TOTAL RCS FLOW AND PRESSURIZER RELIEF vs TIME	
UFSAR FIGURE 14.1-43, sht.5	REV. No. 19





INDIAN POINT UNIT No. 2	
FEEDWATER SYSTEM MALFUNCTION EXCESSIVE FEEDWATER FLOW – HFP CONDITIONS MANUAL ROD CONTROL NUCLEAR POWER AND CORE HEAT FLUX vs TIME	
UFSAR FIGURE 14.1–45, sht.1	REV. No. 19

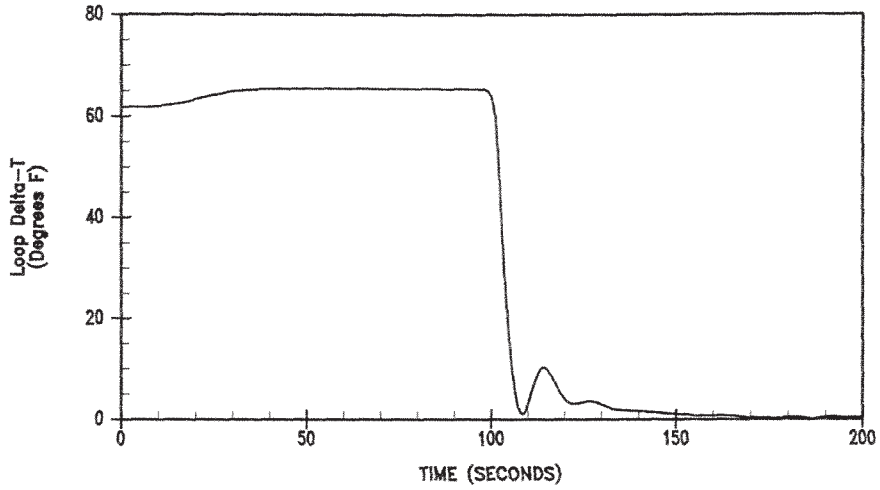


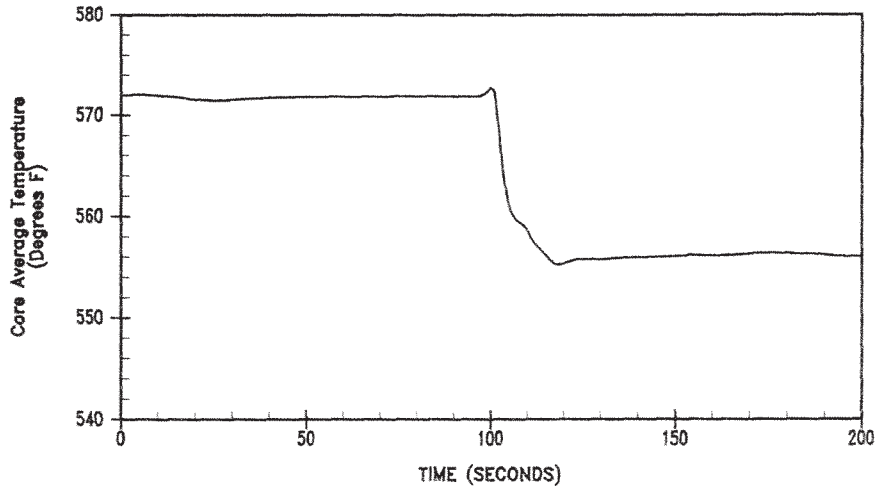


INDIAN POINT UNIT No. 2

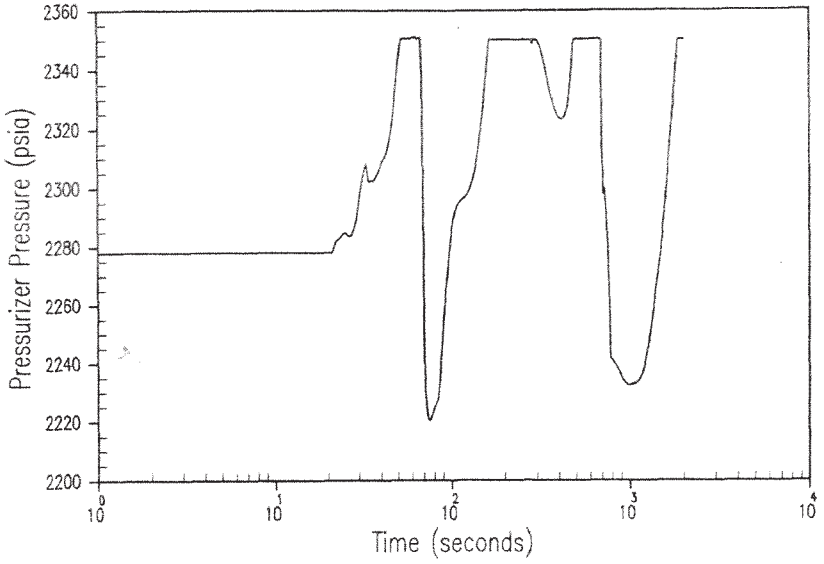
FEEDWATER SYSTEM MALFUNCTION EXCESSIVE FEEDWATER FLOW – HFP CONDITIONS MANUAL ROD CONTROL PRESSURIZER PRESSURE AND DNBR vs TIME

