

Figure 15.0-1 Core Limits and Overpower-Overtemperature Delta T Setpoints ( $T_{ref} = 576.0^\circ\text{F}$ )

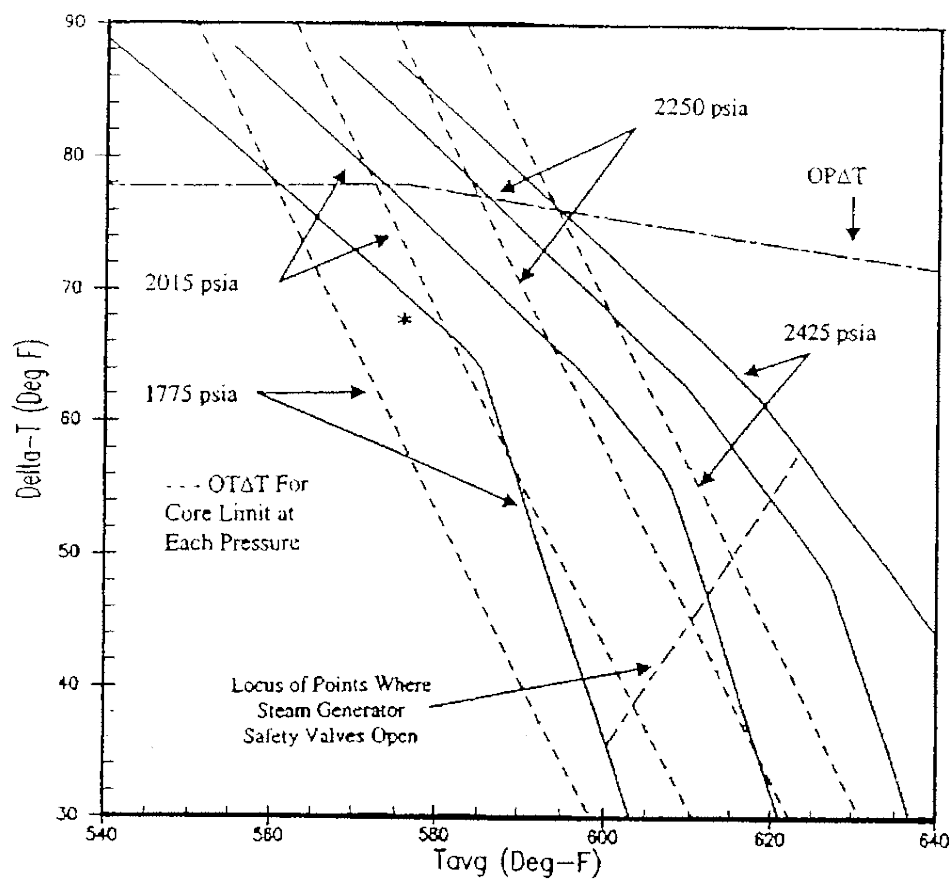
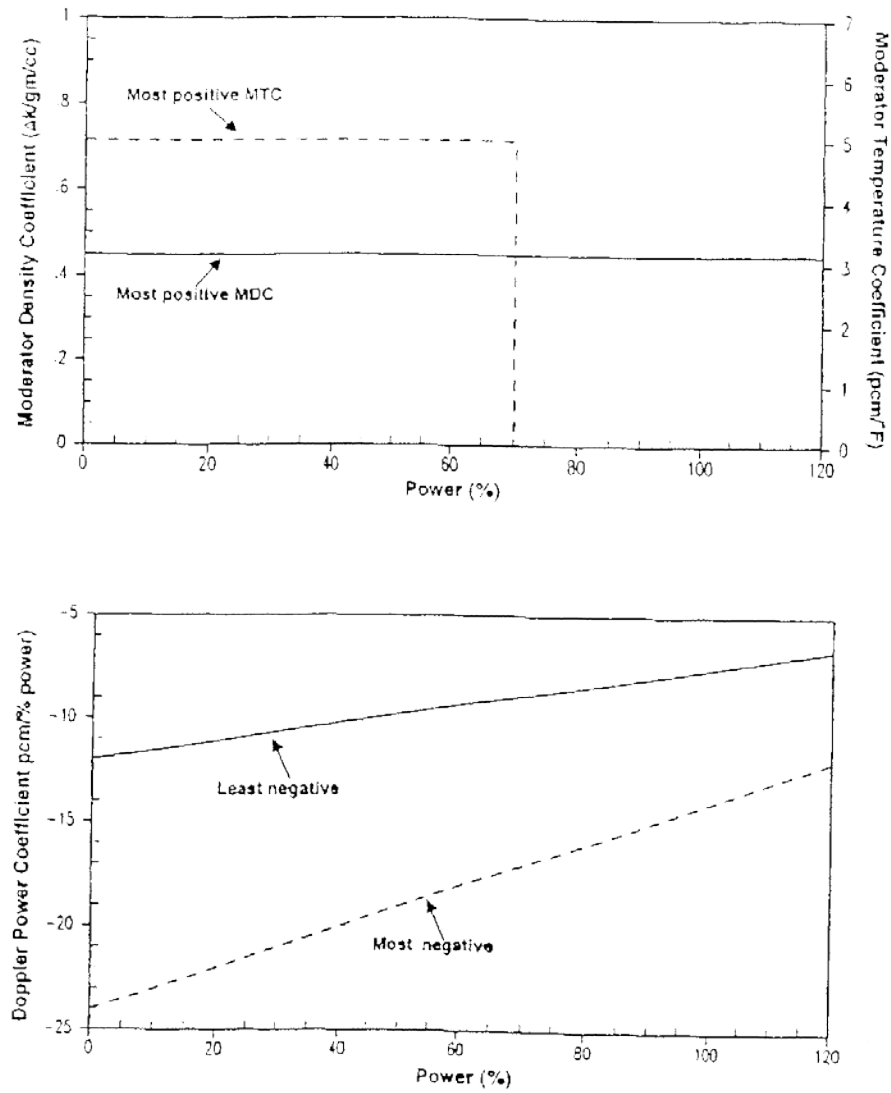
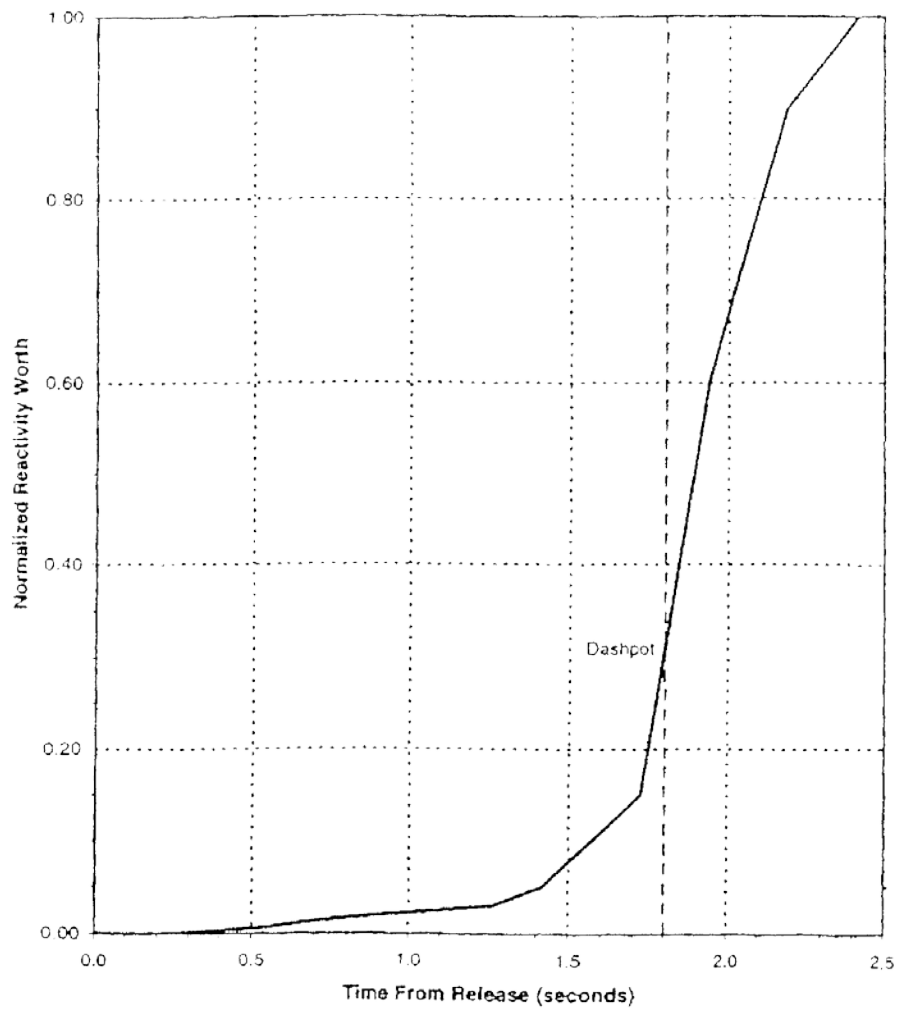


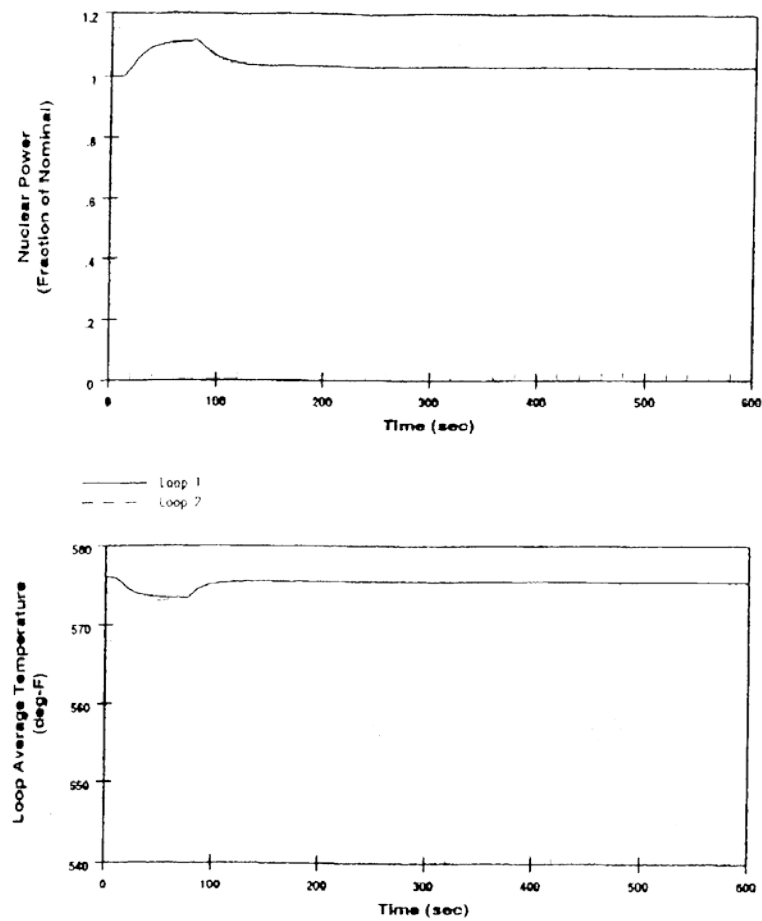
Figure 15.0-2 Reactivity Coefficients Used in Non-LOCA Safety Analysis



*Figure 15.0-3 Reactivity Insertion Scram Curves*



*Figure 15.1-1 Feedwater Flow Increase at Full Power, Nuclear Power and Loop Average Temperature Versus Time*



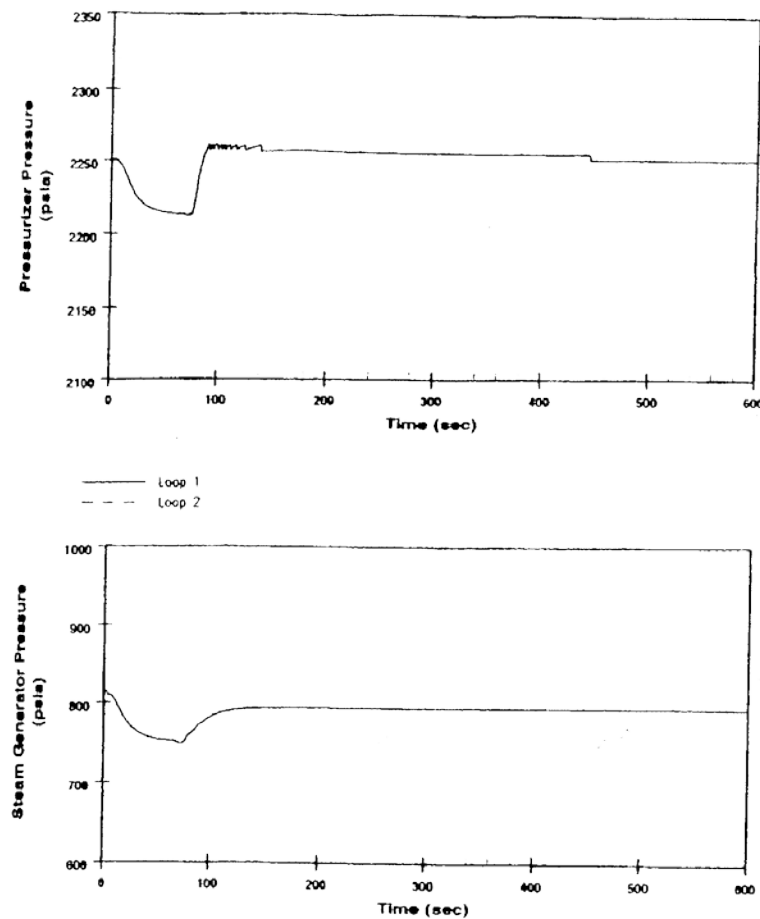
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Figure 15.1-1

*Feedwater Flow Increase at Full Power, Nuclear Power and  
Loop Average Temperature Versus Time*



*Figure 15.1-2 Feedwater Flow Increase at Full Power, Pressurizer Pressure and Steam Generator Pressure Versus Time*

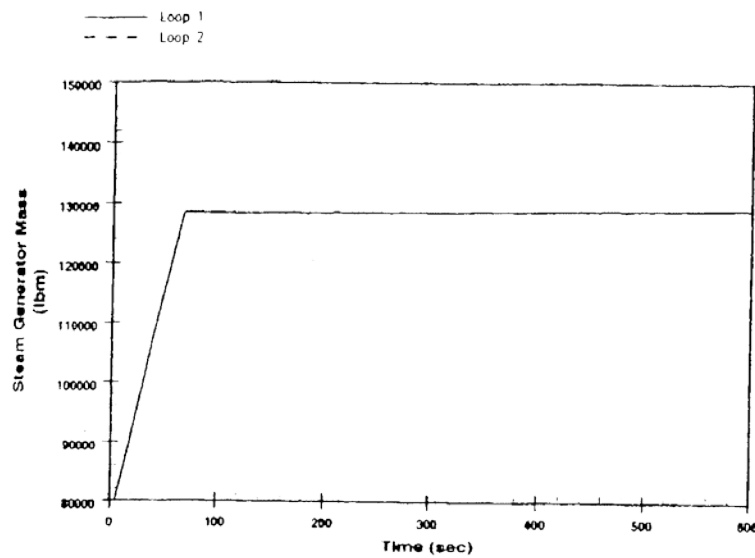


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Figure 15.1-2

*Feedwater Flow Increase at Full Power, Pressurizer Pressure  
and Steam Generator Pressure Versus Time*

*Figure 15.1-3 Feedwater Flow Increase at Full Power, Steam Generator Mass Versus Time*



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Figure 15.1-3

*Feedwater Flow Increase at Full Power, Steam Generator  
Mass Versus Time*

*Figure 15.1-4 Steam Line Rupture, Multiplication Factor Versus Core Average Temperature  
(Calculated at 1050 psia)*

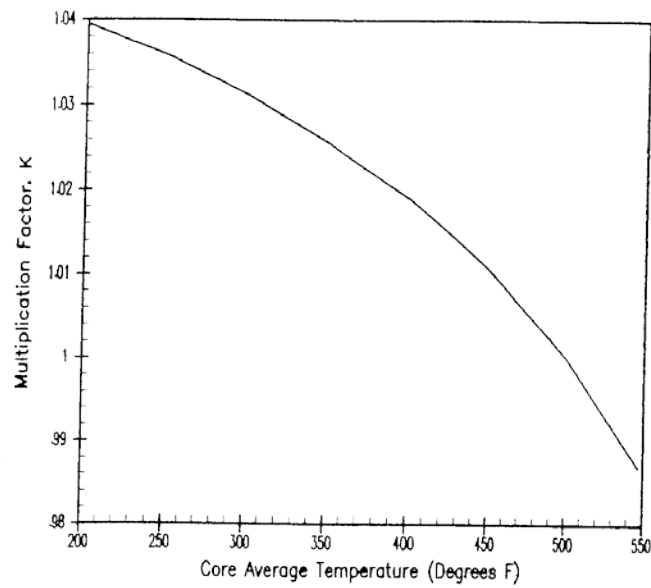
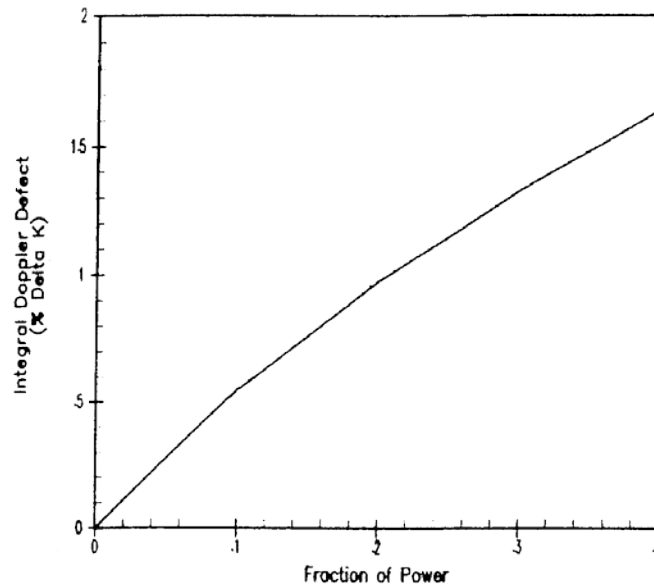
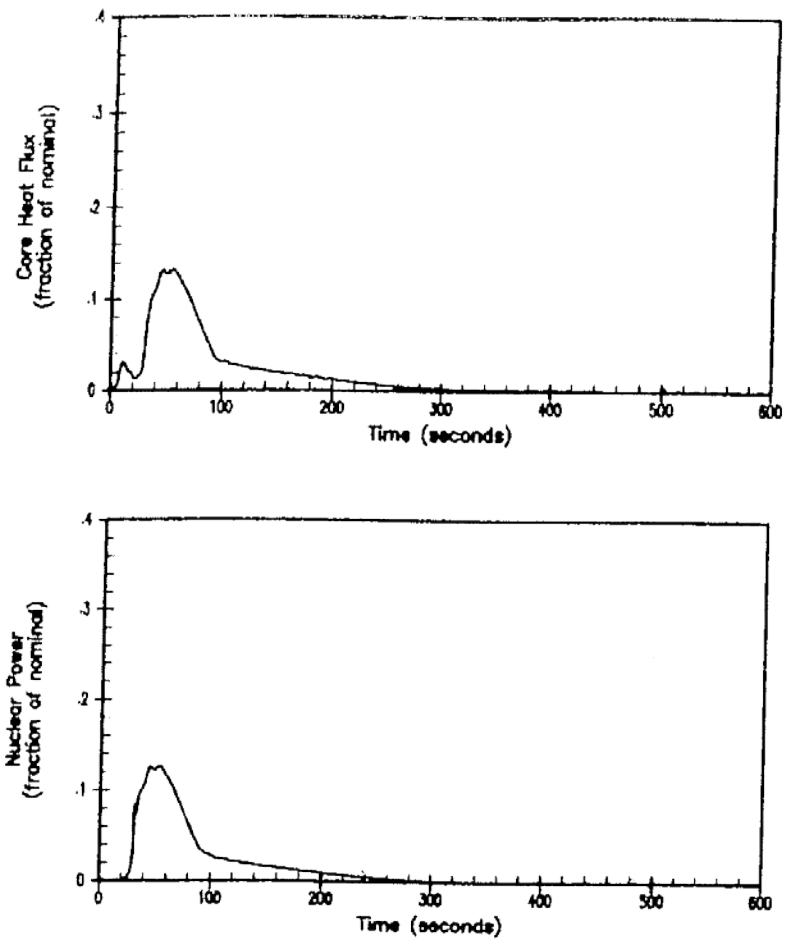


Figure 15.1-5 Steam Line Rupture, Integrated Doppler Defect Versus Fraction of Power

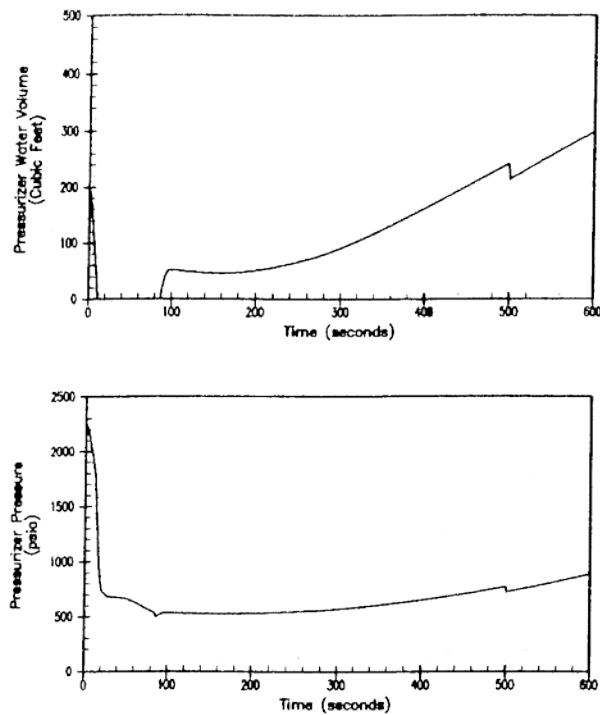


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Figure 15.1-5 Steam Line Rupture, Integral Doppler Defect Versus Fraction of Power