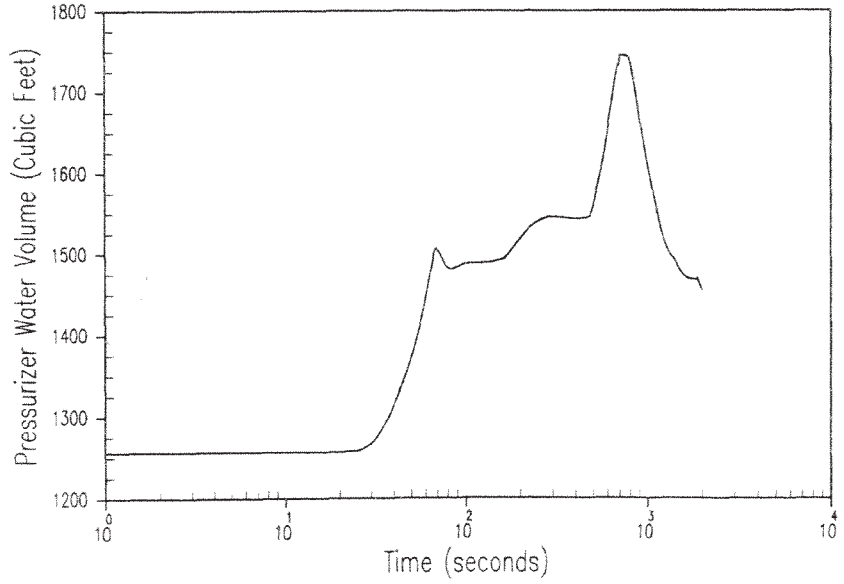
UFSAR FIGURE 14.1-45, sht.2	REV. No. 19



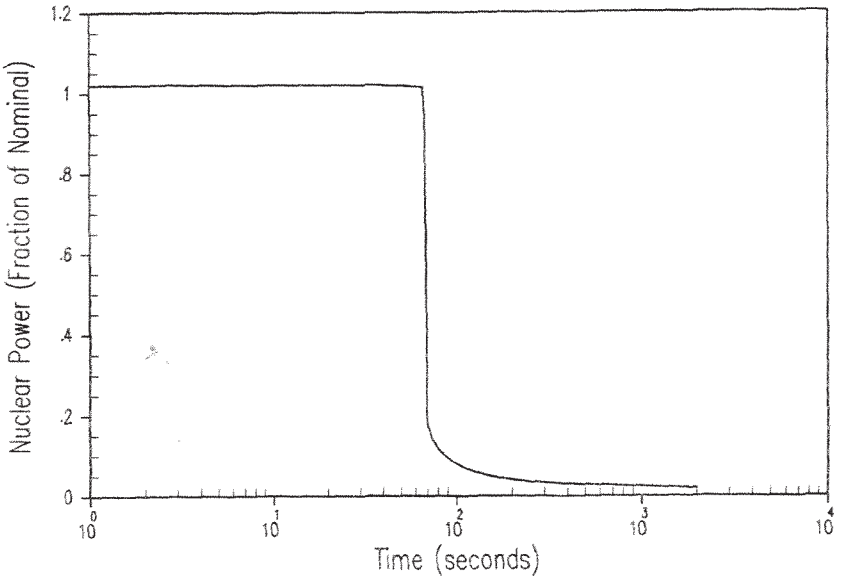


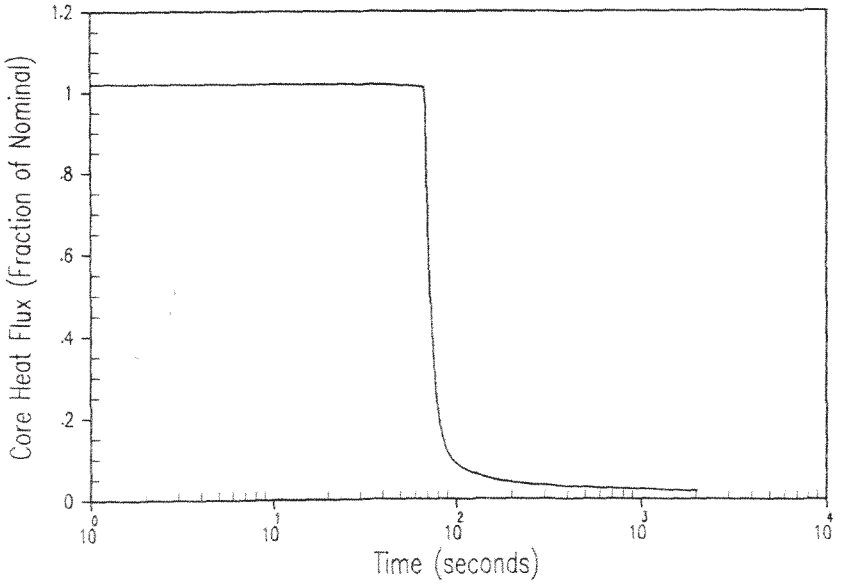
INDIAN POINT UNIT No. 2	
FEEDWATER SYSTEM MALFUNCTION EXCESSIVE FEEDWATER FLOW – HFP CONDITIONS MANUAL ROD CONTROL LOOP DELTA –T, AND CORE Tavg vs TIME	
UFSAR FIGURE 14.1–45, sht.3	REV. No. 19



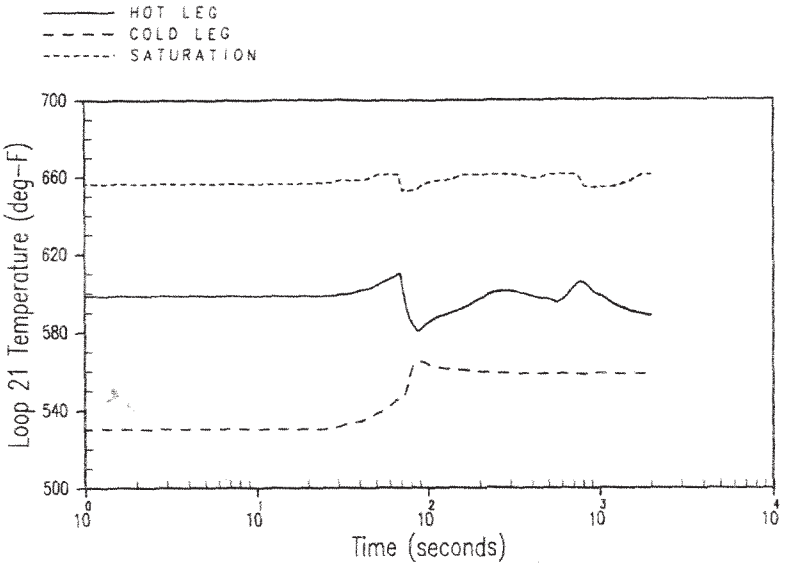


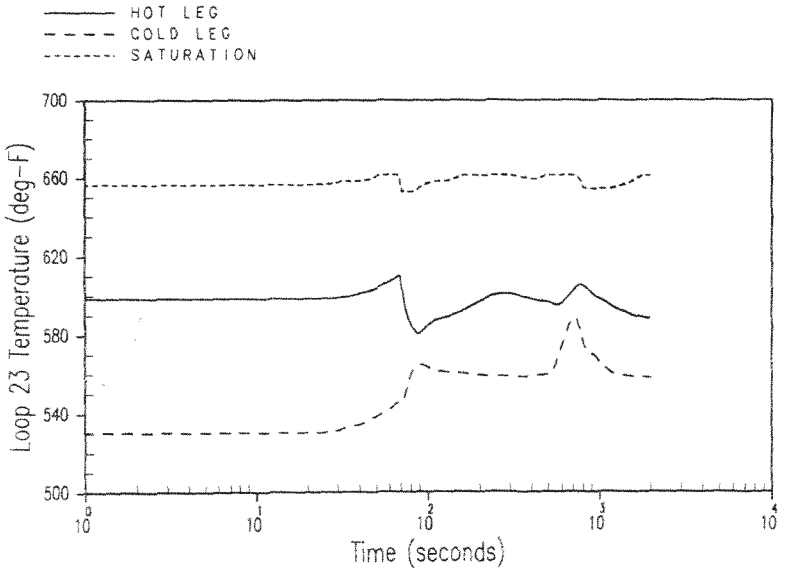
INDIAN POINT UNIT No. 2	
LOSS OF ALL AC POWER, HIGH Tavg PROGRAM, PRESSURIZER PRESSURE AND PRESSURIZER WATER VOLUME vs TIME	
UFSAR FIGURE 14.1–50, sht.1	REV. No. 19