*Figure 15.1-6 Steam Line Rupture, 1.4ft<sup>2</sup> Break with Power; Two Loops in Service, Core Heat Flux and Nuclear Power Versus Time*



*Figure 15.1-7 Steam Line Rupture, 1.4ft<sup>2</sup> Break with Power, Two Loops in Service, Pressurizer Water Volume and Pressurizer Pressure Versus Time*

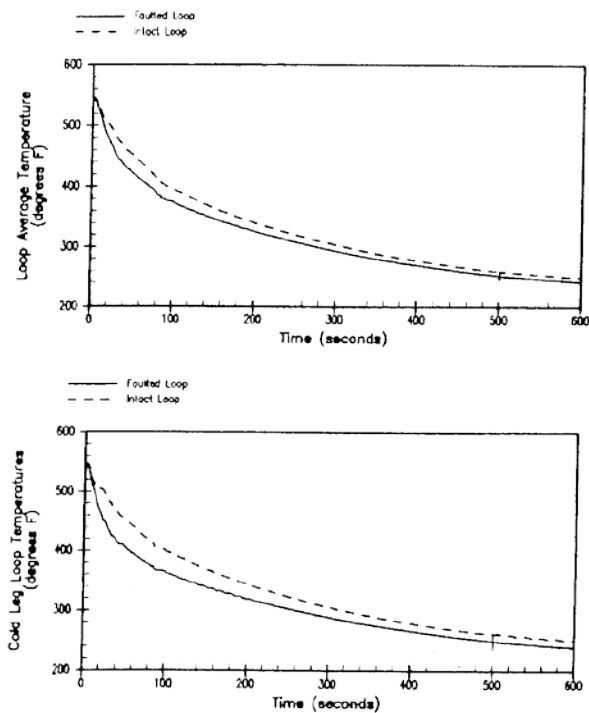


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Figure 15.1-7

*Steam Line Rupture, 1.4ft<sup>2</sup> Break with Power, Two Loops in Service,  
Pressurizer Water Volume and Pressurizer Pressure Versus Time*

Figure 15.1-8 Steam Line Rupture, 1.4ft<sup>2</sup> Break with Power, Two Loops in Service, Loop  $T_{AVG}$  and Cold Leg Loop Temperature Versus Time

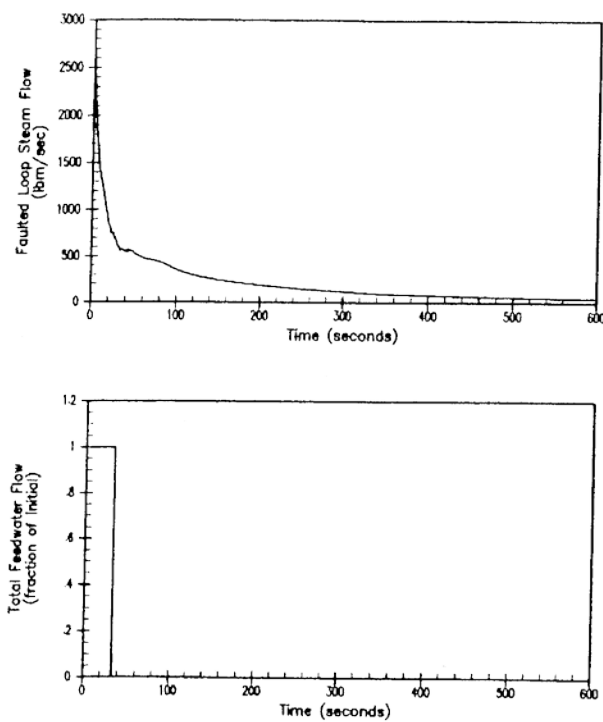


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Figure 15.1-8

Steam Line Rupture, 1.4ft<sup>2</sup> Break with Power, Two Loops in Service,  
Loop  $T_{AVG}$  and Cold Leg Loop Temperature Versus Time

*Figure 15.1-9 Steam Line Rupture, 1.4ft<sup>2</sup> Break with Power, Two Loops in Service, Faulted Loop Steam Flow and Total Feedwater Flow Versus Time*



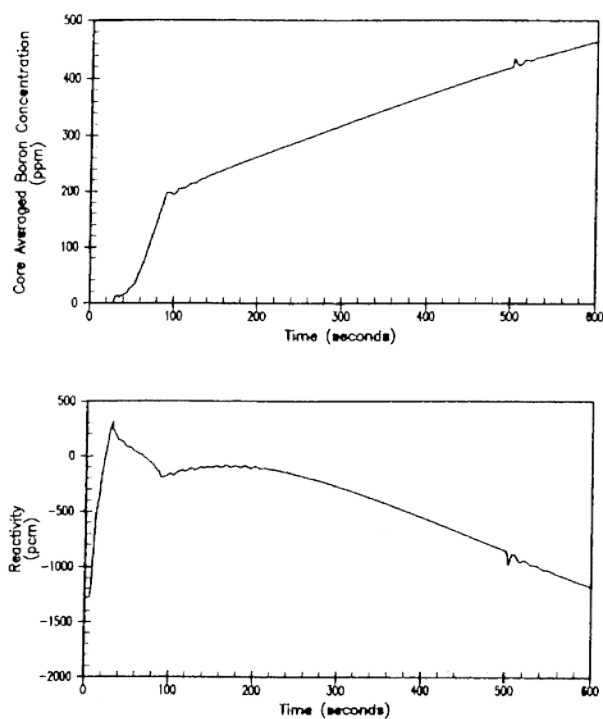
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Figure 15.1-9

*Steam Line Rupture, 1.4ft<sup>2</sup> Break with Power, Two Loops in Service,  
Faulted Loop Steam Flow and Total Feedwater Flow Versus Time*



*Figure 15.1-10 Steam Line Rupture, 1.4ft<sup>2</sup> Break with Power, Two Loops in Service, Core Averaged Boron and Reactivity Versus Time*

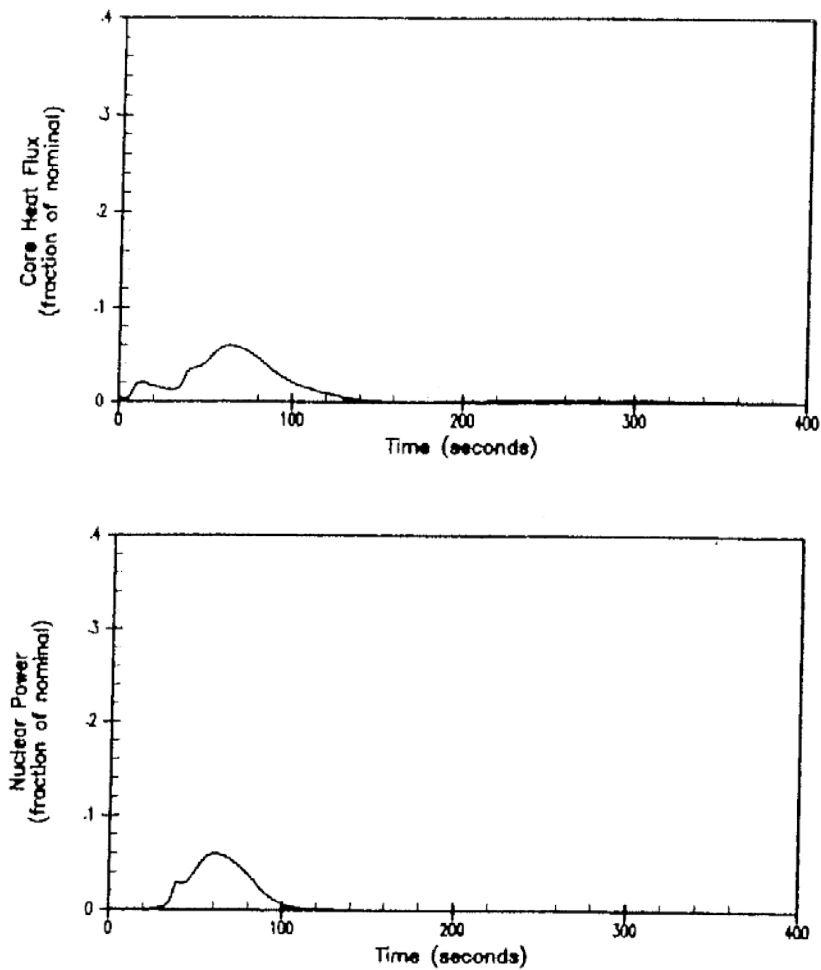


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Figure 15.1-10

*Steam Line Rupture, 1.4ft<sup>2</sup> Break with Power, Two Loops in Service,  
Core Averaged Boron and Reactivity Versus Time*

*Figure 15.1-11 Steam Line Rupture, 1.4ft<sup>2</sup> Break Without Power, Two Loops in Service, Core Heat Flux and Nuclear Power Versus Time*



*Figure 15.1-12 Steam Line Rupture, 1.4ft<sup>2</sup> Break Without Power, Two Loops in Service, Pressurizer Water Volume and Pressurizer Pressure Versus Time*

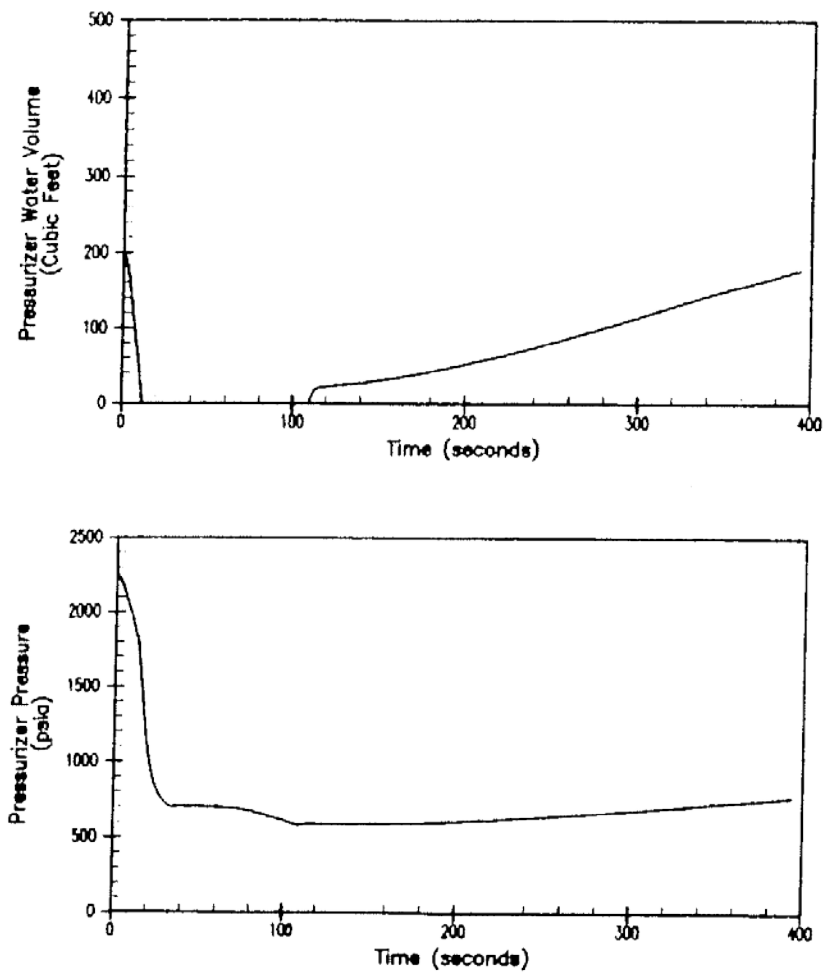
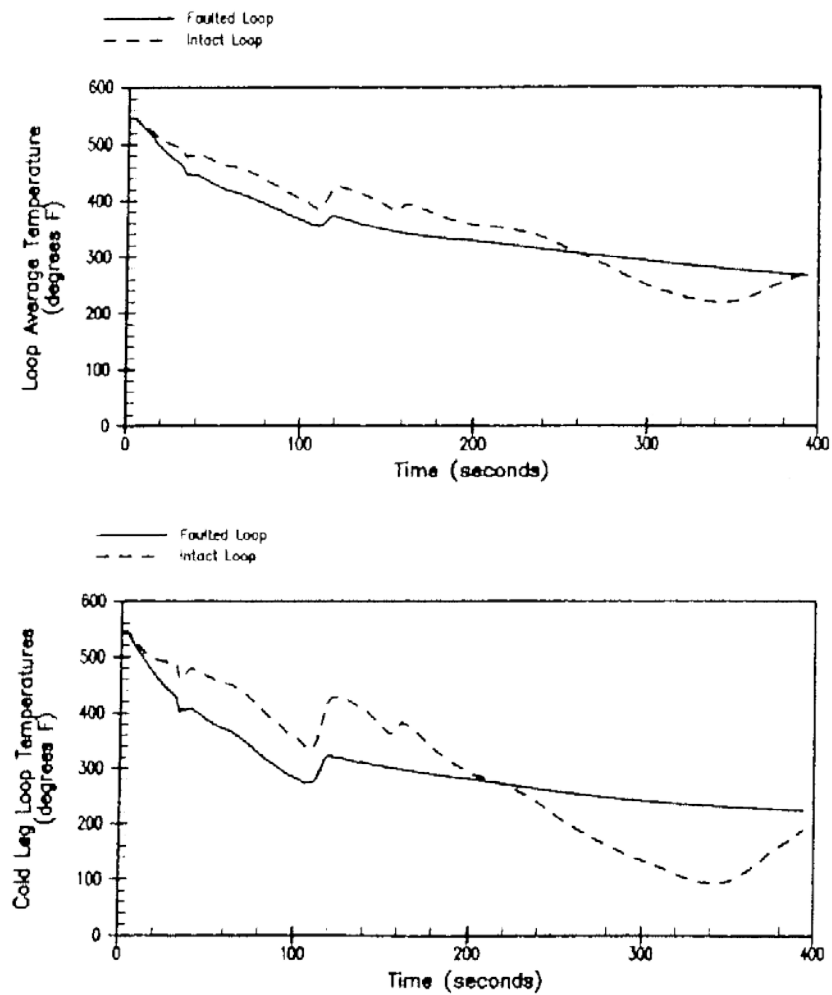
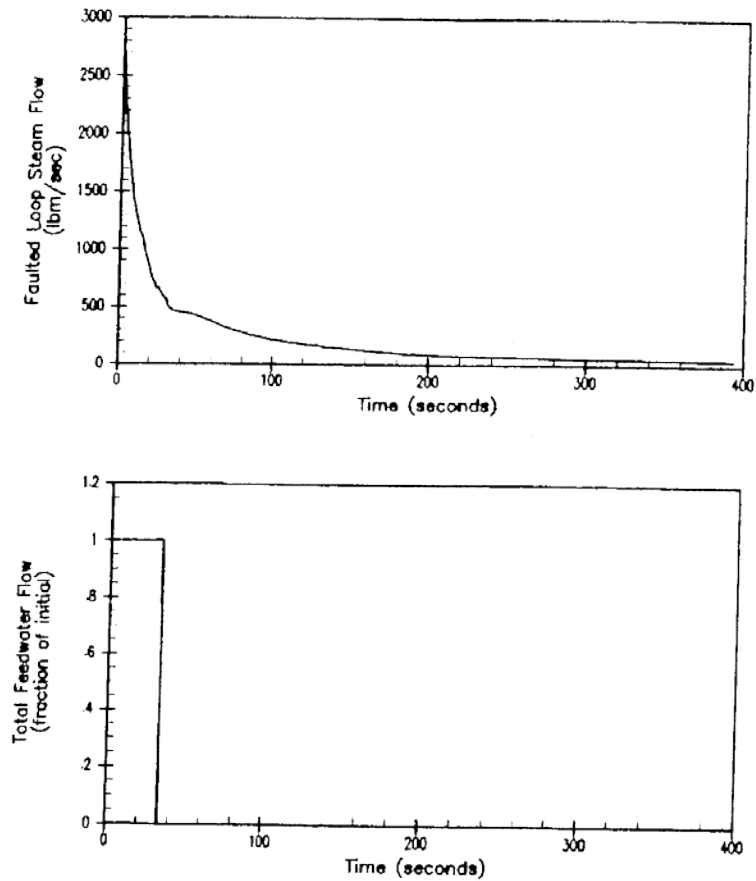


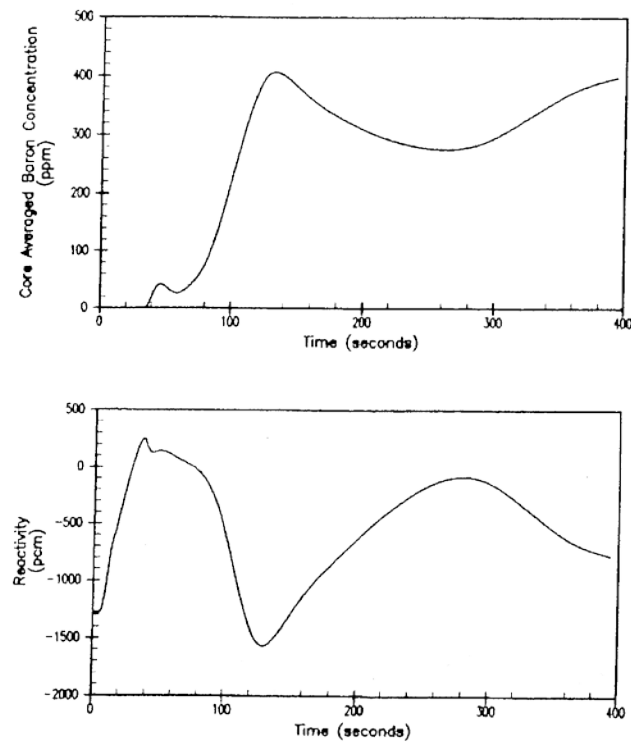
Figure 15.1-13 Steam Line Rupture, 1.4ft<sup>2</sup> Break Without Power, Two Loops in Service, Loop  $T_{AVG}$  and Cold Leg Loop Temperatures Versus Time



*Figure 15.1-14 Steam Line Rupture, 1.4ft<sup>2</sup> Break Without Power, Two Loops in Service, Faulted Loop Steam Flow and Total Feedwater Flow Versus Time*

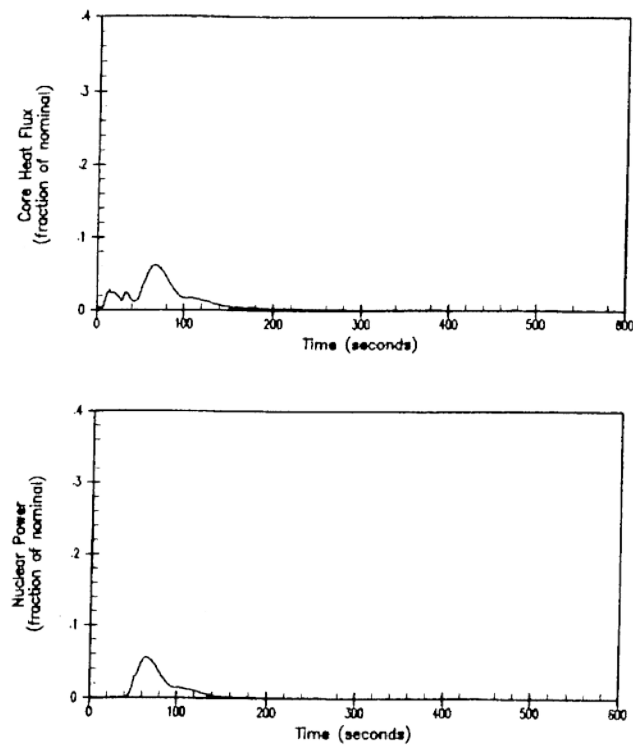


*Figure 15.1-15 Steam Line Rupture, 1.4ft<sup>2</sup> Break without Power, Two Loops in Service, Core Averaged Boron and Reactivity Versus Time*



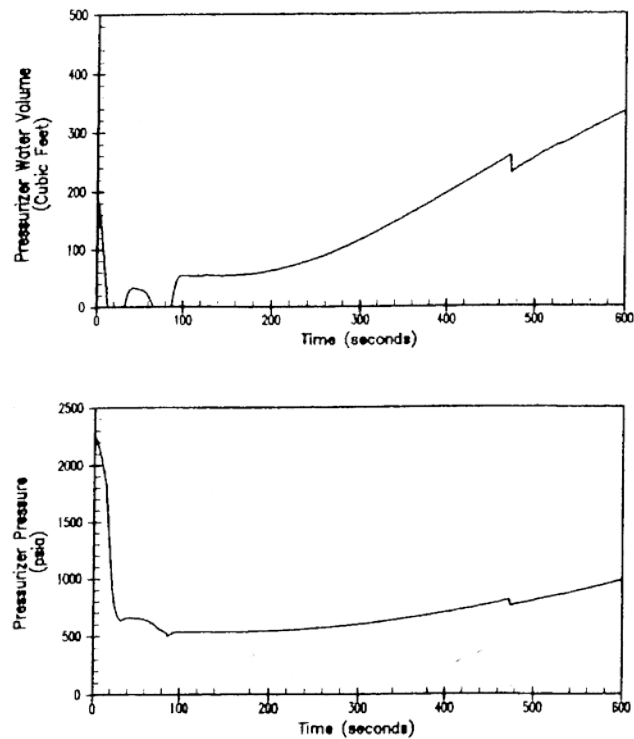
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Figure 15.1-15 <i>Steam Line Rupture, 1.4ft<sup>2</sup> Break without Power, Two Loops in Service, Core Averaged Boron and Reactivity Versus Time</i>

*Figure 15.1-16 Steam Line Rupture, 1.4ft<sup>2</sup> Break with Power, One Loop in Service, Core Heat Flux and Nuclear Power Versus Time*



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Figure 15.1-16 <i>Steam Line Rupture, 1.4ft<sup>2</sup> Break with Power, One Loop in Service, Core heat Flux and Nuclear Power Versus Time</i>