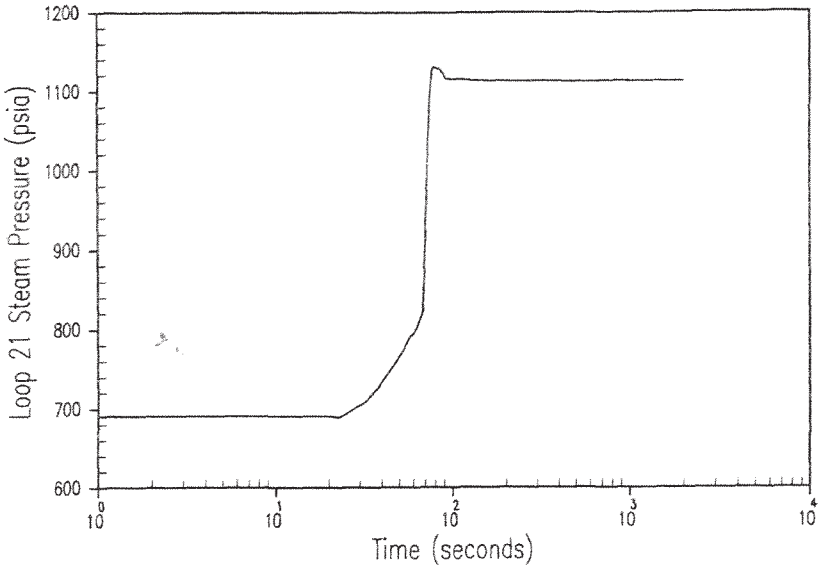


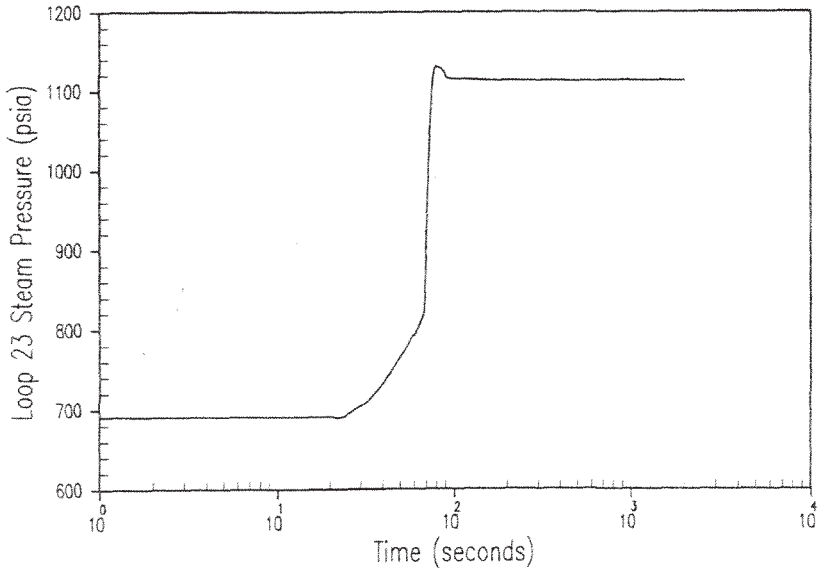
INDIAN POINT UNIT No. 2	
LOSS OF ALL AC POWER, HIGH Tavg PROGRAM, NUCLEAR POWER AND CORE HEAT FLUX vs TIME	
UFSAR FIGURE 14.1-50, sht.2	REV. No. 19



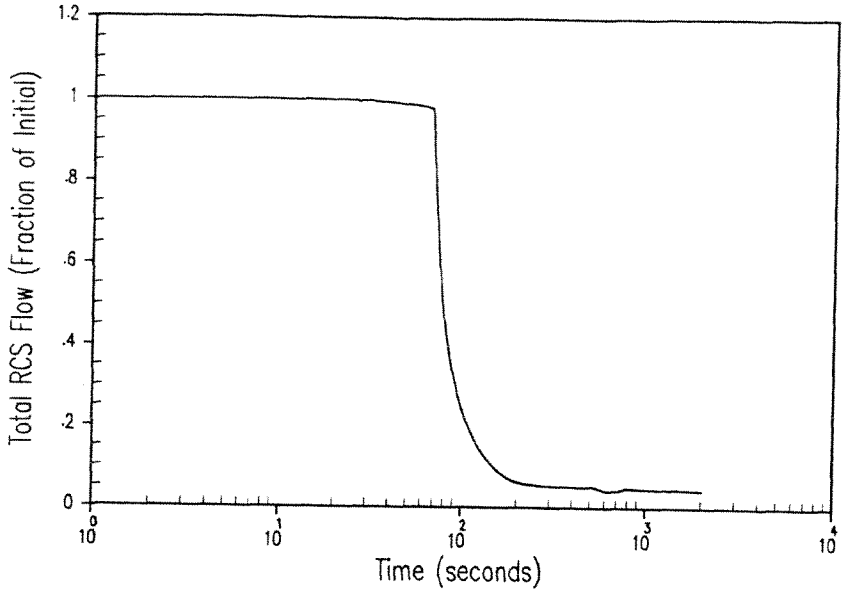


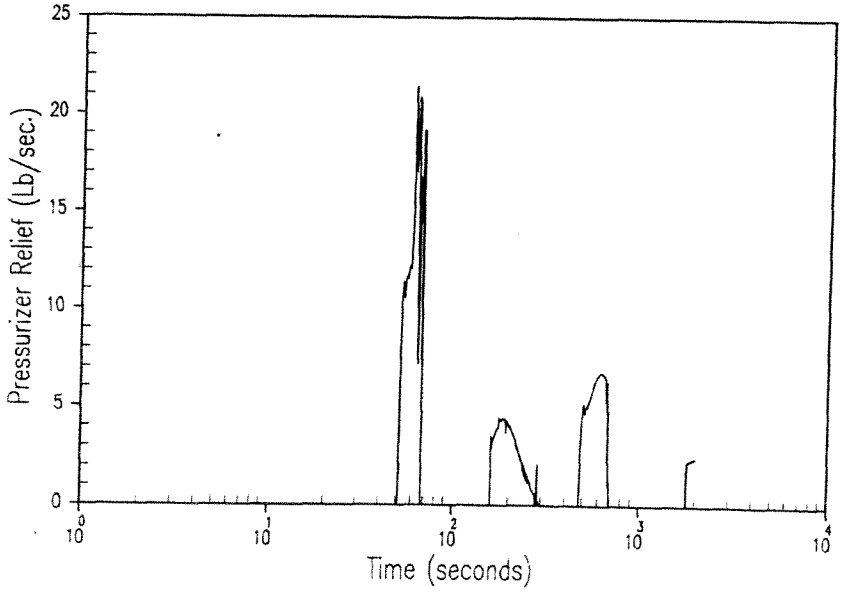
INDIAN POINT UNIT No. 2	
LOSS OF ALL AC POWER TO THE STATION AUXILARIES, HIGH Tavg PROGRAM, LOOP 21 AND LOOP 23 TEMPERATURE vs TIME	
UFSAR FIGURE 14.1-50, sht.3	REV. No. 19