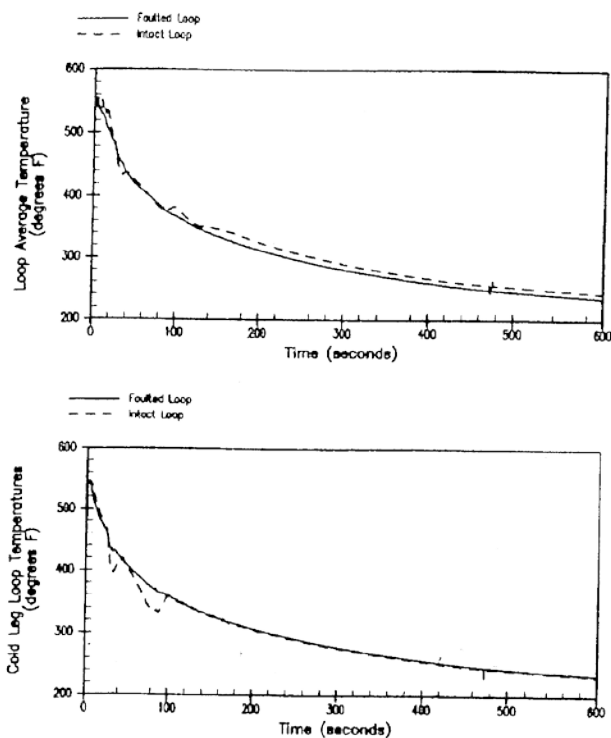
*Figure 15.1-17 Steam Line Rupture, 1.4ft<sup>2</sup> Break with Power, One Loop in Service, Pressurizer Water Volume and Pressurizer Pressure Versus Time*



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Figure 15.1-17 <i>Steam Line Rupture, 1.4ft<sup>2</sup> Break with Power, One Loop in Service, Pressurizer Water Volume and Pressurizer Pressure Versus Time</i>



*Figure 15.1-18 Steam Line Rupture, 1.4ft<sup>2</sup> Break with Power, One Loop in Service, Loop  $T_{AVG}$  and Cold Leg Loop Temperatures Versus Time*

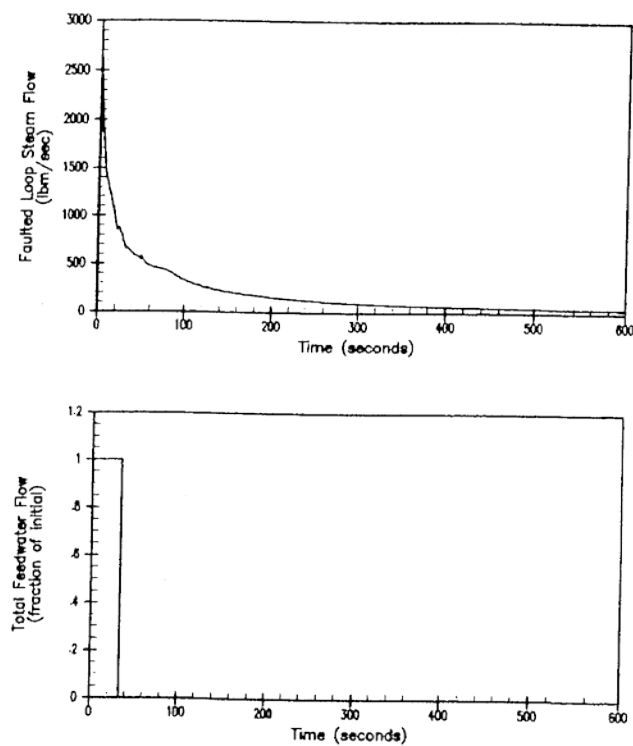


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Figure 15.1-18

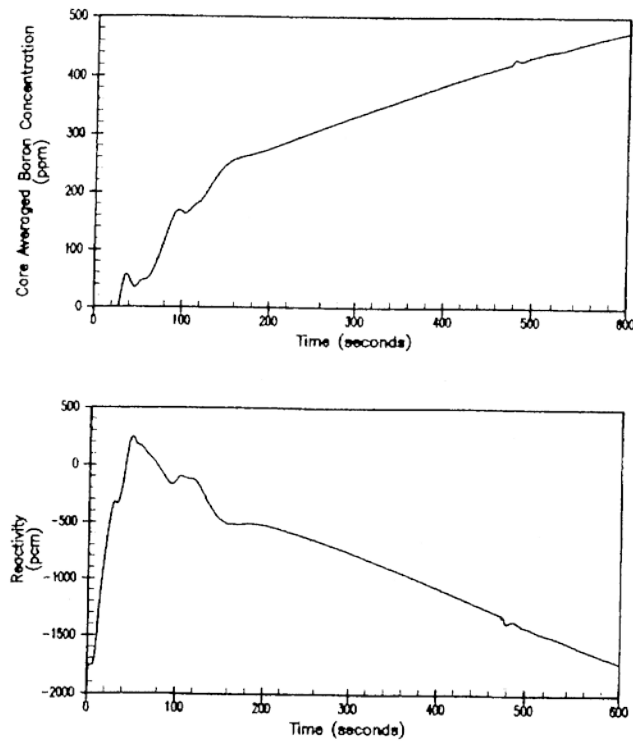
Steam Line Rupture, 1.4ft<sup>2</sup> Break with Power, One Loop in Service,  
Loop  $T_{avg}$  and Cold Leg Loop Temperatures Versus Time

*Figure 15.1-19 Steam Line Rupture, 1.4ft<sup>2</sup> Break with Power, One Loop in Service, Faulted Loop Steam Flow and Total Feedwater Flow Versus Time*



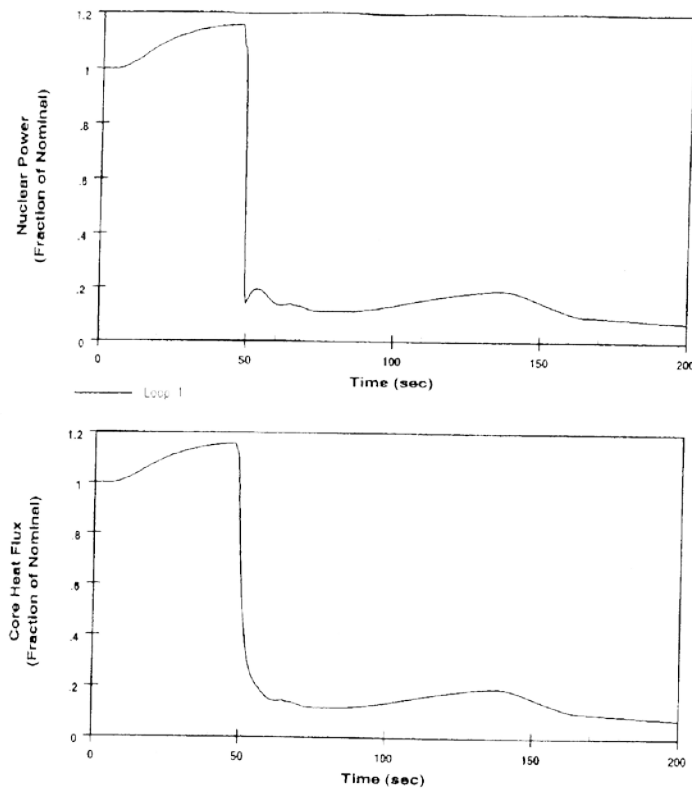
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Figure 15.1-19 <i>Steam Line Rupture, 1.4ft<sup>2</sup> Break with Power, One Loop in Service, Faulted Loop Steam Flow and Total Feedwater Flow Versus Time</i>

*Figure 15.1-20 Steam Line Rupture, 1.4ft<sup>2</sup> Break with Power, One Loop in Service, Core Averaged Boron and Reactivity Versus Time*



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Figure 15.1-20 <i>Steam Line Rupture, 1.4ft<sup>2</sup> Break with Power, One Loop in Service, Core Averaged Boron and Reactivity Versus Time</i>

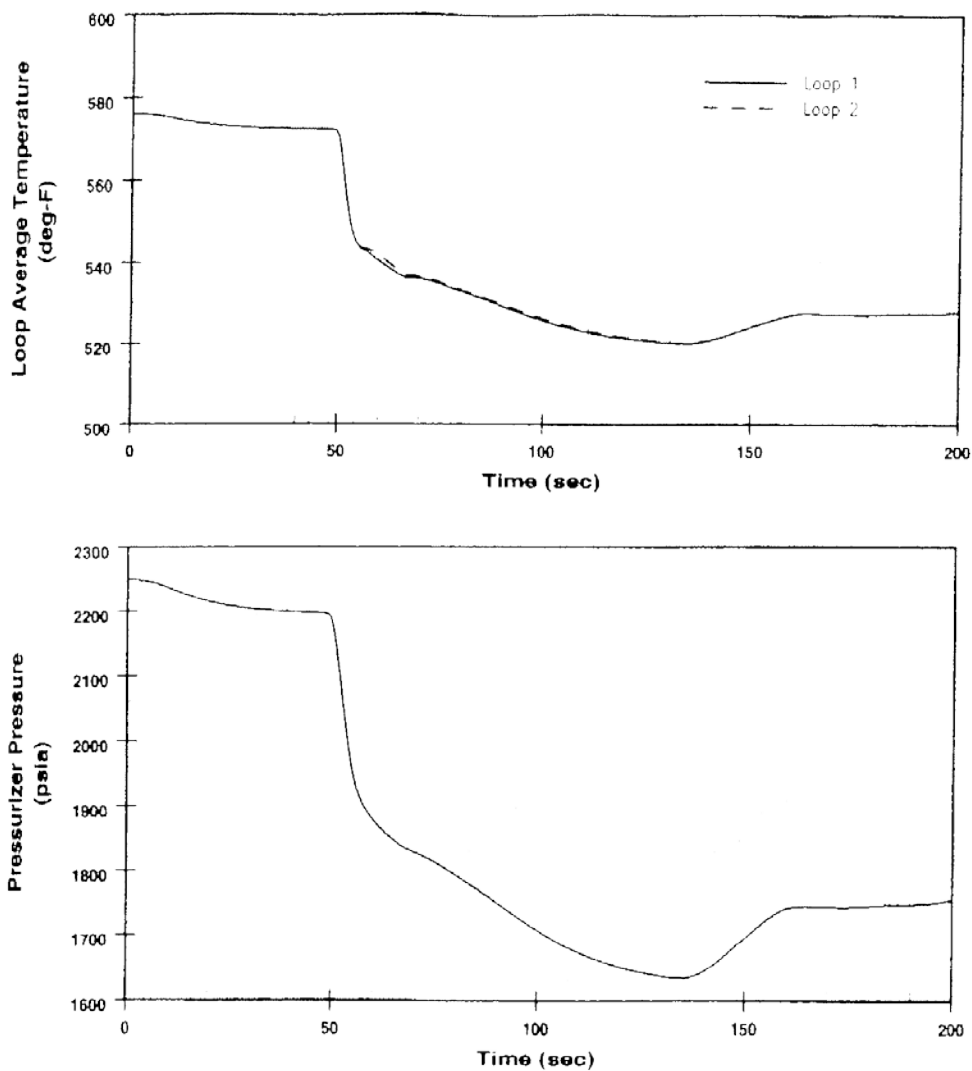
*Figure 15.1-21 Combined Atmospheric Relief Valve and Main Feedwater Regulating Valve Failure, Nuclear Power and Core Heat Flux Versus Time*



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Figure 15.1-21  
*Combined Atmospheric Relief Valve and Main Feedwater Regulating  
Valve Failure, Nuclear Power and Core Heat Flux Versus Time*

*Figure 15.1-22 Combined Atmospheric Relief Valve and Main Feedwater Regulating Valve Failure, Loop Average Temperature and Pressurizer Pressure Versus Time*

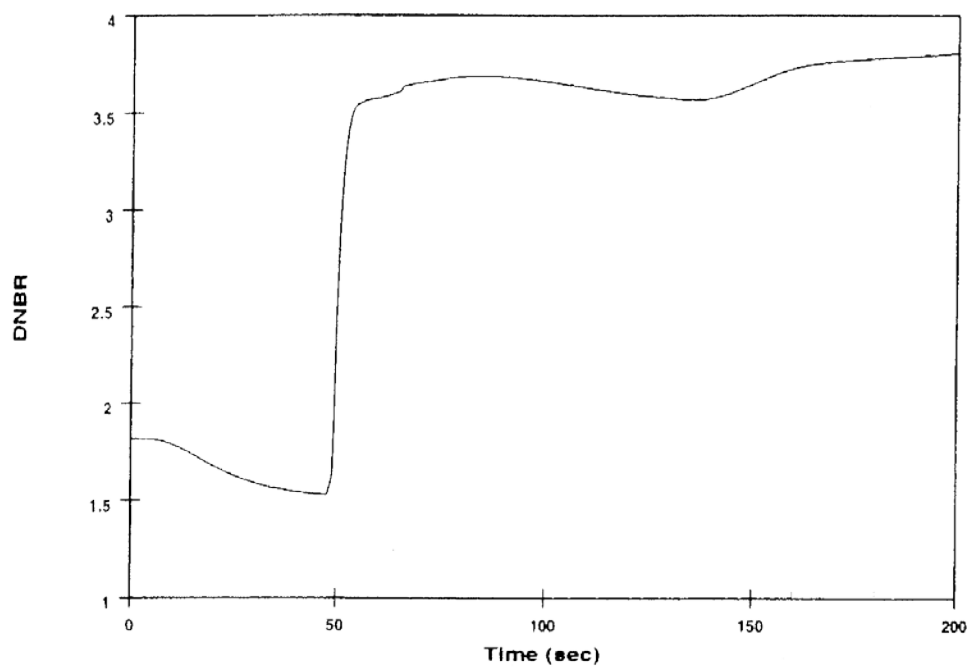


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Figure 15.1-22

*Combined Atmospheric Relief Valve and Main Feedwater Regulating Valve  
Failure, Loop Average Temperature and Pressurizer Pressure Versus Time*

*Figure 15.1-23 Combined Atmospheric Relief Valve and Main Feedwater Regulating Valve Failure, DNBR Versus Time*

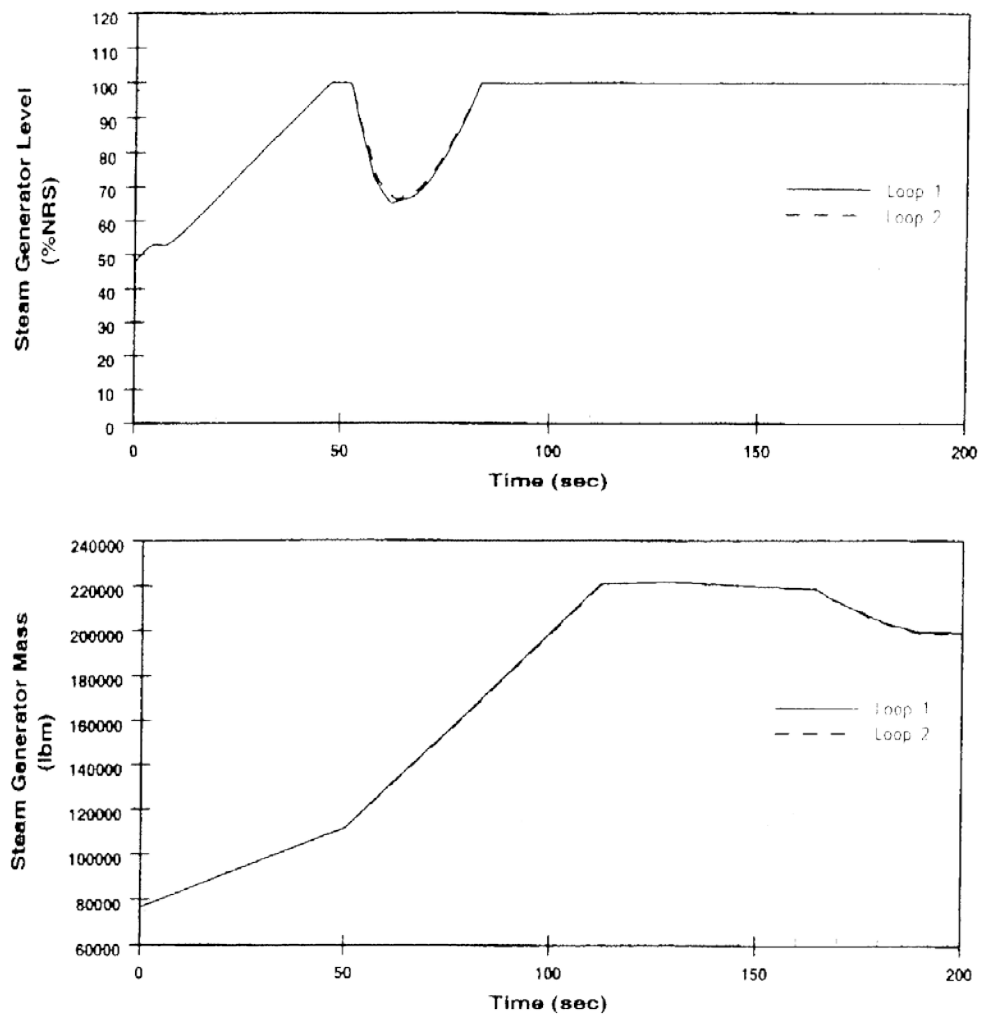


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Figure 15.1-23

*Combined Atmospheric Relief Valve and Main Feedwater Regulating  
Valve Failure, DNBR Versus Time*

*Figure 15.1-24 Combined Atmospheric Relief Valve and Main Feedwater Regulating Valve Failure, Steam Generator Level and Steam Generator Mass Versus Time*

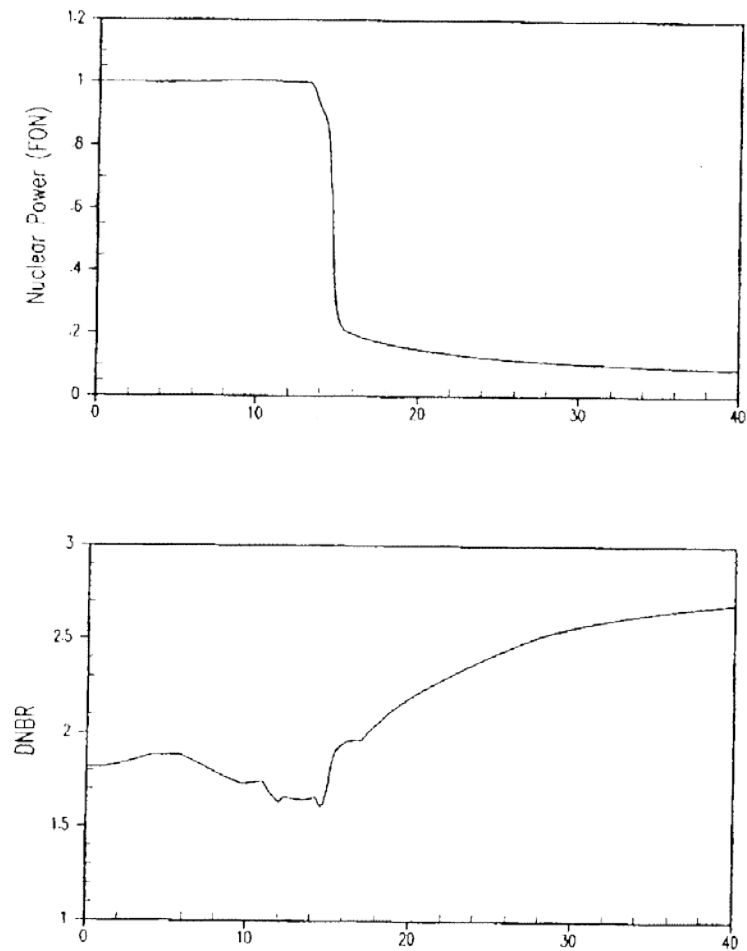


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Figure 15.1-24

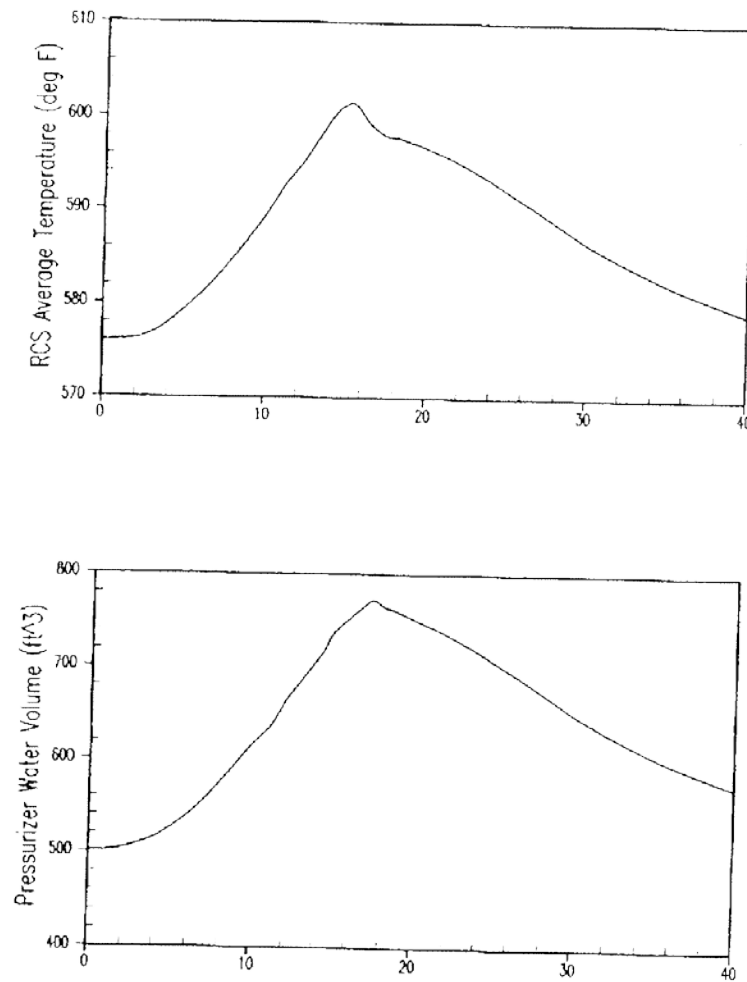
*Combined Atmospheric Relief Valve and Main Feedwater Regulating Valve Failure, Steam Generator Level and Steam Generator Mass Versus Time*