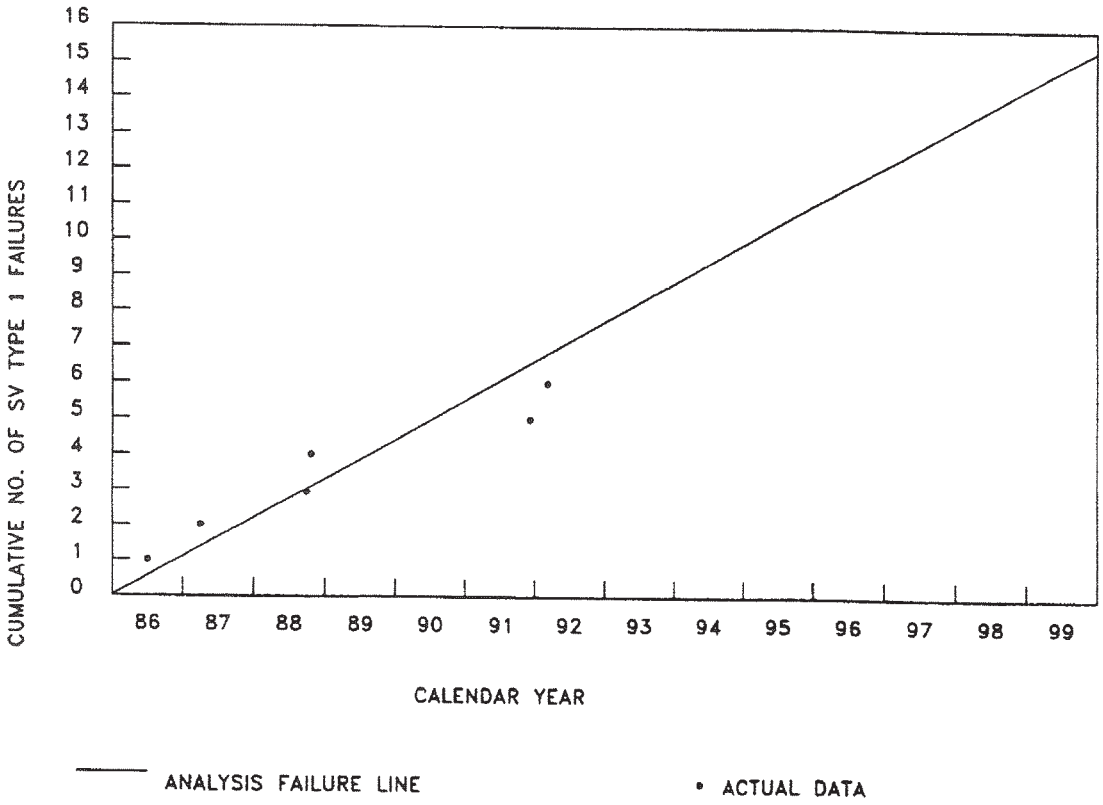


INDIAN POINT UNIT No. 2	
LOSS OF ALL AC POWER TO THE STATION AUXILARIES, HIGH Tavg PROGRAM, LOOP 21 AND LOOP 23 STEAM PRESSURE vs TIME	
UFSAR FIGURE 14.1-50, sht.4	REV. No. 19





INDIAN POINT UNIT No. 2	
LOSS OF ALL AC POWER TO THE STATION AUXILARIES, INTERMEDIATE Tavg PROGRAM, TOTAL RCS FLOW AND PRESSURIZER RELIEF RATE vs TIME	
UFSAR FIGURE 14.1-50, sht.5	REV. No. 19

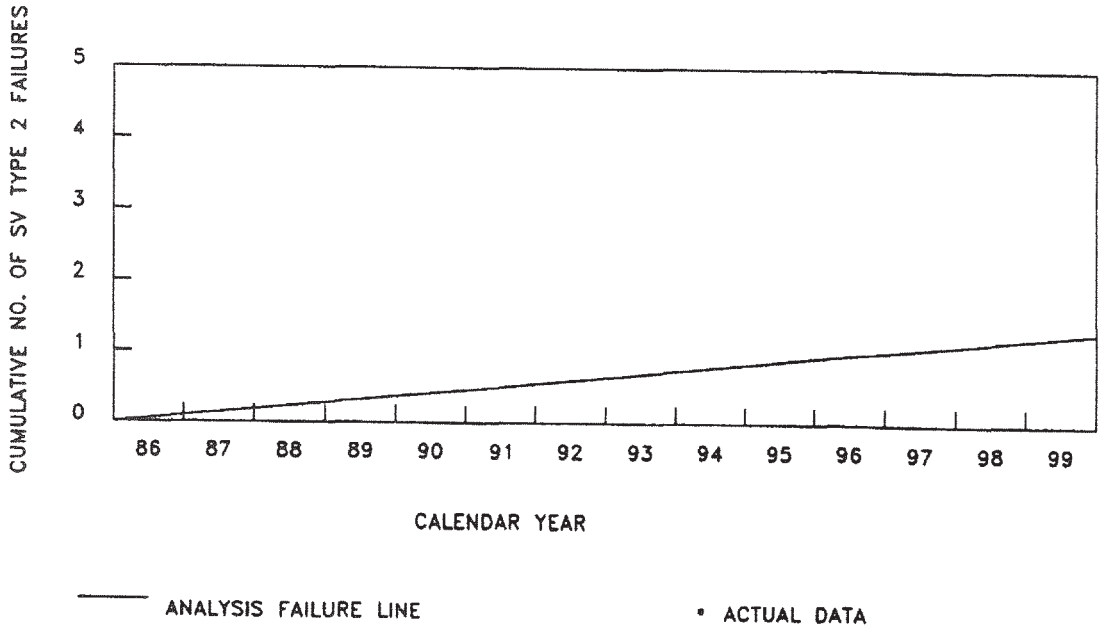


SV TYPE 1 FAILURE RATE = 2.47-06/HR

SLOPE OF ANALYSIS FAILURE LINE = [(SV TYPE 1 F.R.) * (OPERATING HOURS)] / (CALENDAR YEARS)

= [(2.47E-06/HR) * (2.917E+06 HRS)] / (6.42 CAL. YRS.) = 1.1 FAIL./CAL. YR.

INDIAN POINT UNIT No. 2	
UFSAR FIGURE 14.1-62 TRACKING B-95/96 STOP VALVE (SV) TYPE 1 FAILURES STOP VALVE DISC FAILS	
MIC. No. 2001MB1537	REV. No. 17A

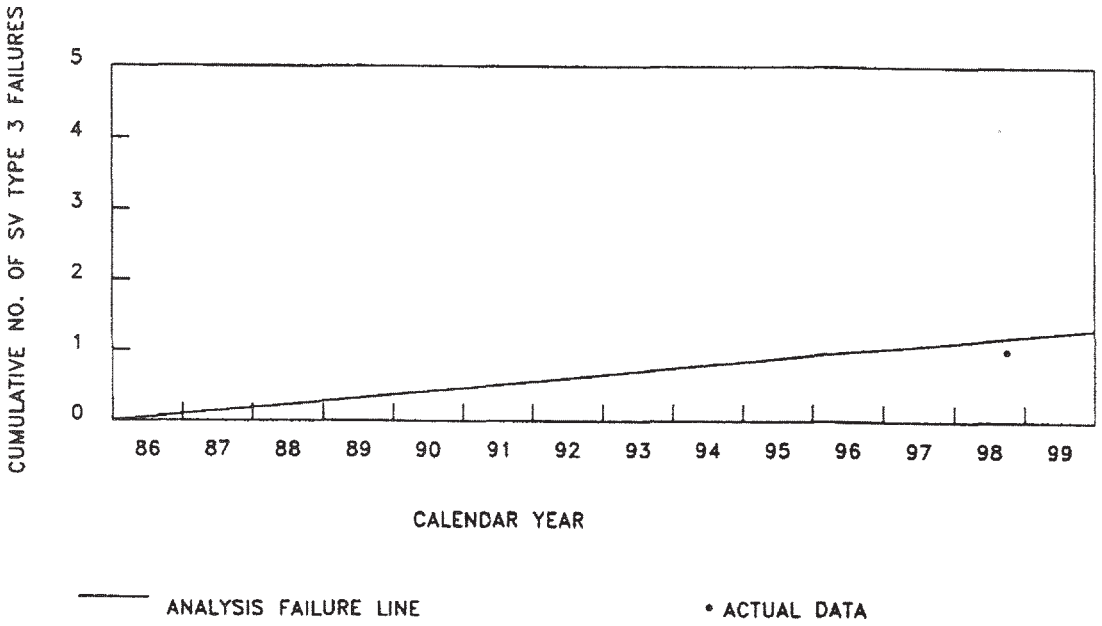


SV TYPE 2 FAILURE RATE = 2.05-07/HR

SLOPE OF ANALYSIS FAILURE LINE = [(SV TYPE 2 F.R.) * (OPERATING HOURS)] / (CALENDAR YEARS)

= [(2.05E-07/HR) * (2.917E+06 HRS)] / (6.42 CAL. YRS.) = 0.093 FAIL./CAL. YR.

INDIAN POINT UNIT No. 2	
UFSAR FIGURE 14.1-63 TRACKING B-95/96 STOP VALVE (SV) TYPE 2 FAILURES STOP VALVE SPRING FAILS	
MIC. No. 2001MB1538	REV. No. 17A