*Figure 15.2-1 Loss of Load, with Automatic Pressure Control, Nuclear Power and DNBR Versus Time*



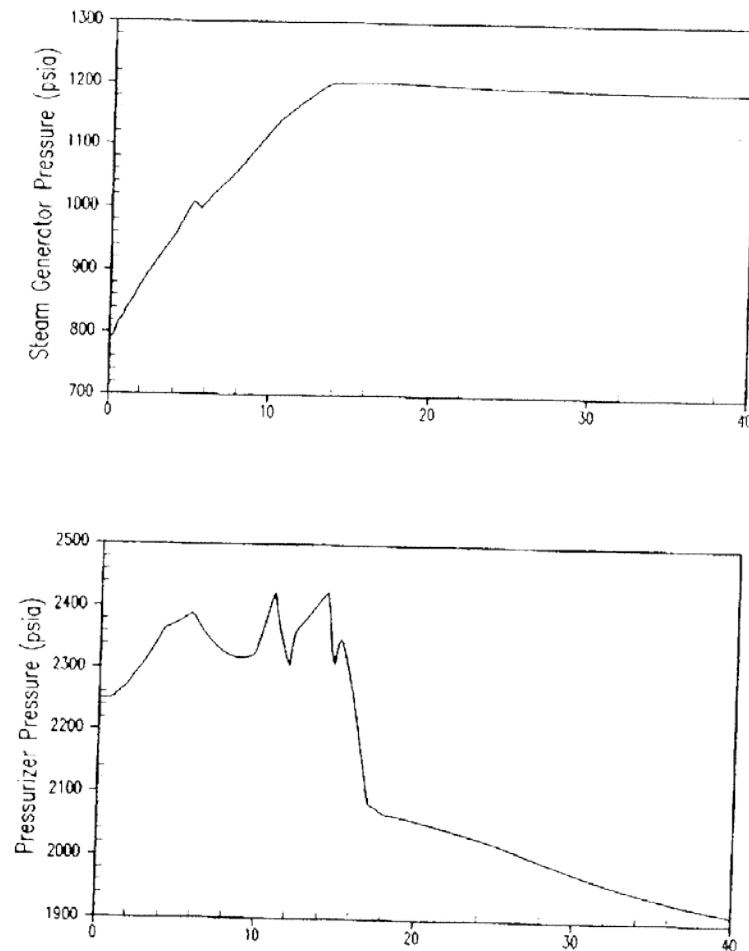


*Figure 15.2-2 Loss of Load, with Automatic Pressure Control, RCS Average Temperature and Pressurizer Water Volume Versus Time*



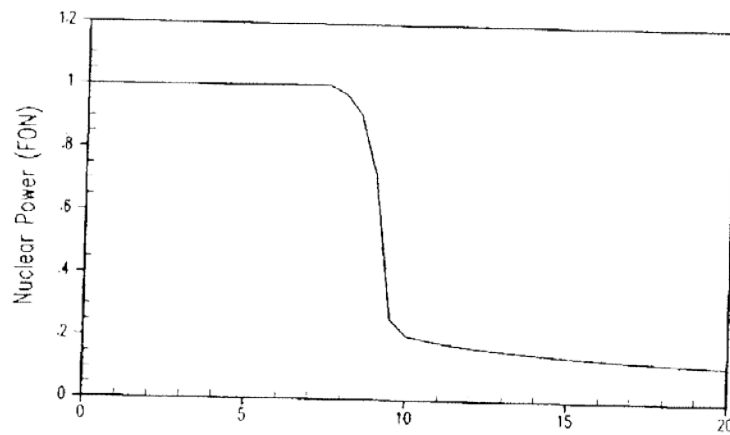
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Figure 15.2-2  
Loss of Load, with Automatic Pressure Control, RCS  
Average Temperature and Pressurizer Water Volume  
Versus Time

*Figure 15.2-3 Loss of Load, with Automatic Pressure Control, Steam Generator Pressure and Pressurizer Pressure Versus Time*



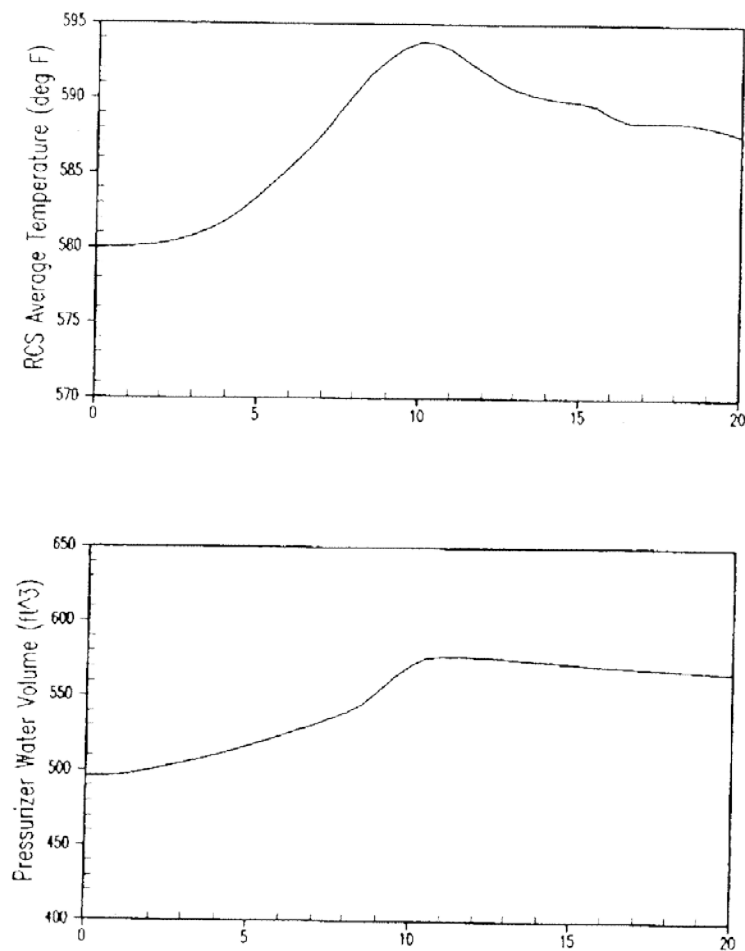
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Figure 15.2-3  
Loss of Load, with Automatic Pressure Control, Steam  
Generator Pressure and Pressurizer Pressure Versus Time

*Figure 15.2-4 Loss of Load, Without Pressure Control, Nuclear Power Versus Time*



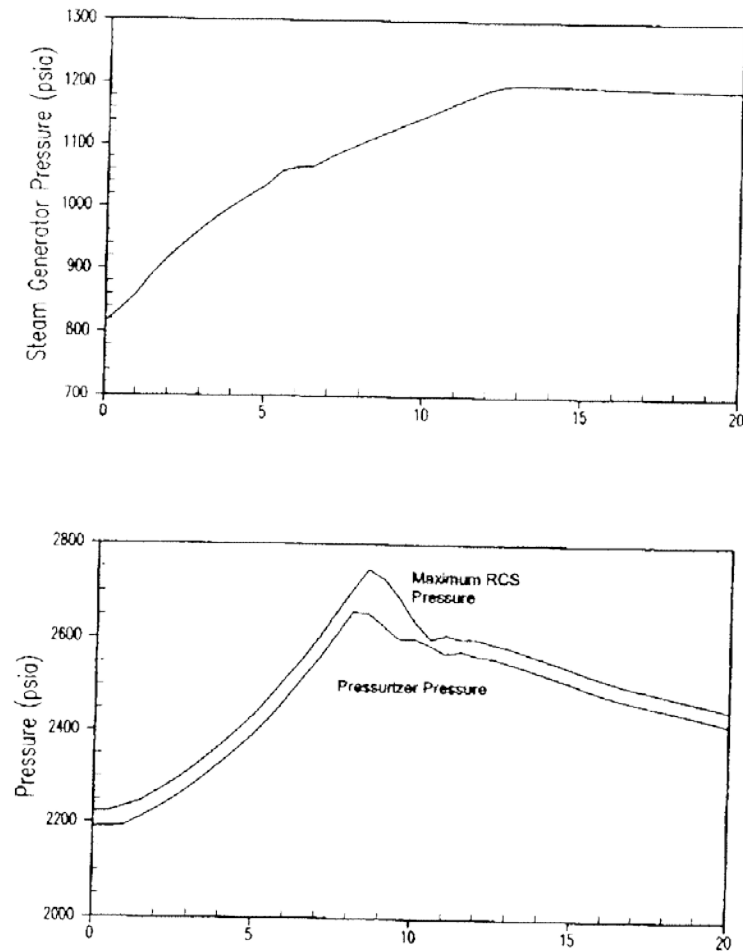
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Figure 15.2-4  
Loss of Load, Without Pressure Control, Nuclear Power  
Versus Time

*Figure 15.2-5 Loss of Load, Without Pressure Control, RCS Average Temperature and Pressurizer Water Volume Versus Time*



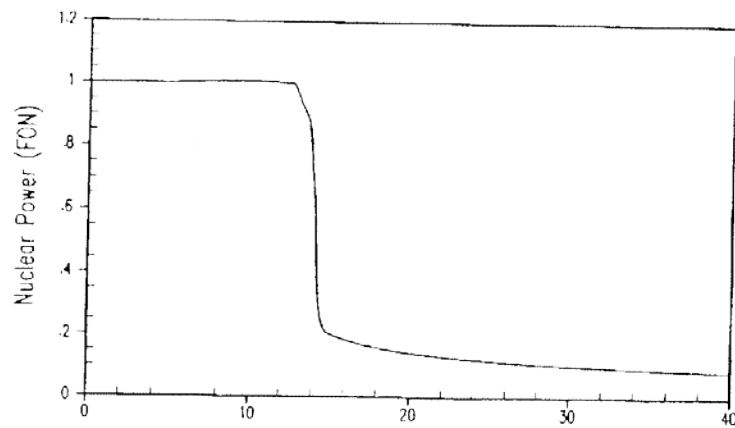
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Figure 15.2-5  
Loss of Load, Without Pressure Control, RCS Average  
Temperature and Pressurizer Water Volume Versus Time

*Figure 15.2-6 Loss of Load, Without Pressure Control, Steam Generator Pressure and Reactor Coolant System Pressures Versus Time*



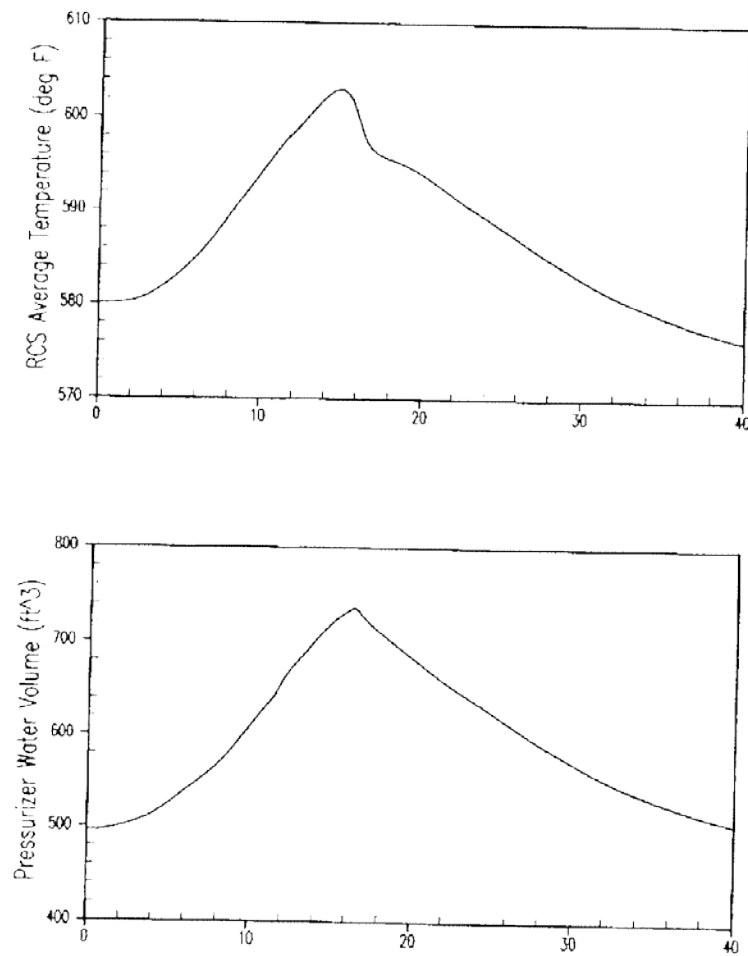
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Figure 15.2-6 Loss of Load, Without Pressure Control, Steam Generator Pressure and Reactor Coolant System Pressures Versus Time

*Figure 15.2-7 Loss of Load, Peak MSS Pressure Case, Nuclear Power Versus Time*



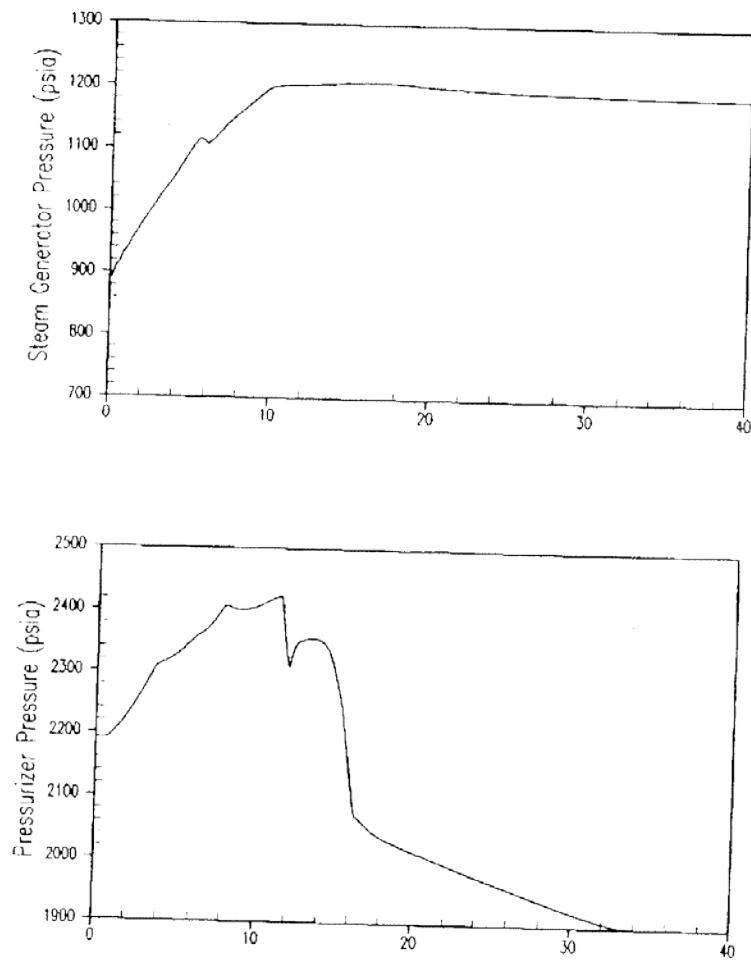
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Figure 15.2-7 Loss of Load, Peak MSS Pressure Case, Nuclear Power Versus Time

*Figure 15.2-8 Loss of Load, Peak MSS Pressure Case, RCS Average Temperature and Pressurizer Water Volume Versus Time*



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Figure 15.2-8 Loss of Load, Peak MSS Pressure Case, RCS Average Temperature and Pressurizer Water Volume Versus Time

*Figure 15.2-9 Loss of Load, Peak MSS Pressure Case, Steam Generator Pressure and Pressurizer Pressure Versus Time*



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Figure 15.2-9 Loss of Load, Peak MSS Pressure Case, Steam Generator Pressure and Pressurizer Pressure Versus Time



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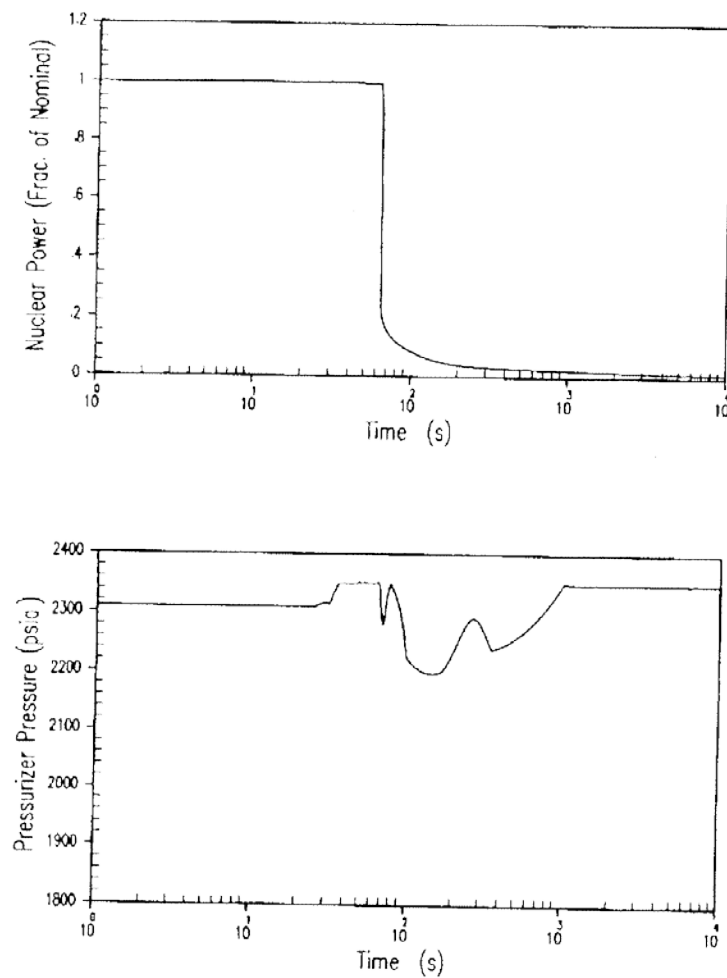
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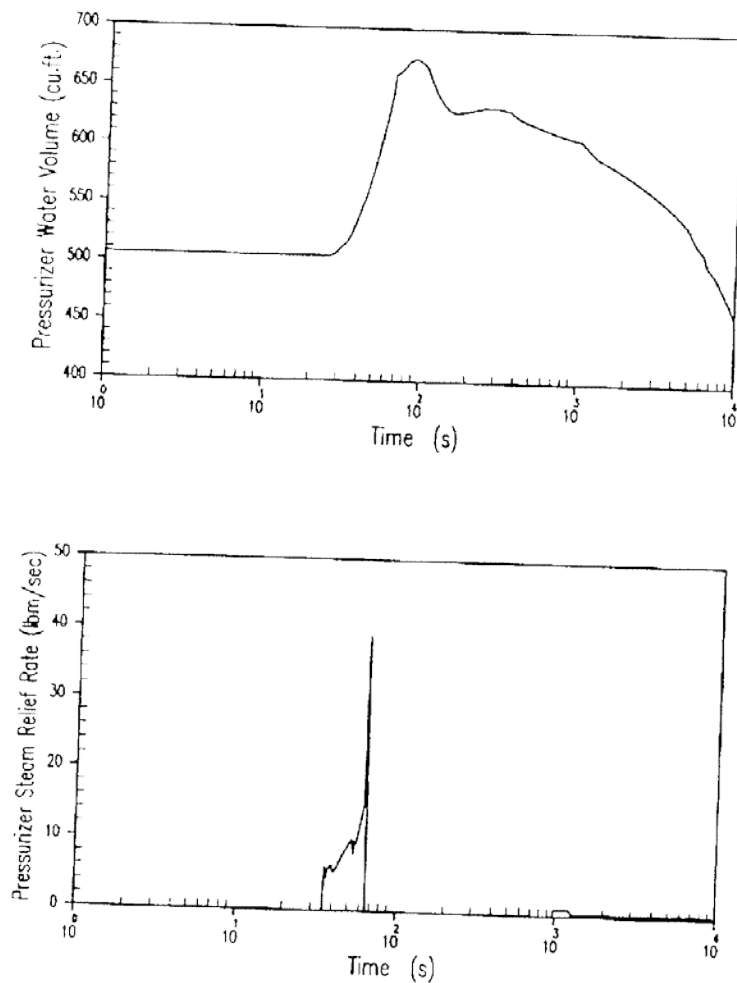
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*Figure 15.2-13 Loss of Offsite Alternating Current Power to the Station Auxiliaries, Nuclear Power and Pressurizer Pressure Versus Time*



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Figure 15.2-13 Loss of Offsite Alternating Current Power to the Station Auxiliaries, Nuclear Power and Pressurizer Pressure Versus Time

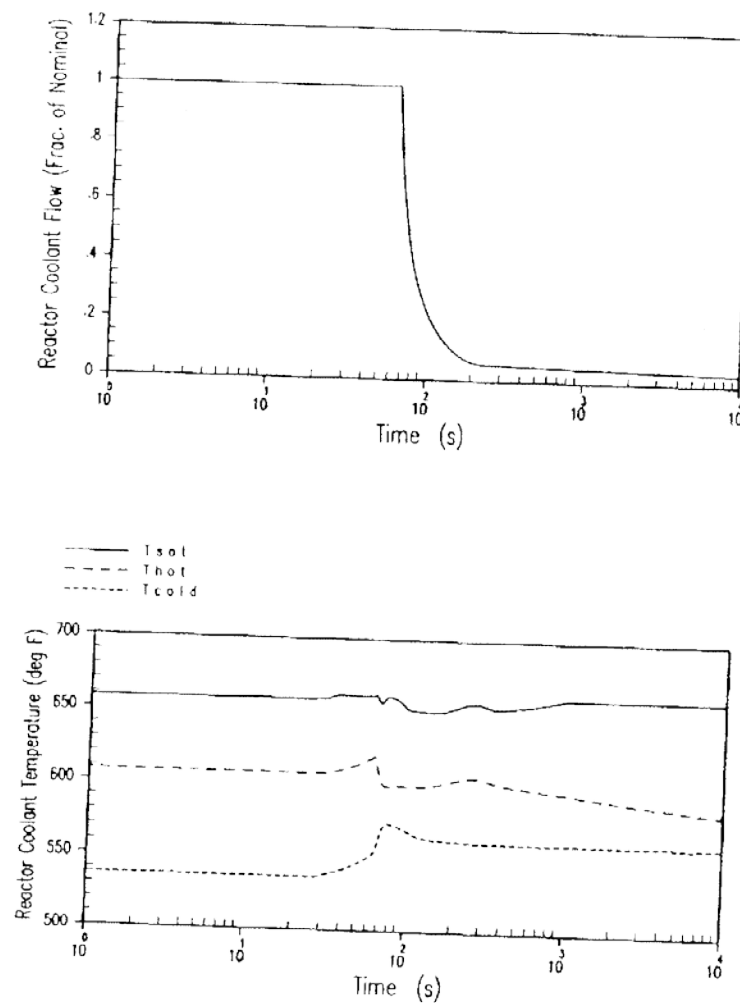
*Figure 15.2-14 Loss of Offsite Alternating Current Power to the Station Auxiliaries, Pressurizer Water Volume and Pressurizer Steam Relief Rate Versus Time*



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Figure 15.2-14  
Loss of Offsite Alternating Current  
Power to the Station Auxiliaries,  
Pressurizer Water Volume and  
Pressurizer Steam Relief Rate Versus  
Time

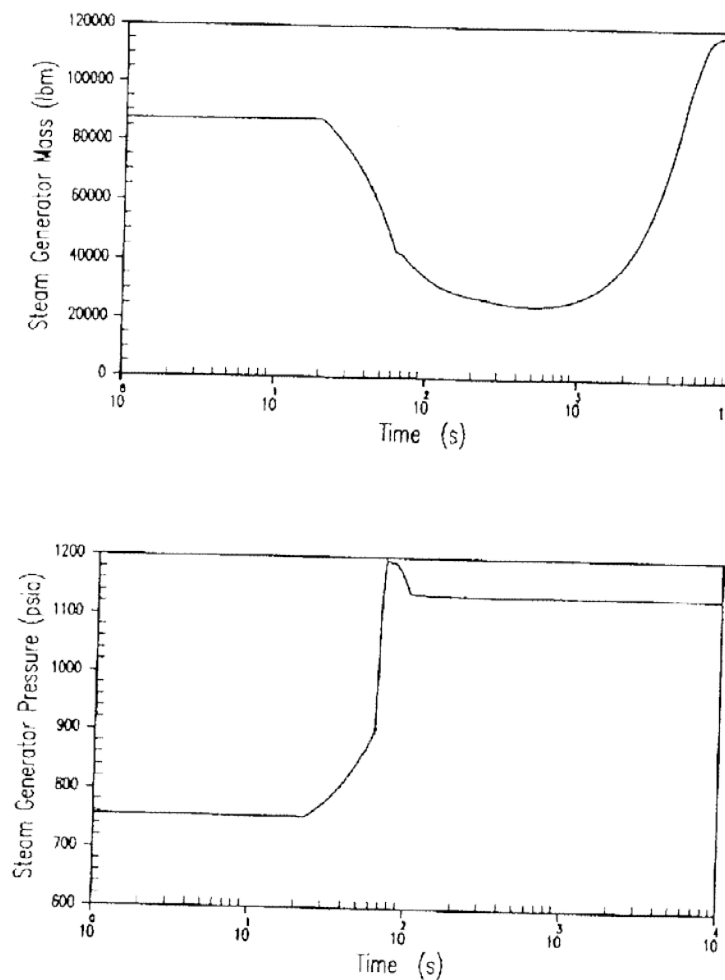
*Figure 15.2-15 Loss of Offsite Alternating Current Power to the Station Auxiliaries, Reactor Coolant Flow and Core Inlet/Outlet Temperatures Versus Time*



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Figure 15.2-15  
Loss of Offsite Alternating Current  
Power to the Station Auxiliaries,  
Reactor Coolant Flow and Core  
Inlet/Outlet Temperatures Versus Time

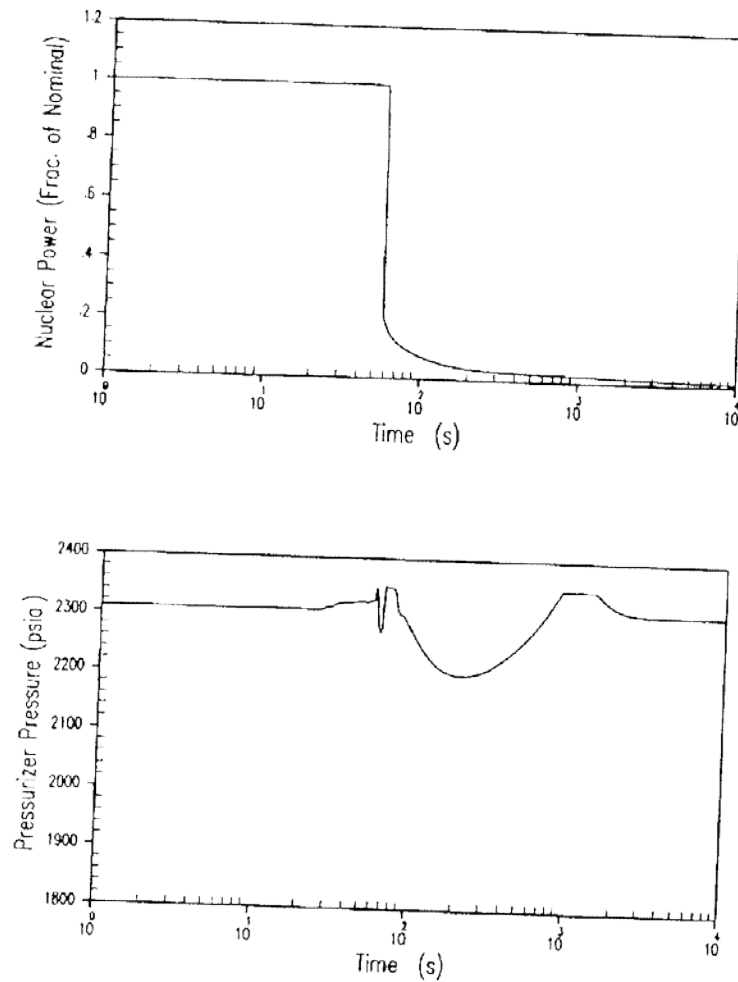
*Figure 15.2-16 Loss of Offsite Alternating Current Power to the Station Auxiliaries, Steam Generator Mass and Steam Generator Pressure Versus Time*



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Figure 15.2-16  
Loss of Offsite Alternating Current  
Power to the Station Auxiliaries,  
Steam Generator Mass and Steam  
Generator Pressure Versus Time

*Figure 15.2-17 Loss of Normal Feedwater With Power, Nuclear Power and Pressurizer Pressure Versus Time*

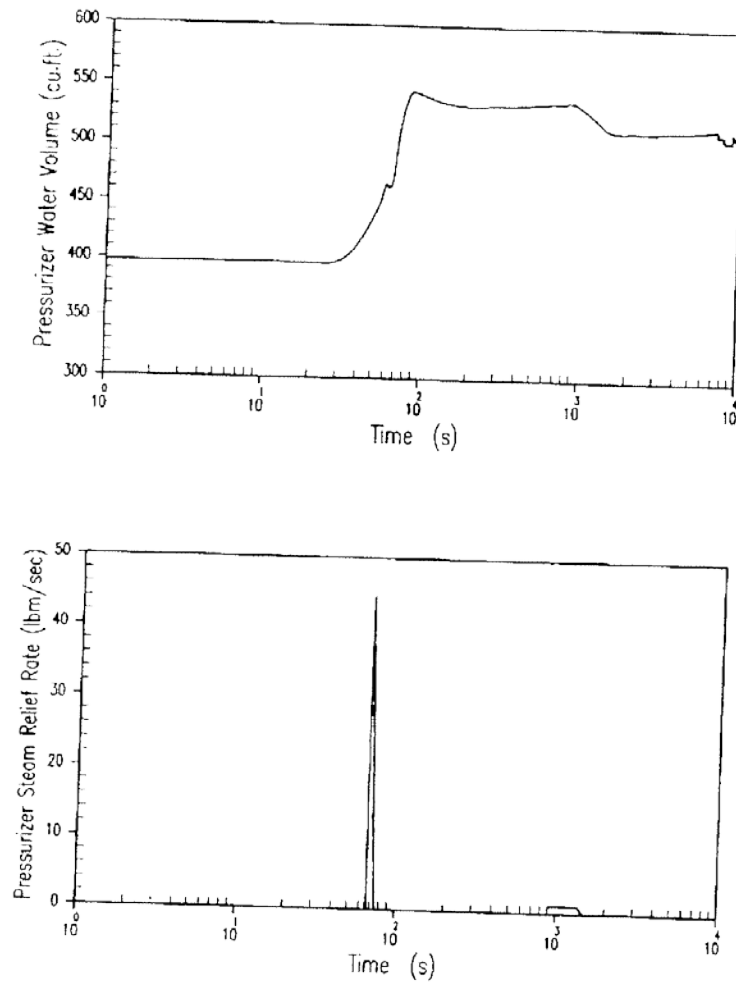


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Figure 15.2-17  
Loss of Normal Feedwater With Power,  
Nuclear Power and Pressurizer Pressure  
Versus Time



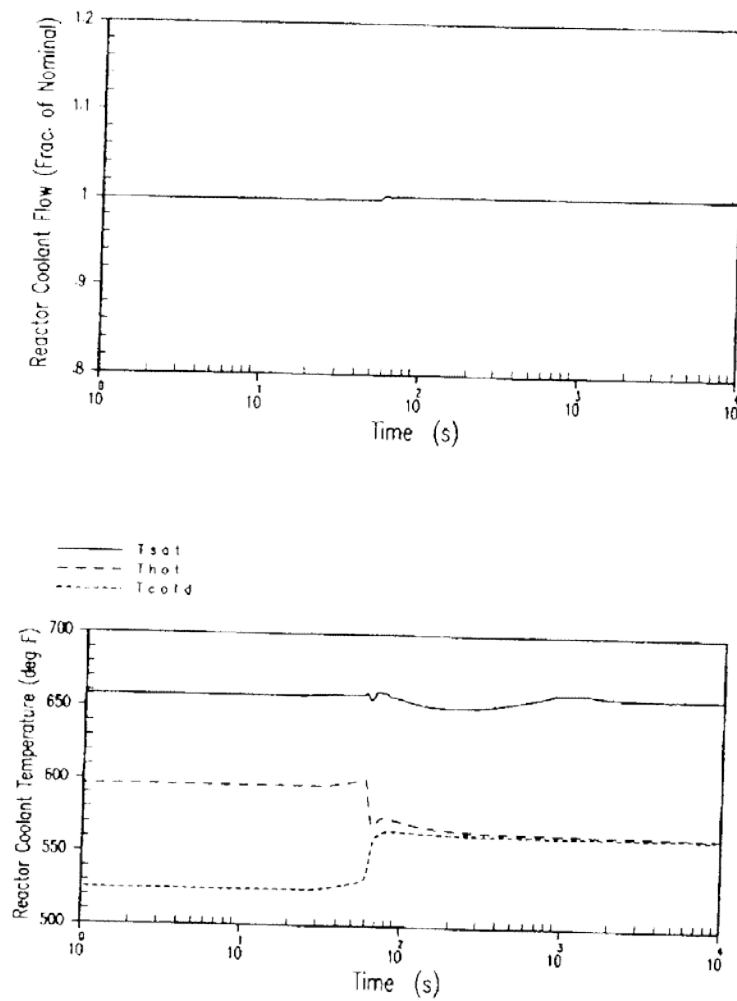
*Figure 15.2-18 Loss of Normal Feedwater With Power, Pressurizer Water Volume and Pressurizer Steam Relief Rate Versus Time*



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Figure 15.2-18  
Loss of Normal Feedwater With Power,  
Pressurizer Water Volume and  
Pressurizer Steam Relief Rate Versus  
Time

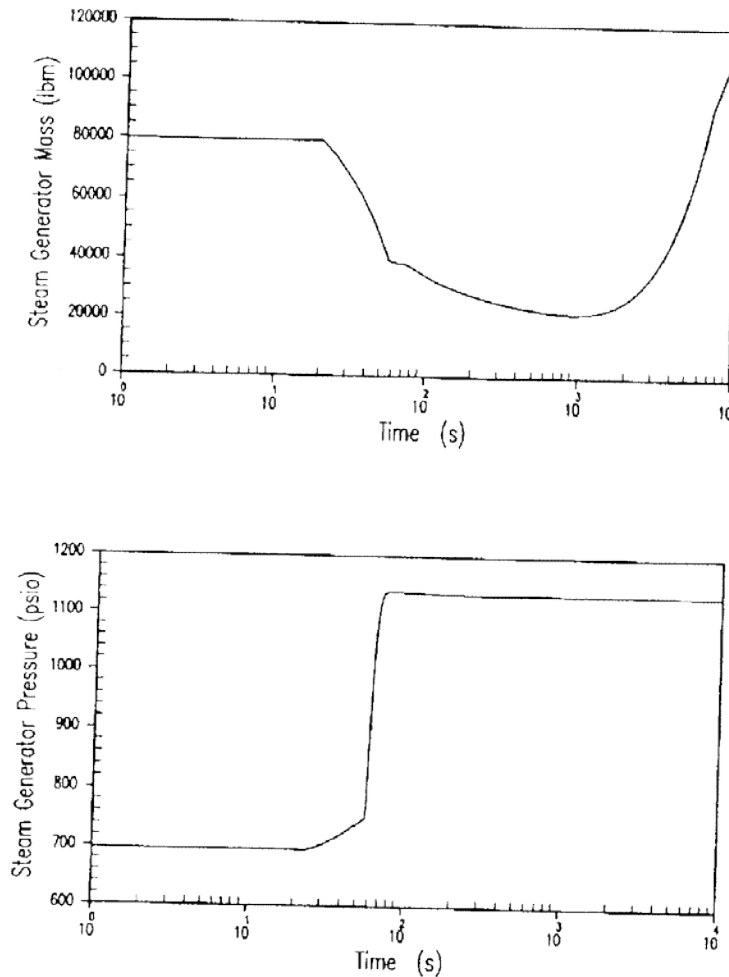
Figure 15.2-19 Loss of Normal Feedwater With Power, Reactor Coolant Flow and Core Inlet/Outlet Temperatures Versus Time



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Figure 15.2-19  
Loss of Normal Feedwater With Power,  
Reactor Coolant Flow and Core  
Inlet/Outlet Temperatures Versus Time

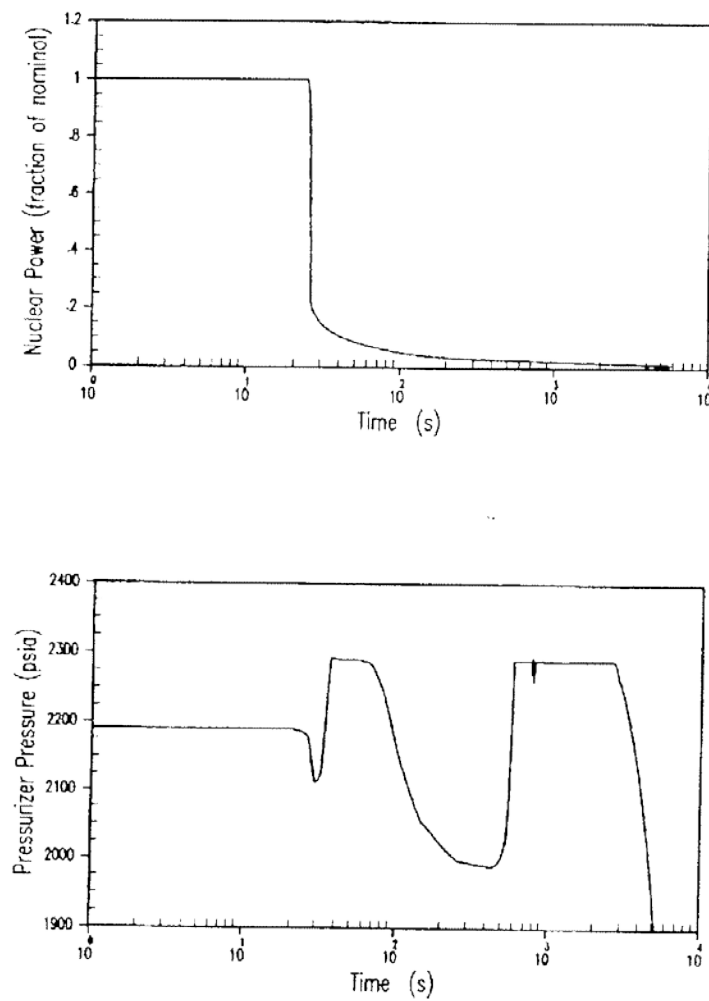
*Figure 15.2-20 Loss of Normal Feedwater With Power, Steam Generator Mass and Steam Generator Pressure Versus Time*



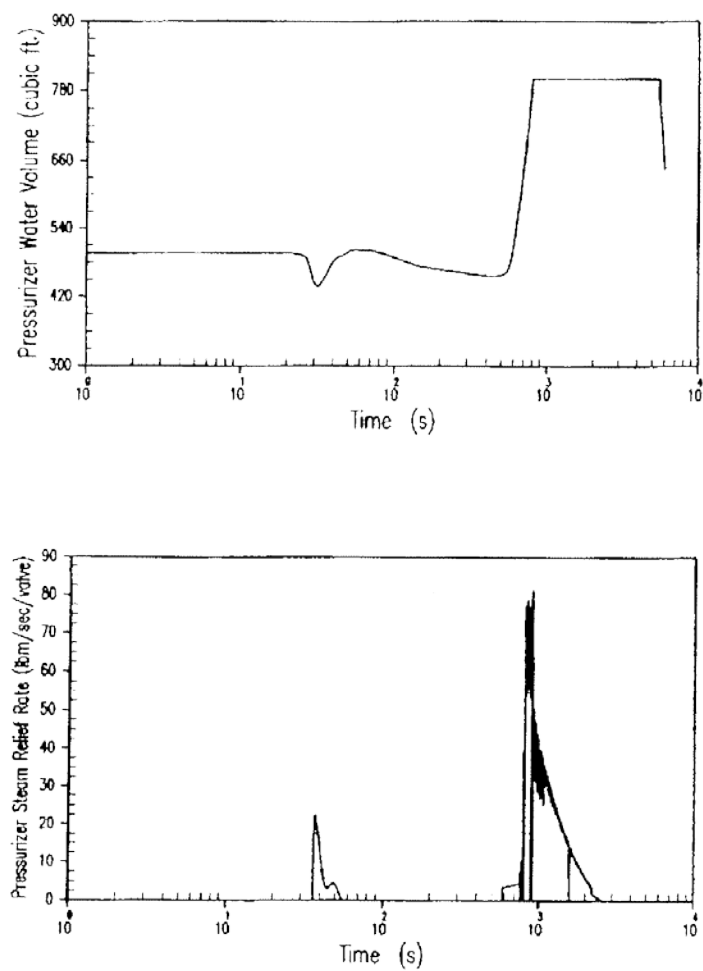
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Figure 15.2-20  
Loss of Normal Feedwater With Power,  
Steam Generator Mass and Steam  
Generator Pressure Versus Time

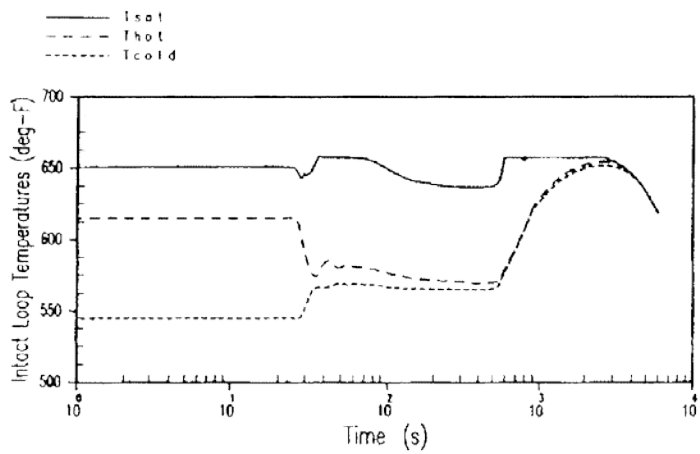
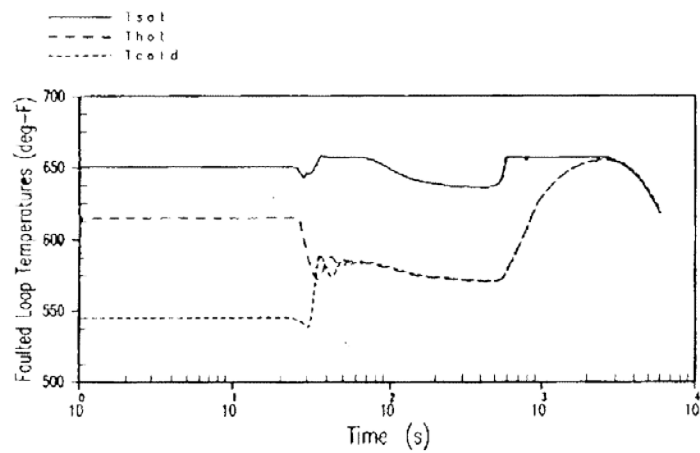
*Figure 15.2-21 Feedline Break With Offsite Power; Nuclear Power and Pressurizer Pressure Versus Time*