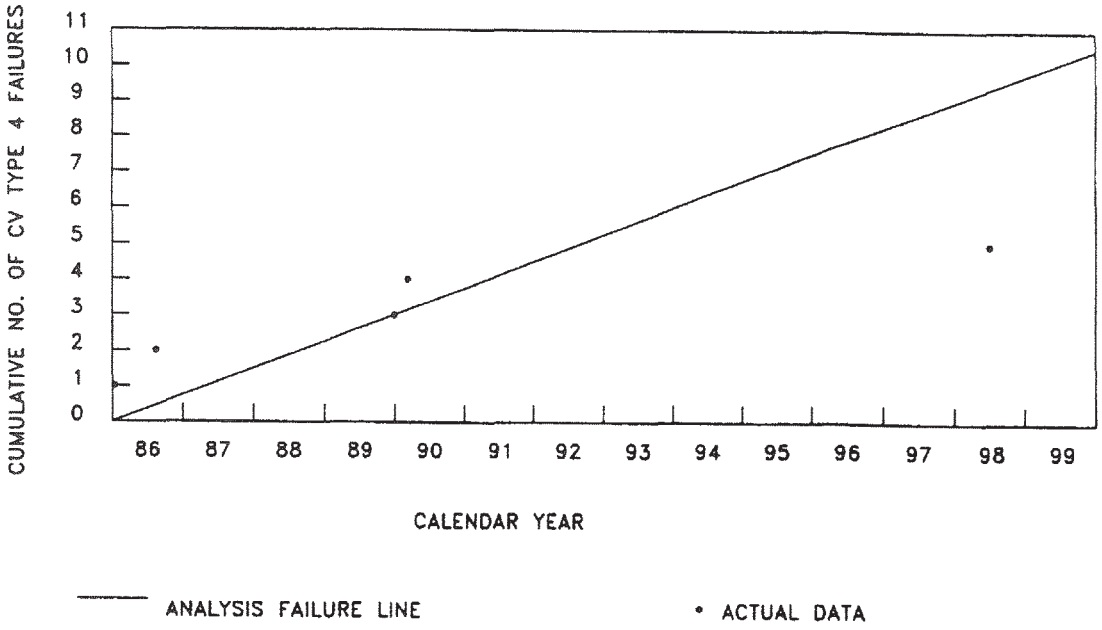


SV TYPE 3 FAILURE RATE = 2.05-07/HR

SLOPE OF ANALYSIS FAILURE LINE = [(SV TYPE 3 F.R.) * (OPERATING HOURS)] / (CALENDAR YEARS)

= [(2.05E-07/HR) * (2.917E+06 HRS)] / (6.42 CAL. YRS.) = 0.093 FAIL./CAL. YR.

INDIAN POINT UNIT No. 2	
UFSAR FIGURE 14.1-64 TRACKING B-95/96 STOP VALVE (SV) TYPE 3 FAILURES STOP VALVE STICKS OPEN	
MIC. No. 2001MB1539	REV. No. 17A

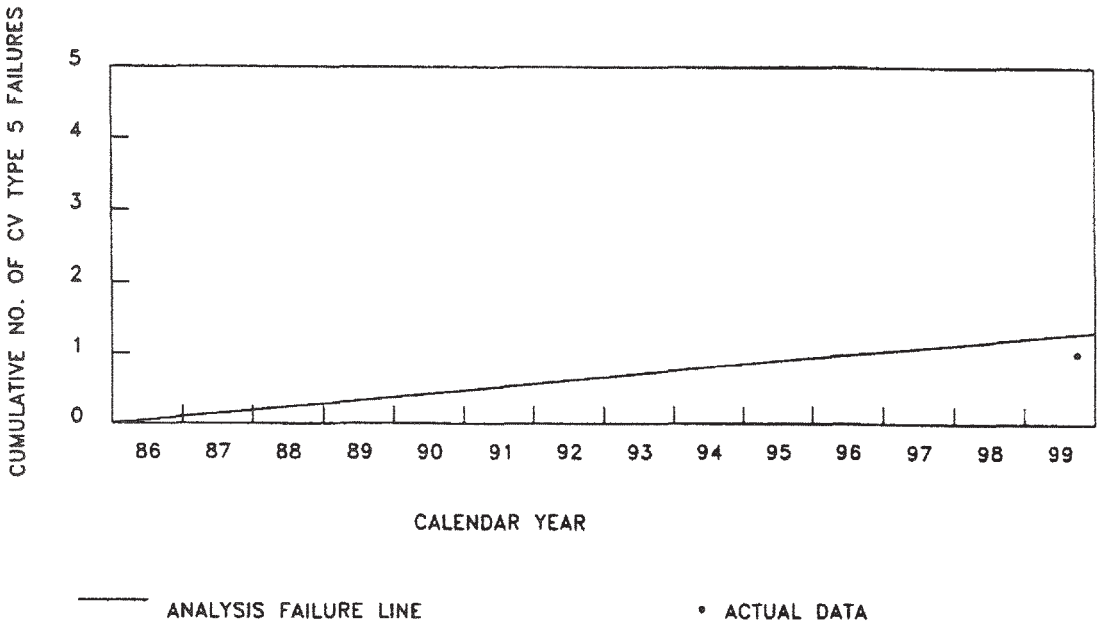


CV TYPE 4 FAILURE RATE = 1.22-06/HR

SLOPE OF ANALYSIS FAILURE LINE = [(CV TYPE 4 F.R.) * (OPERATING HOURS)] / (CALENDAR YEARS)

= [(1.22E-06/HR) * (3.925E+06 HRS)] / (6.42 CAL. YRS.) = 0.75 FAIL./CAL. YR.

INDIAN POINT UNIT No. 2	
UFSAR FIGURE 14.1-65 TRACKING B-95/96 CONTROL VALVE (CV) TYPE 4 FAILURES CONTROL VALVE SPRING BOLT FAILS	
MIC. No. 2001MB1540	REV. No. 17A



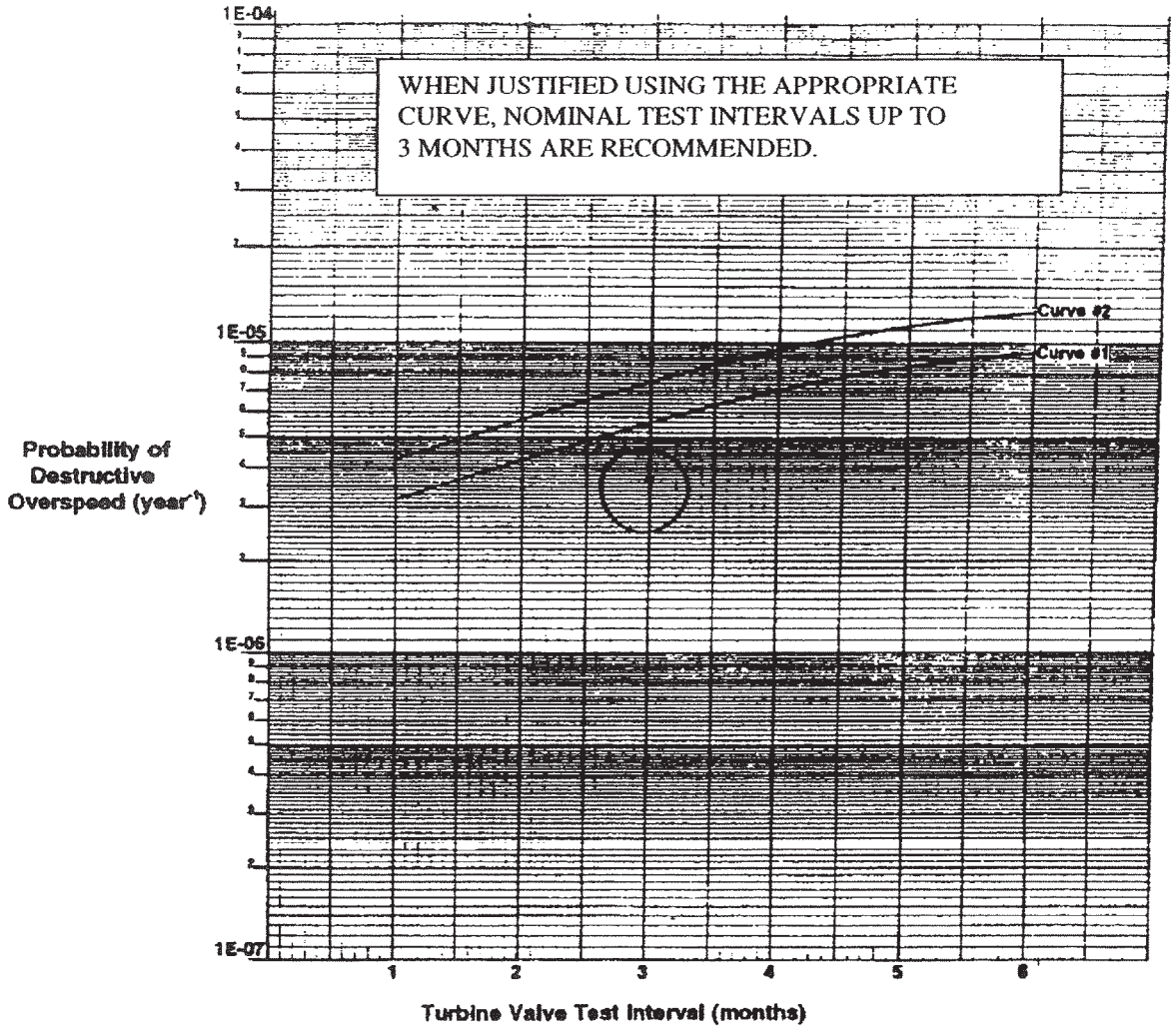
CV TYPE 5 FAILURE RATE = 1.53-07/HR

SLOPE OF ANALYSIS FAILURE LINE = [(CV TYPE 5 F.R.) * (OPERATING HOURS)] / (CALENDAR YEARS)

= [(1.53E-07/HR) * (3.925E+06 HRS)] / (6.42 CAL. YRS.) = 0.094 FAIL./CAL. YR.

INDIAN POINT UNIT No. 2	
UFSAR FIGURE 14.1-66 TRACKING B-95/96 CONTROL VALVE (CV) TYPE 5 FAILURES CONTROL VALVE STICKS OPEN	
MIC. No. 2001MB1541	REV. No. 17A

Initial Case



Curve #1: Surveillance of stop valve discs occurs every 18 months. Testing of valve freedom of movement occurs at intervals of 1 to 6 months (horizontal axis).

Curve #2: Surveillance of stop valve discs occurs every 24 months. Testing of valve freedom of movement occurs at intervals of 1 to 6 months (horizontal axis).

- Estimated 3.7E-06/r for 3 month test interval for Curve #2

INDIAN POINT UNIT No. 2	
UFSAR FIGURE 14.1-67 ANNUAL FREQUENCY OF DESTRUCTIVE OVERSPEED FOR VARIOUS BB-95/96 TURBINE VALVE TEST INTERVAL (1-ON-1 SV-CV TURBINE / 1 OUT OF 4 STEAM PATHS)	
MIC. No. 2001MB1542	REV. No. 17A