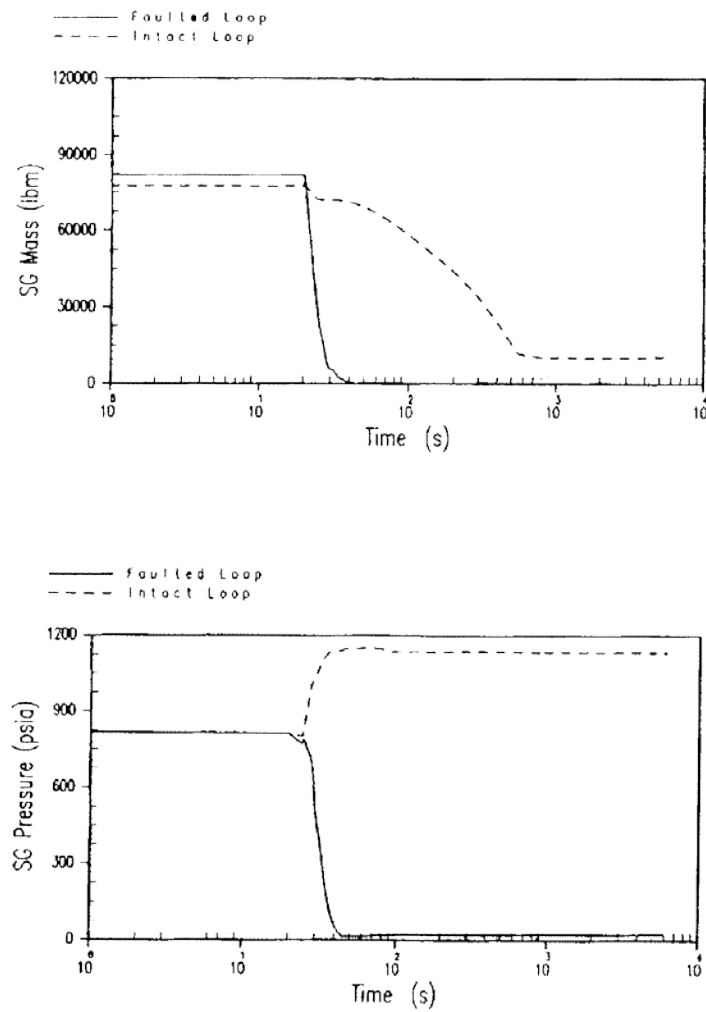
*Figure 15.2-22 Feedline Break With Offsite Power; Pressurizer Water Volume and Pressurizer Steam Relief Rate Versus Time*



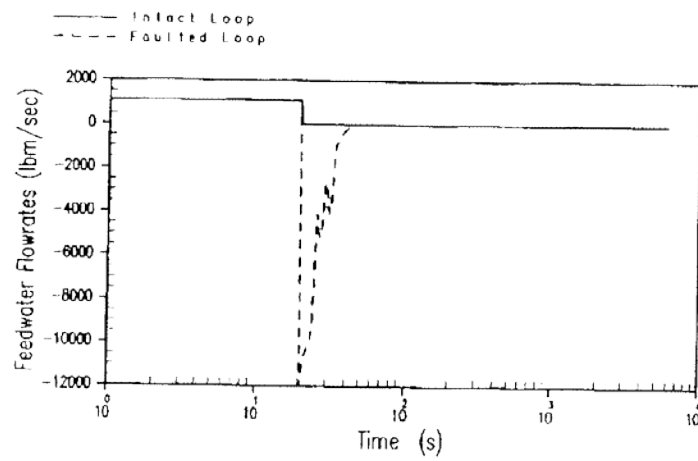
*Figure 15.2-23 Feedline Break With Offsite Power; Cold Leg, Hot Leg and Saturation Temperatures Versus Time*



*Figure 15.2-24 Feedline Break With Offsite Power; Steam Generator Mass and Steam Generator Pressure Versus Time*

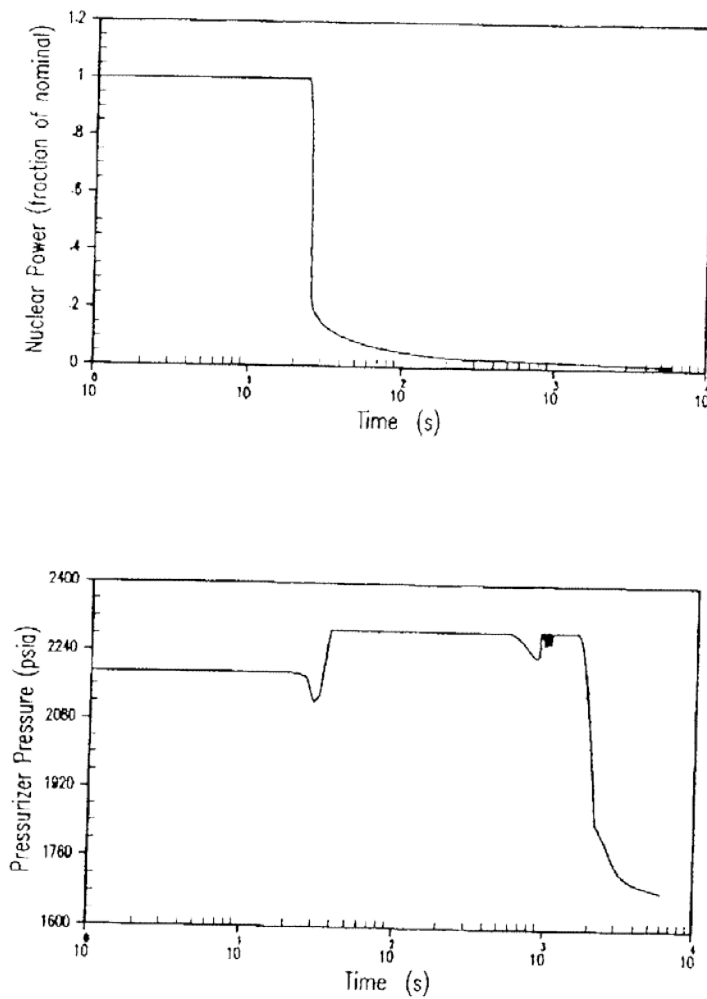


*Figure 15.2-25 Feedline Break With Offsite Power; Feedwater Mass Flow Rates Versus Time*

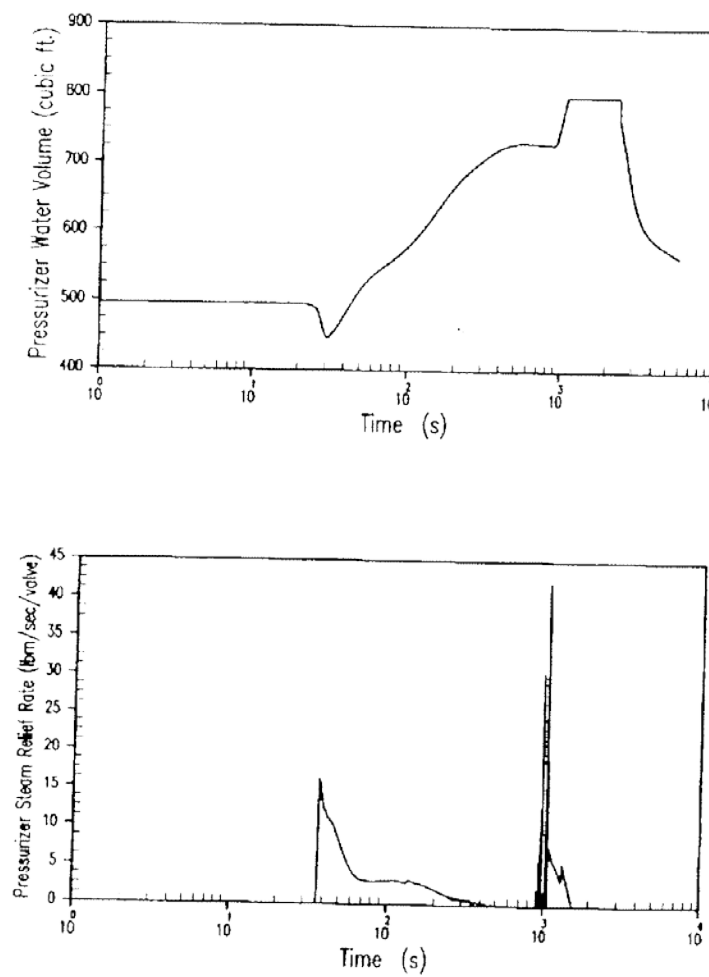




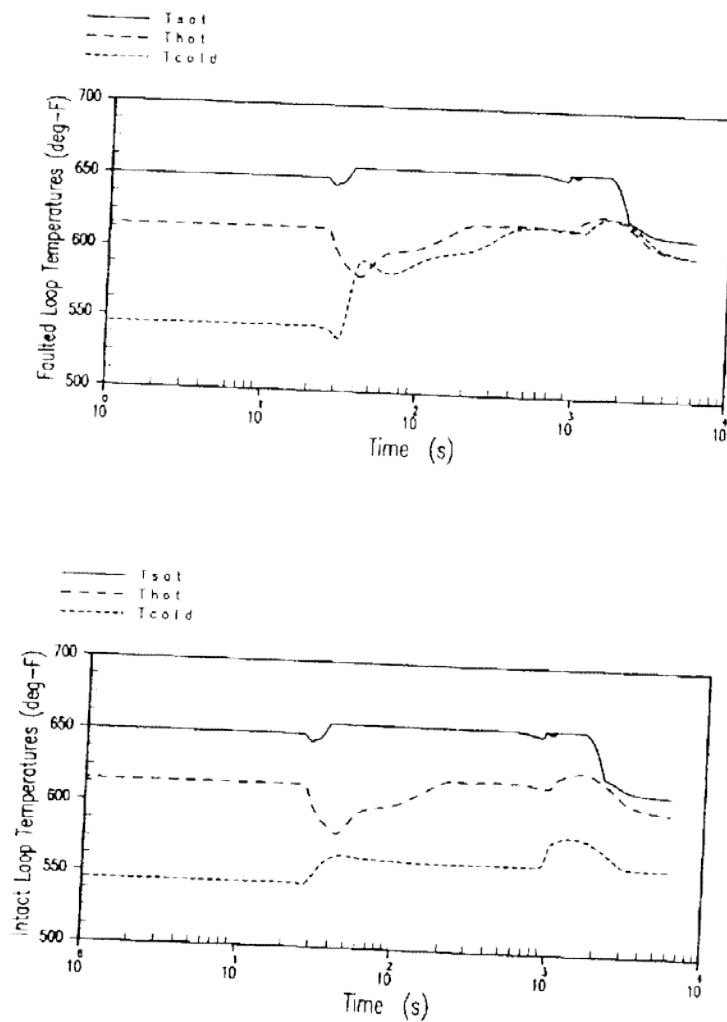
*Figure 15.2-26 Feedline Break Without Offsite Power; Nuclear Power and Pressurizer Pressure Versus Time*



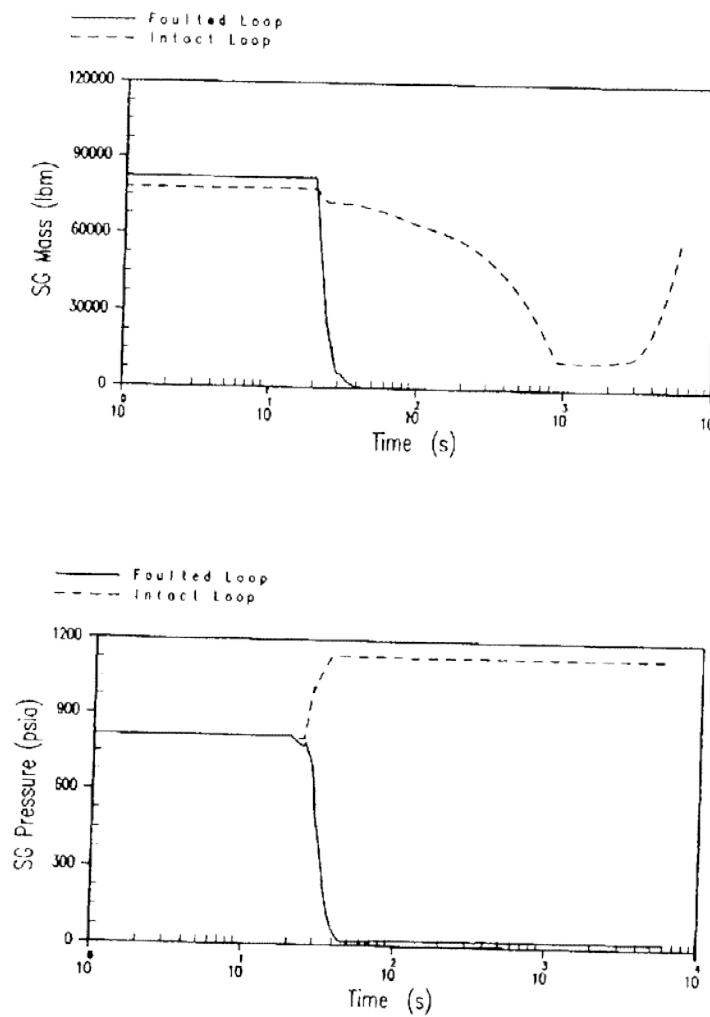
*Figure 15.2-27 Feedline Break Without Offsite Power; Pressurizer Water Volume and Pressurizer Steam Relief Rate Versus Time*



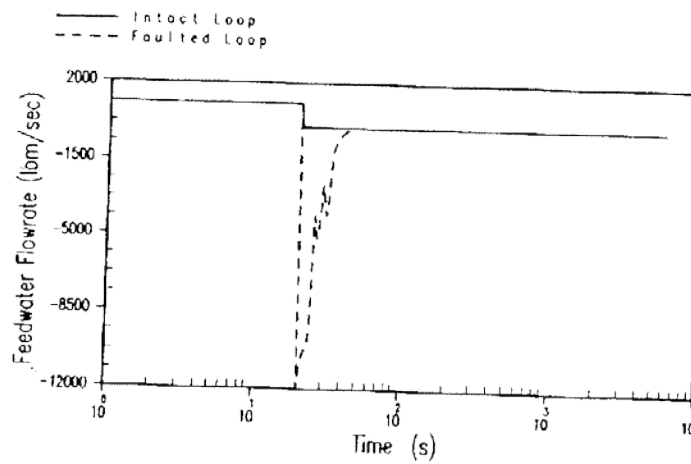
*Figure 15.2-28 Feedline Break Without Offsite Power; Cold Leg, Hot Leg and Saturation Temperatures Versus Time*



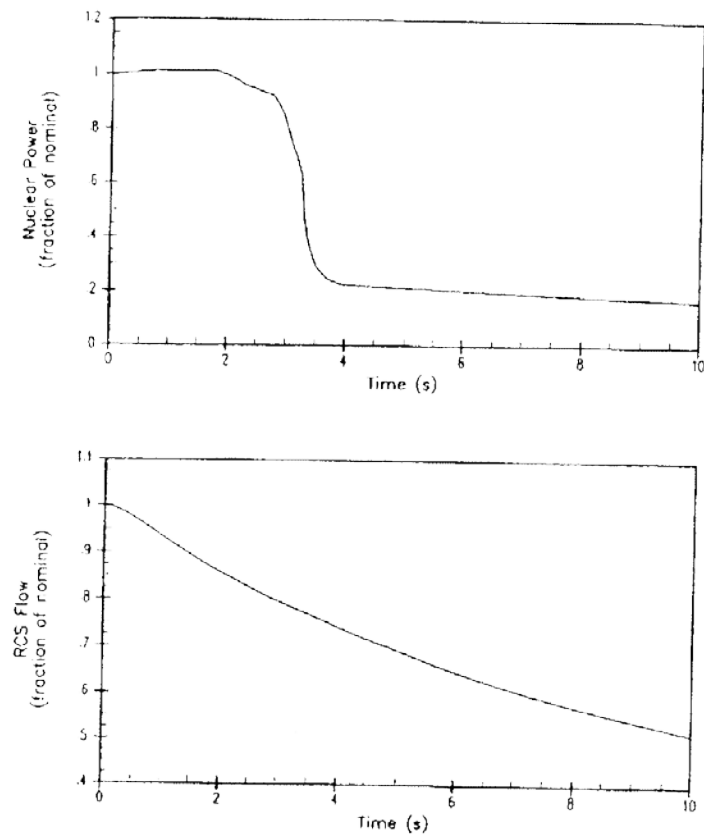
*Figure 15.2-29 Feedline Break Without Offsite Power; Steam Generator Mass and Steam Generator Pressure Versus Time*



*Figure 15.2-30 Feedline Break Without Offsite Power; Feedwater Mass Flow Rates Versus Time*



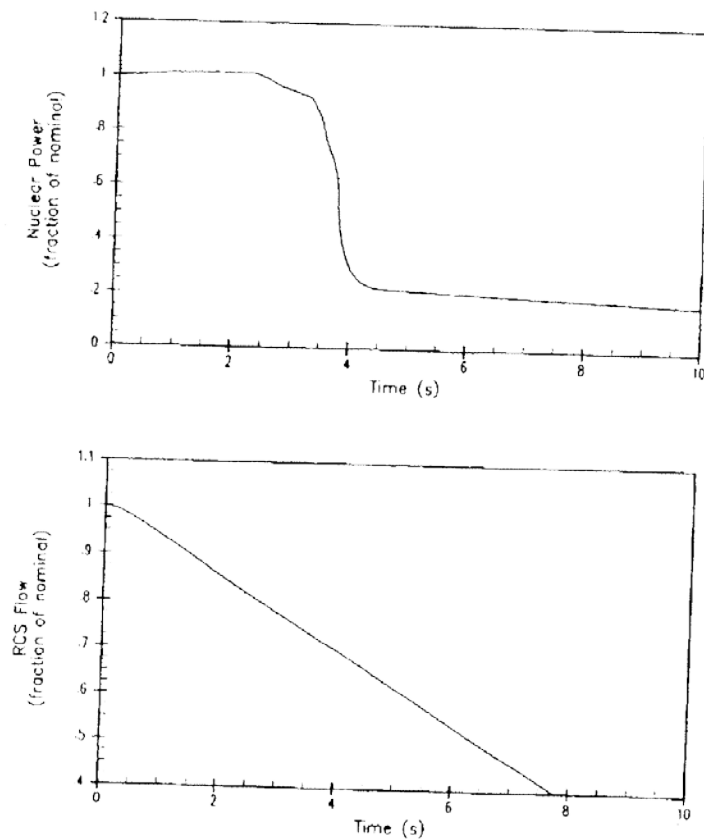
*Figure 15.3-1 Full Loss of Flow (Undervoltage), Nuclear Power and RCS Flow Versus Time*



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**Figure 15.3-1**  
Full Loss of Flow (Undervoltage)  
Nuclear Power and RCS Flow Versus Time

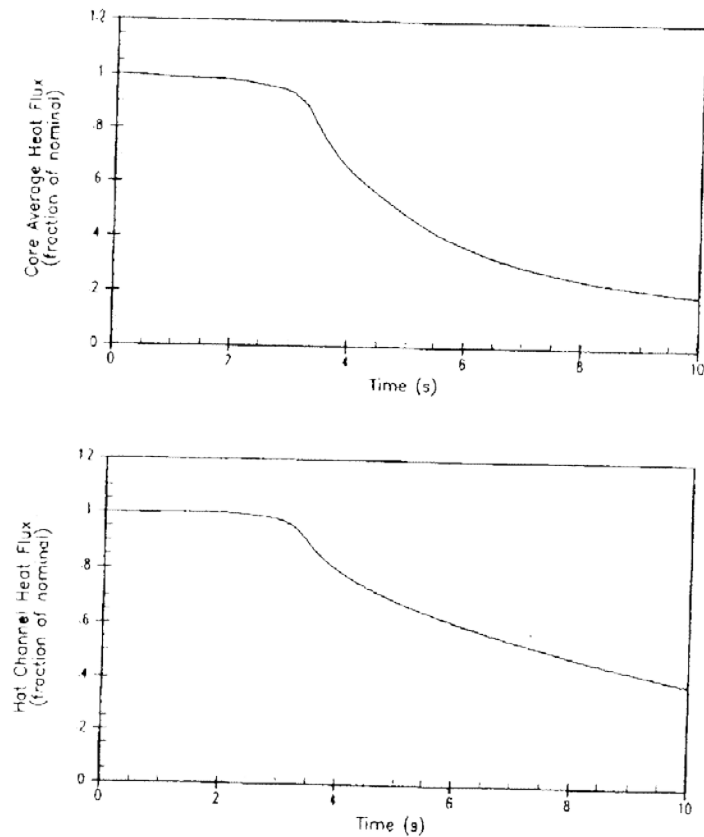
*Figure 15.3-1a Full Loss of Flow (Underfrequency), Nuclear Power and RCS Flow Versus Time*



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**Figure 15.3-1a**  
Full Loss of Flow (Underfrequency)  
Nuclear Power and RCS Flow Versus Time

*Figure 15.3-2 Full Loss of Flow (Undervoltage), Core Average and Hot Channel Heat Flux Versus Time*

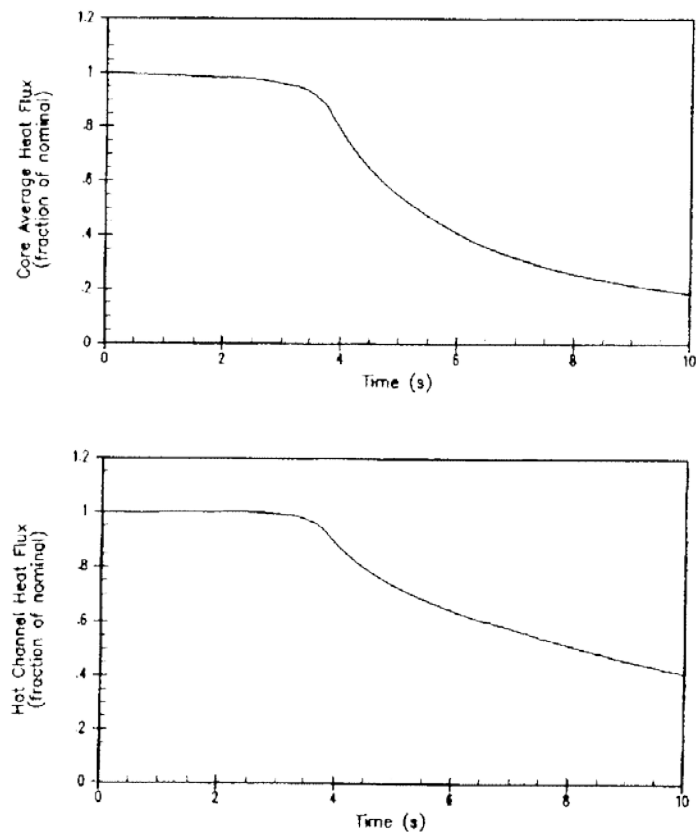


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**Figure 15.3-2**  
Full Loss of Flow (Undervoltage)  
Core Average and Hot Channel Heat Flux Versus Time

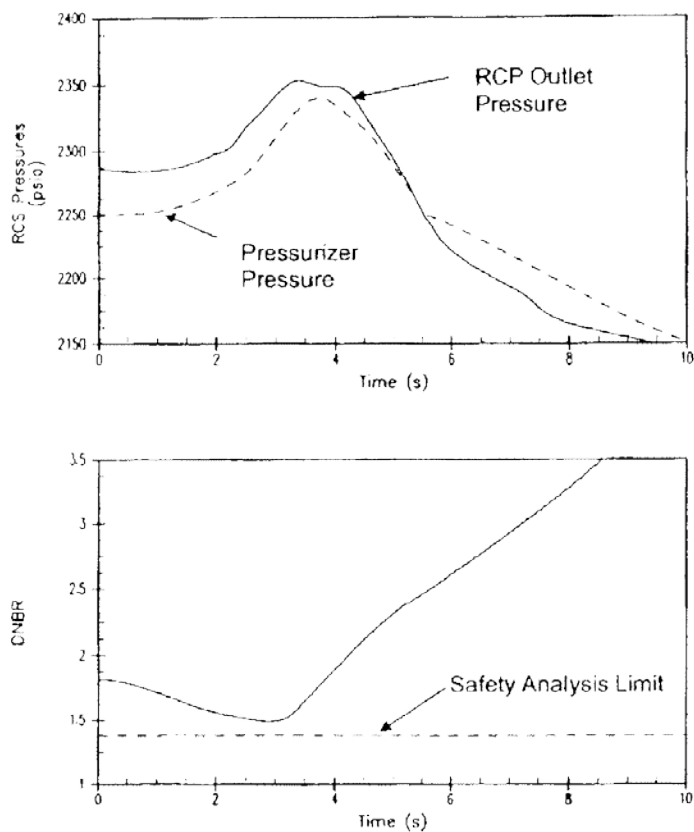


*Figure 15.3-2a Full Loss of Flow (Underfrequency), Core Average and Hot Channel Heat Flux Versus Time*



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<b>Figure 15.3-2a</b> Full Loss of Flow (Underfrequency) Core Average and Hot Channel Heat Flux Versus Time

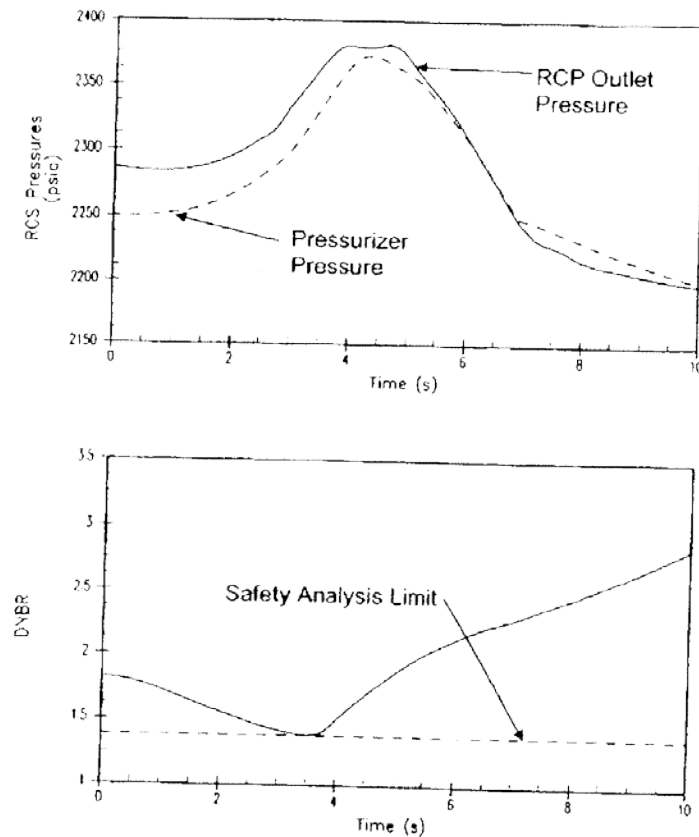
*Figure 15.3-3 Full Loss of Flow (Undervoltage), RCS Pressures and DNBR Versus Time*



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**Figure 15.3-3**  
Full Loss of Flow (Undervoltage)  
RCS Pressures and DNBR Versus Time

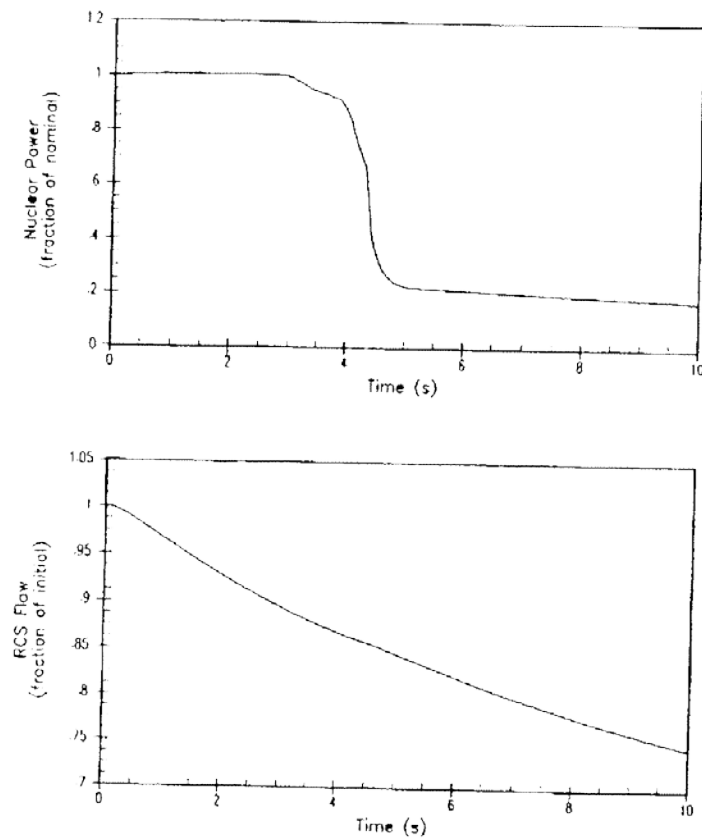
*Figure 15.3-3a Full Loss of Flow (Underfrequency), DNBR and Reactor Coolant System Pressures Versus Time*



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**Figure 15.3-3a**  
Full Loss of Flow (Underfrequency)  
RCS Pressures and DNBR Versus Time

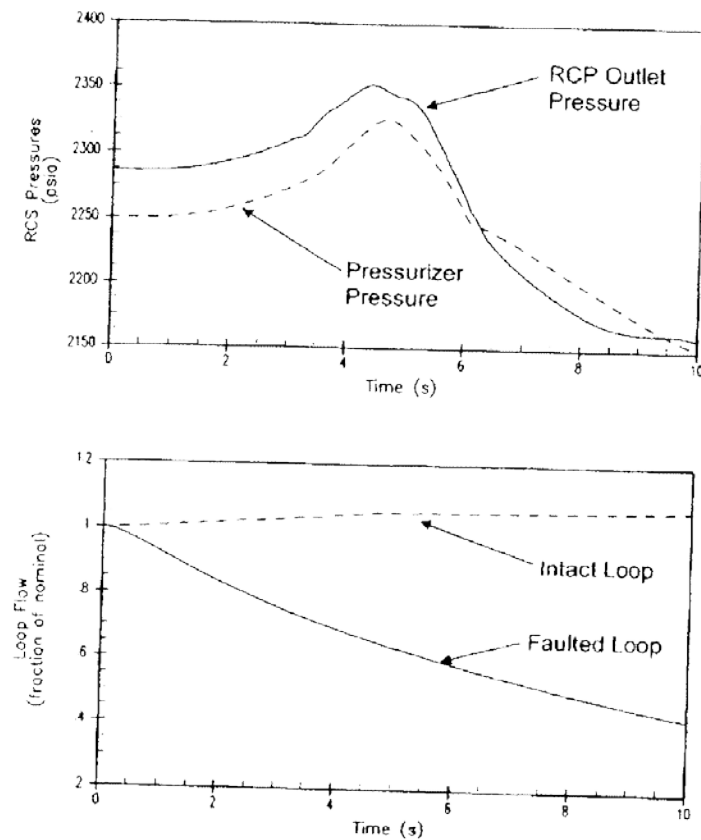
*Figure 15.3-4 Partial Loss of Flow, Nuclear Power and RCS Flow Versus Time*



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**Figure 15.3-4**  
Partial Loss of Flow  
Nuclear Power and RCS Flow Versus Time

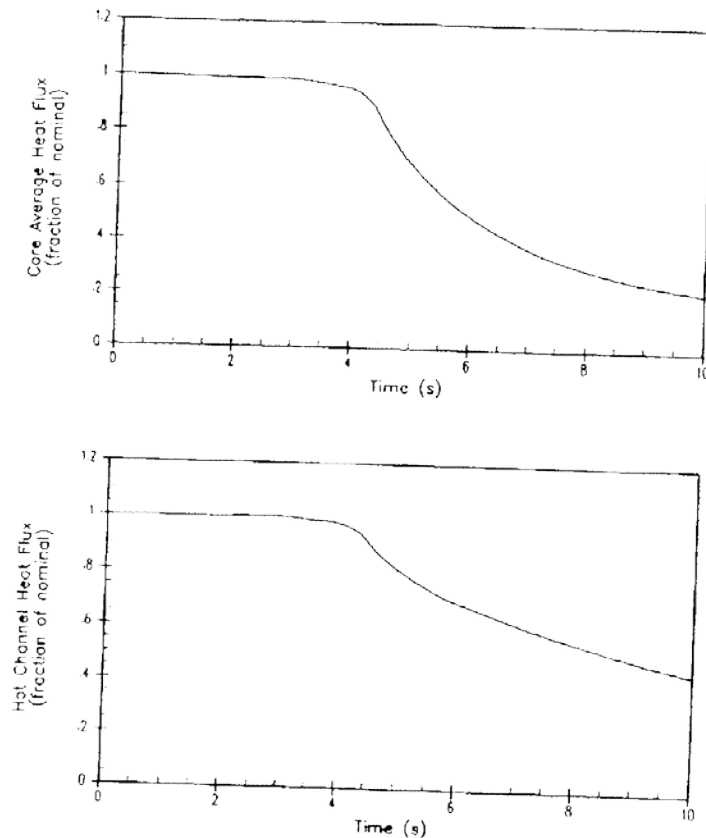
Figure 15.3-5 Partial Loss of Flow, RCS Pressures and RCS Loop Flows Versus Time



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**Figure 15.3-5**  
Partial Loss of Flow  
RCS Pressures and RCS Loop Flows Versus Time

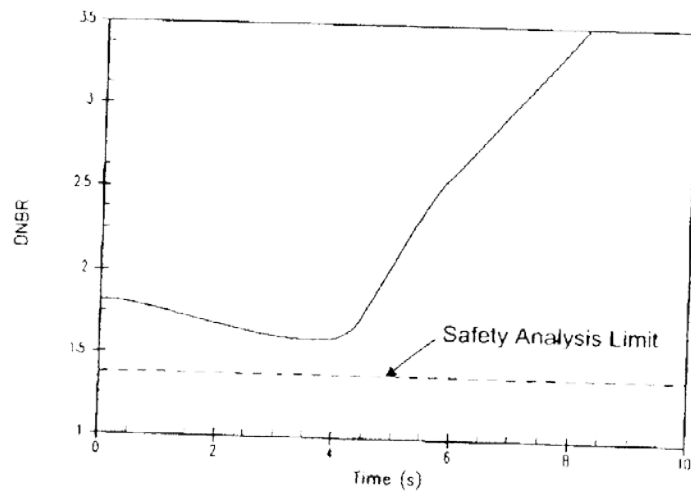
*Figure 15.3-6 Partial Loss of Flow, Core Average and Hot Channel Heat Flux Versus Time*



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**Figure 15.3-6**  
Partial Loss of Flow  
Core Average and Hot Channel Heat Flux Versus Time

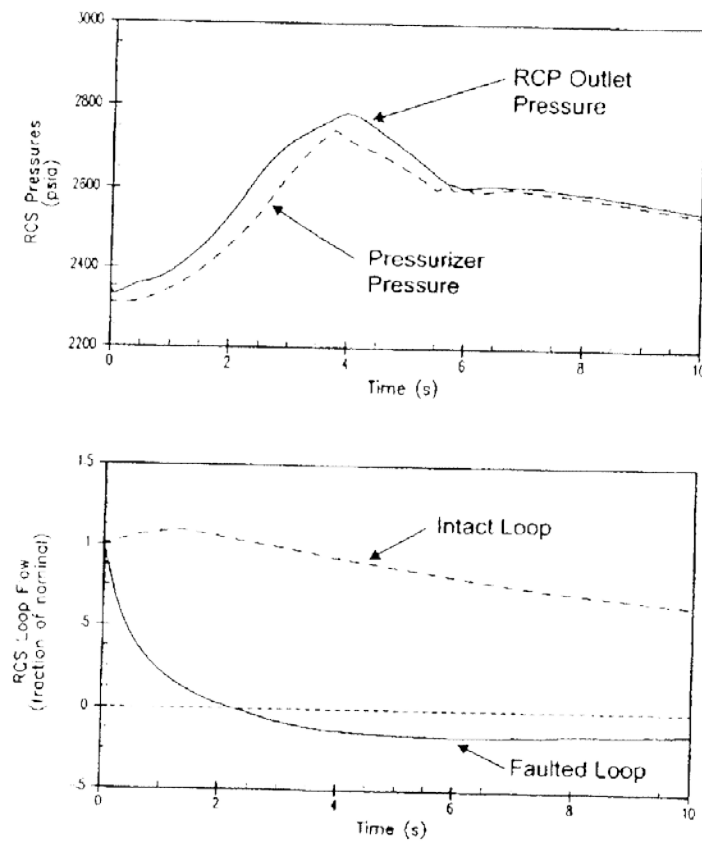
*Figure 15.3-7 Partial Loss of Flow, DNBR Versus Time*



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**Figure 15.3-7**  
Partial Loss of Flow  
DNBR Versus Time

*Figure 15.3-8 Locked Rotor, RCS Pressures and RCS Loop Flows Versus Time*

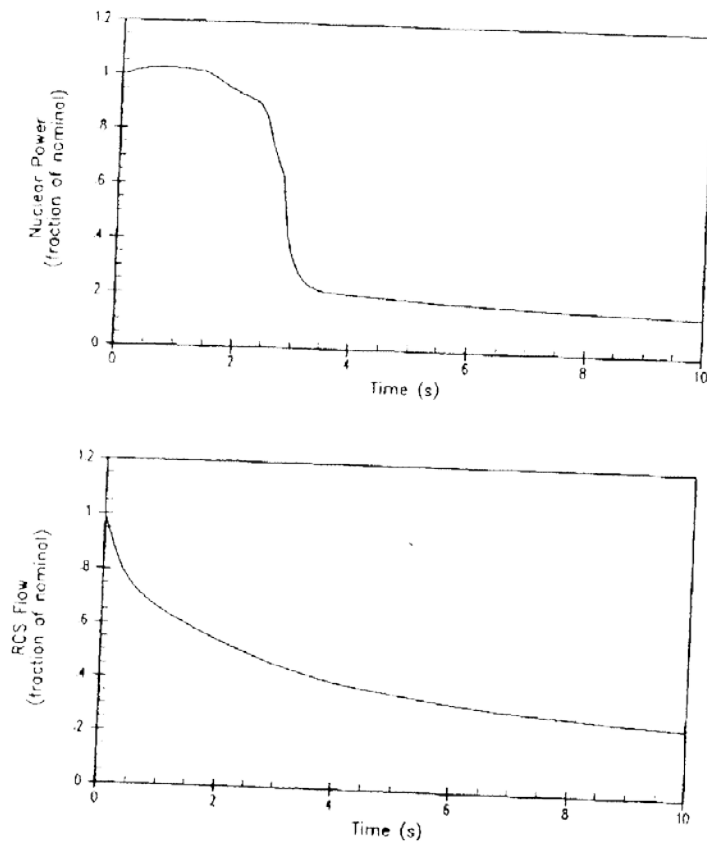


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**Figure 15.3-8**  
Locked Rotor  
RCS Pressures and RCS Loop Flows Versus Time



*Figure 15.3-9 Locked Rotor, Nuclear Power and RCS Flow Versus Time*

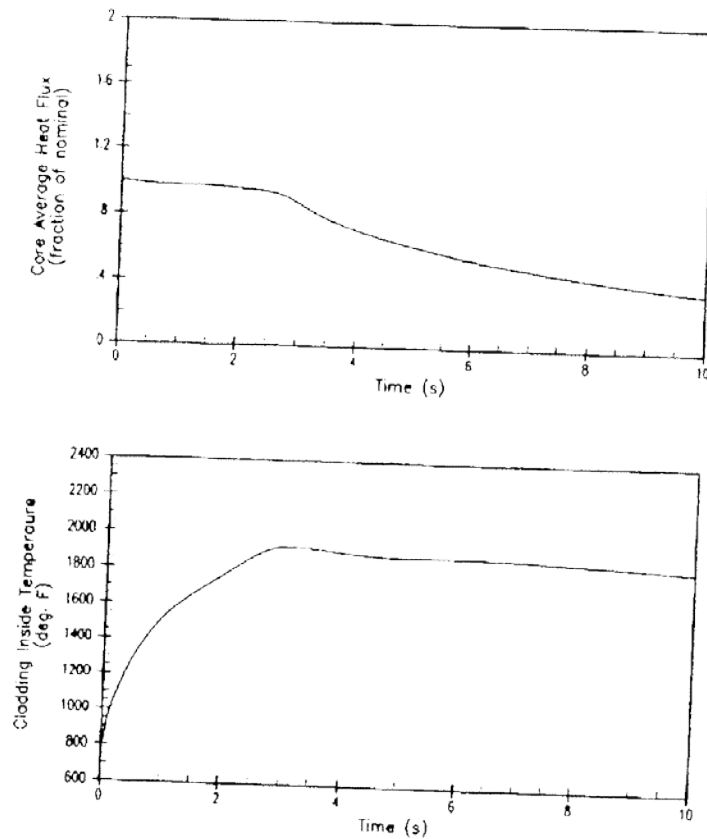


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**Figure 15.3-9**  
Locked Rotor  
Nuclear Power and RCS Flow Versus Time

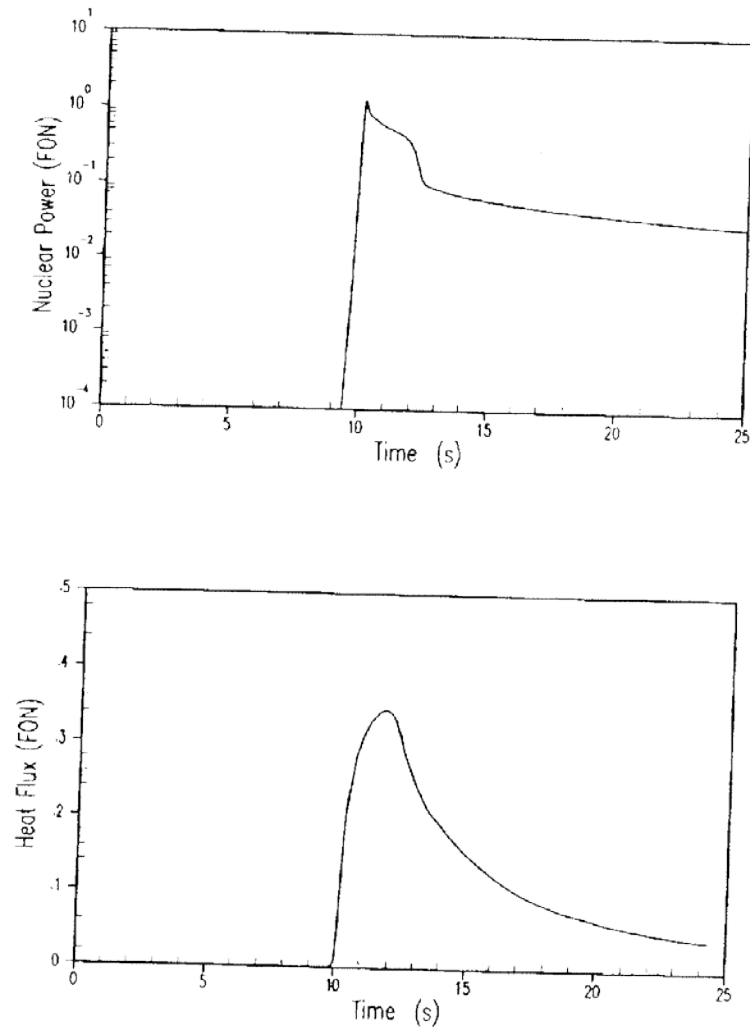
*Figure 15.3-10 Locked Rotor, Core Average Heat Flux and Cladding Inside Temperature Versus Time*



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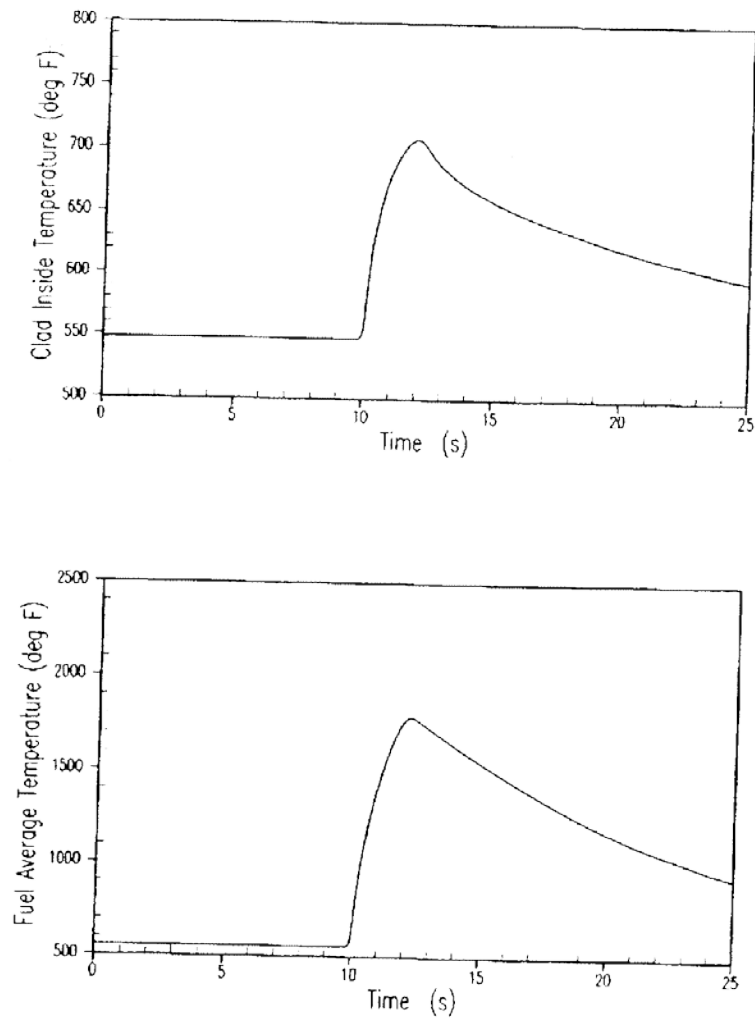
**Figure 15.3-10**  
Locked Rotor  
Core Average Heat Flux and Cladding Inside  
Temperature Versus Time

*Figure 15.4-1 Uncontrolled Rod Cluster Control Assembly Bank Withdrawal From Subcritical Conditions, Heat Flux and Nuclear Power Versus Time (422V+Fuel)*



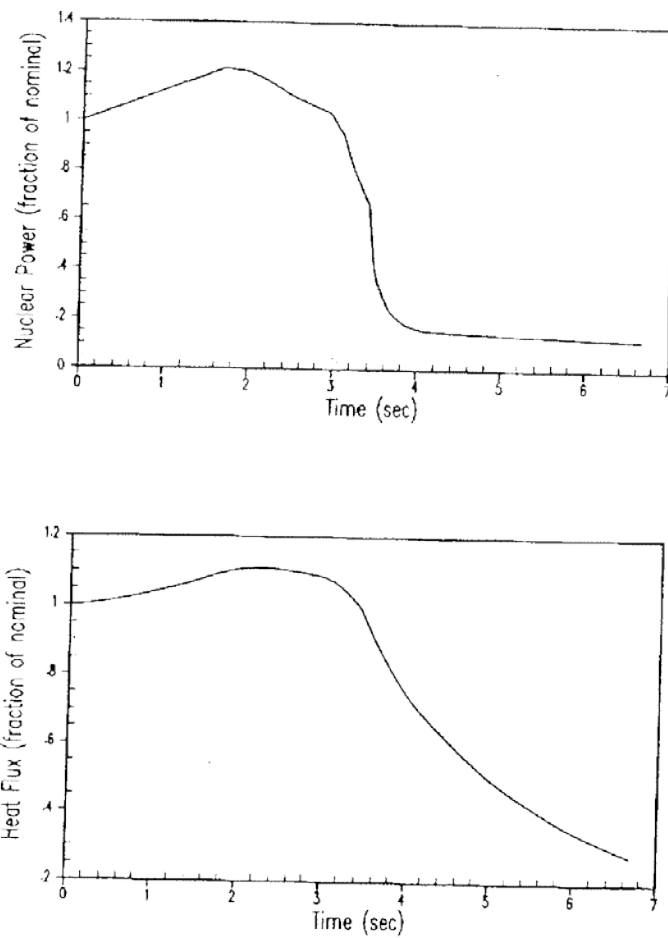
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Figure 15.4-1 Uncontrolled Rod Cluster Control Assembly Bank Withdrawal From Subcritical Conditions, Heat Flux and Nuclear Power Versus Time (422V+ Fuel)

*Figure 15.4-2 Uncontrolled Rod Cluster Control Assembly Bank Withdrawal From Subcritical Conditions, Clad Inside and Fuel Average Temperature Versus Time (422V+Fuel)*



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Figure 15.4-2 Uncontrolled Rod Cluster Control Assembly Bank Withdrawal From Subcritical Conditions, Clad Inside and Fuel Average Temperature Versus Time (422V+ Fuel)

*Figure 15.4-3 Uncontrolled Rod Cluster Control Assembly Bank Withdrawal at Power, Minimum Feedback, 100 pcm/sec, Nuclear Power and Heat Flux Versus Time*



*Figure 15.4-4 Uncontrolled Rod Cluster Control Assembly Bank Withdrawal at Power, Minimum Feedback, 100 pcm/sec, Pressurizer Pressure and Pressurizer Water Volume Versus Time*

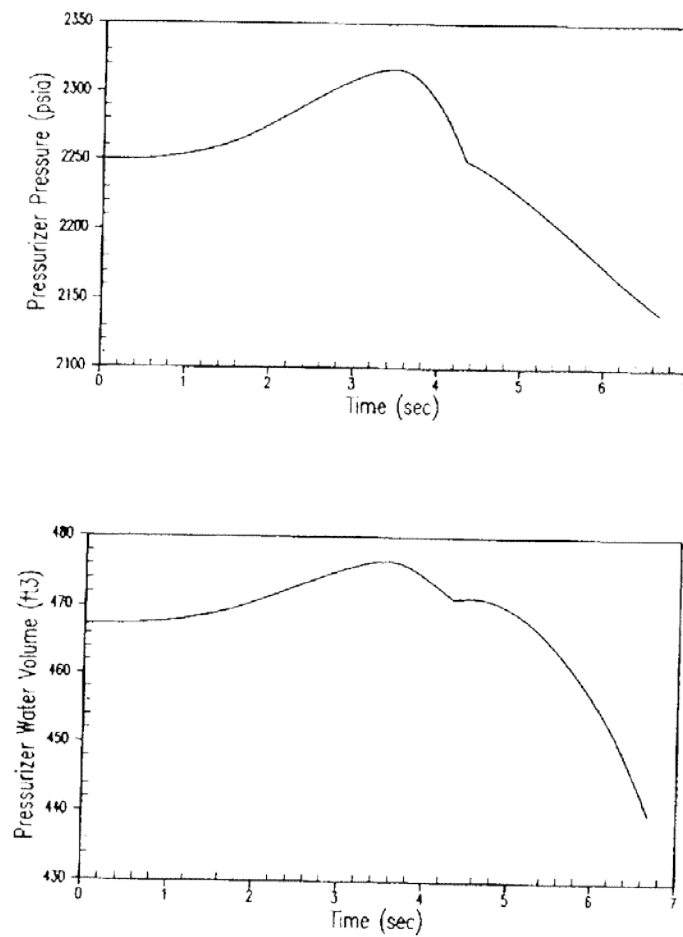
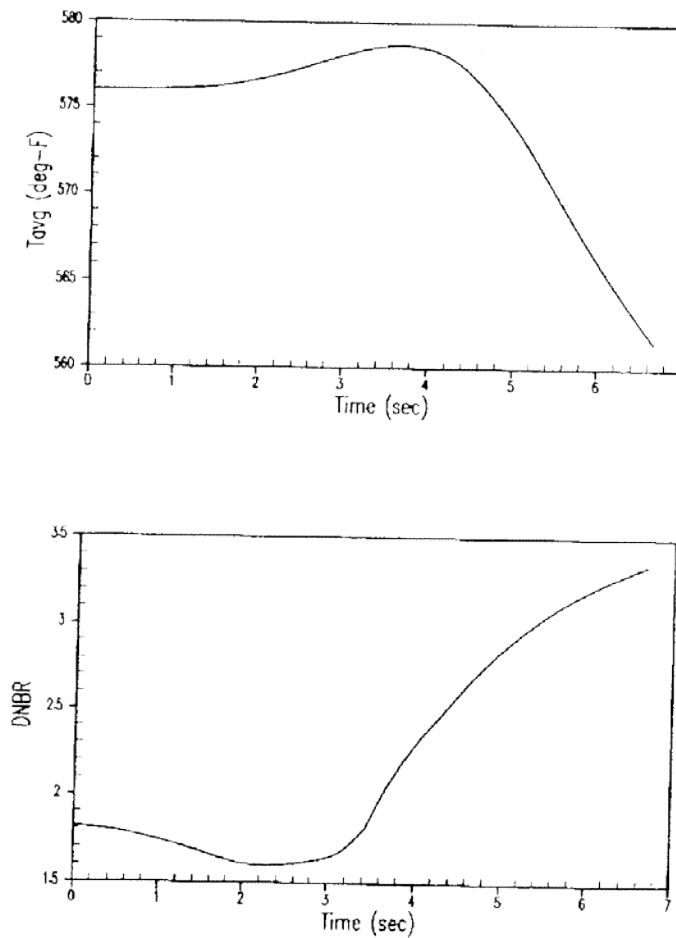
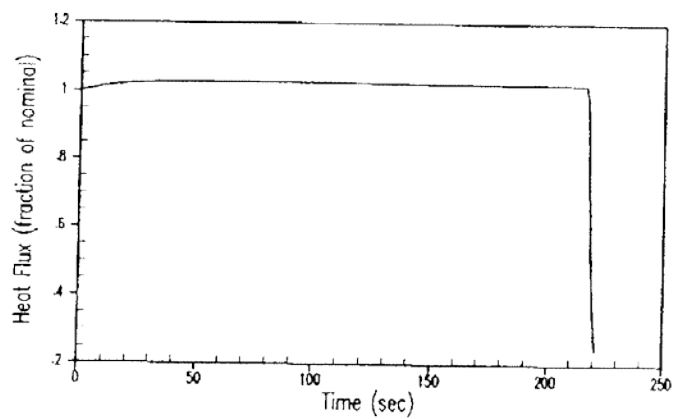
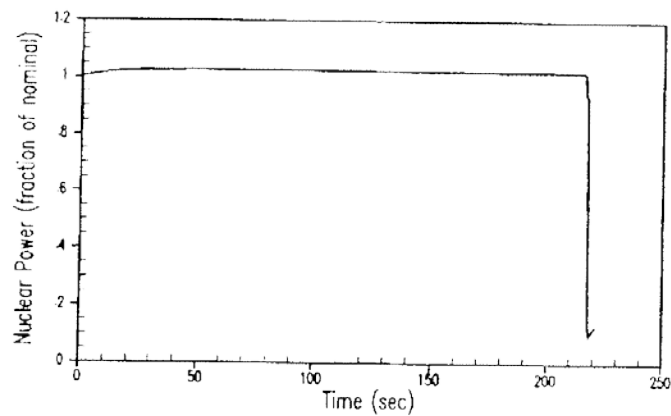


Figure 15.4-5 Uncontrolled Rod Cluster Control Assembly Bank Withdrawal at Power, Minimum Feedback, 100 pcm/sec,  $T_{avg}$  and DNBR Versus Time



*Figure 15.4-6 Uncontrolled Rod Cluster Control Assembly Bank Withdrawal at Power, Maximum Feedback, 5 pcm/sec, Nuclear Power and Heat Flux Versus Time*





*Figure 15.4-7 Uncontrolled Rod Cluster Control Assembly Bank Withdrawal at Power, Maximum Feedback, 5 pcm/sec, Pressurizer Water Volume and Pressurizer Pressure Versus Time*

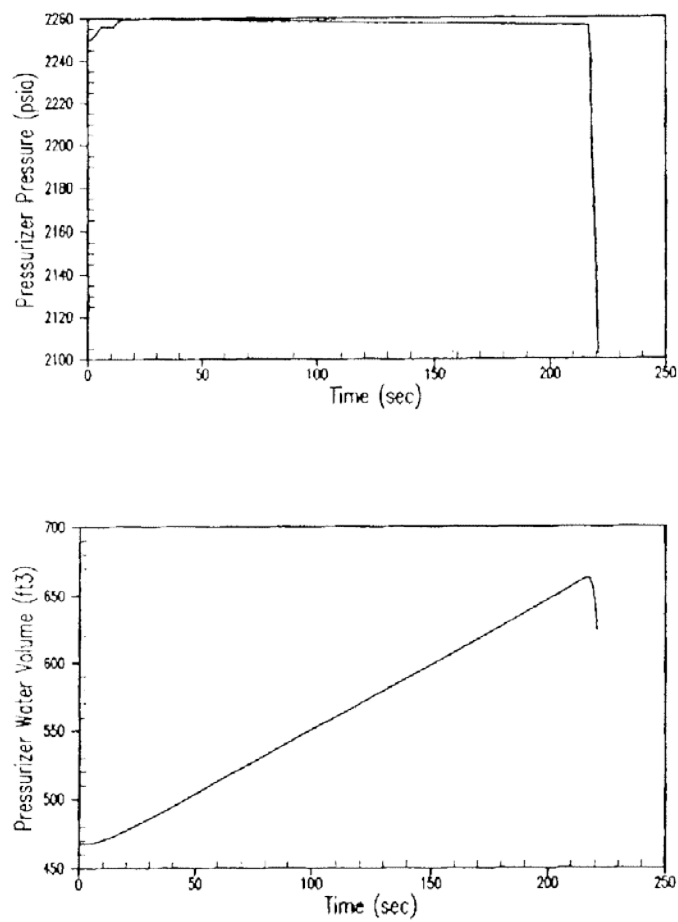
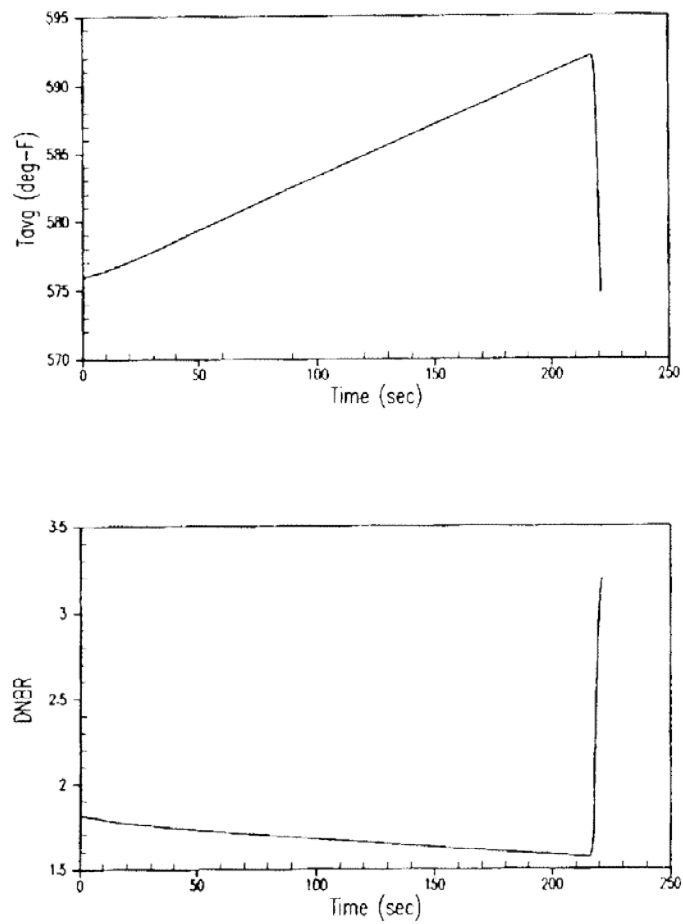
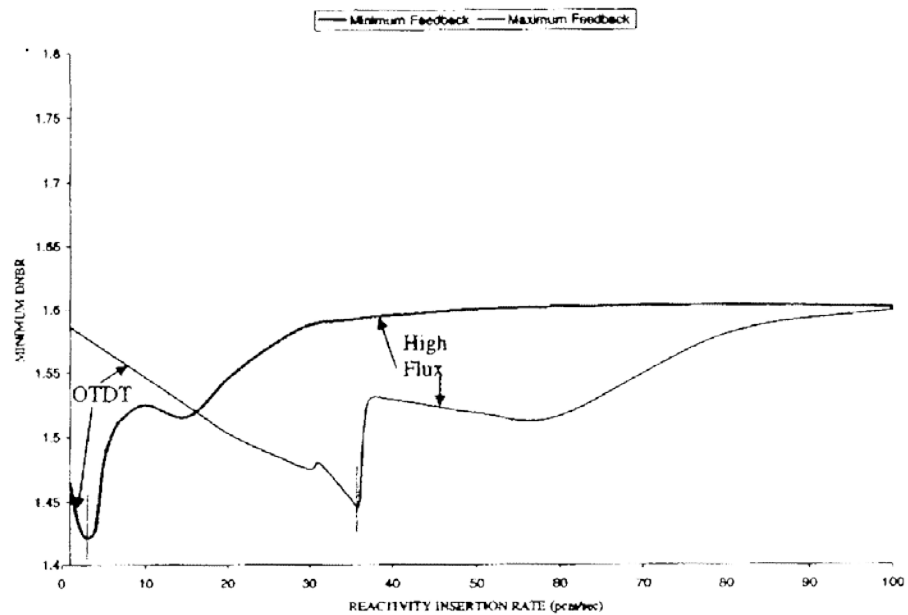


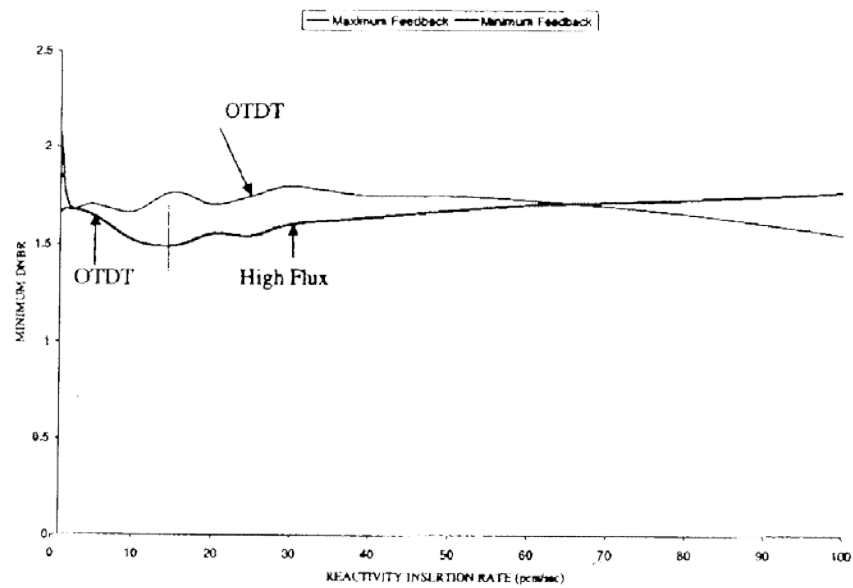
Figure 15.4-8 Uncontrolled Rod Cluster Control Assembly Bank Withdrawal at Power, Maximum Feedback, 5 pcm/sec,  $T_{AVG}$  and DNBR Versus Time



*Figure 15.4-9 Uncontrolled Rod Cluster Control Assembly Bank Withdrawal at Power, Maximum and Minimum Feedback, DNBR Versus Reactivity Insertion Rate*



*Figure 15.4-10 Uncontrolled Rod Cluster Control Assembly Bank Withdrawal from 60% Power, Minimum and Maximum Feedback, DNBR Versus Reactivity Insertion Rate*



*Figure 15.4-11 Uncontrolled Rod Cluster Control Assembly Bank Withdrawal from 10% Power, Minimum and Maximum Feedback, DNBR Versus Reactivity Insertion Rate*

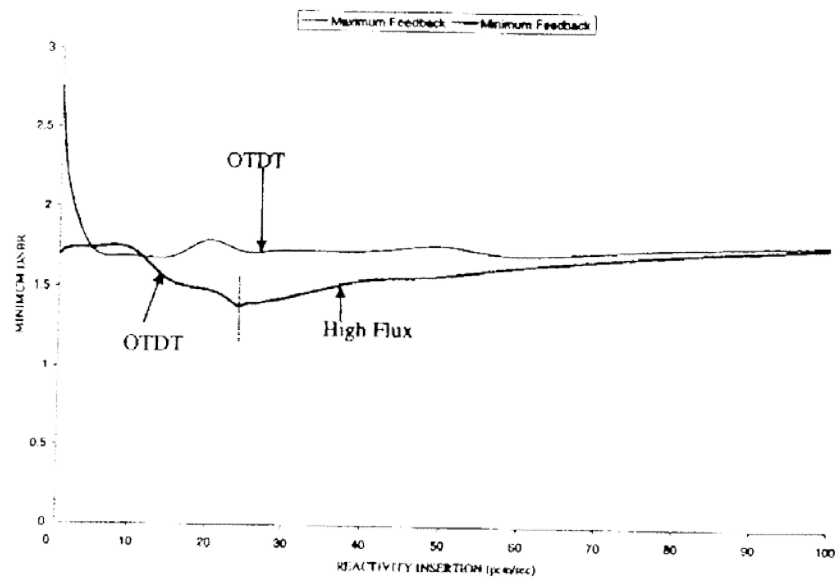


Figure 15.4-12 Startup of an Inactive Coolant Loop, Nuclear Power Versus Time

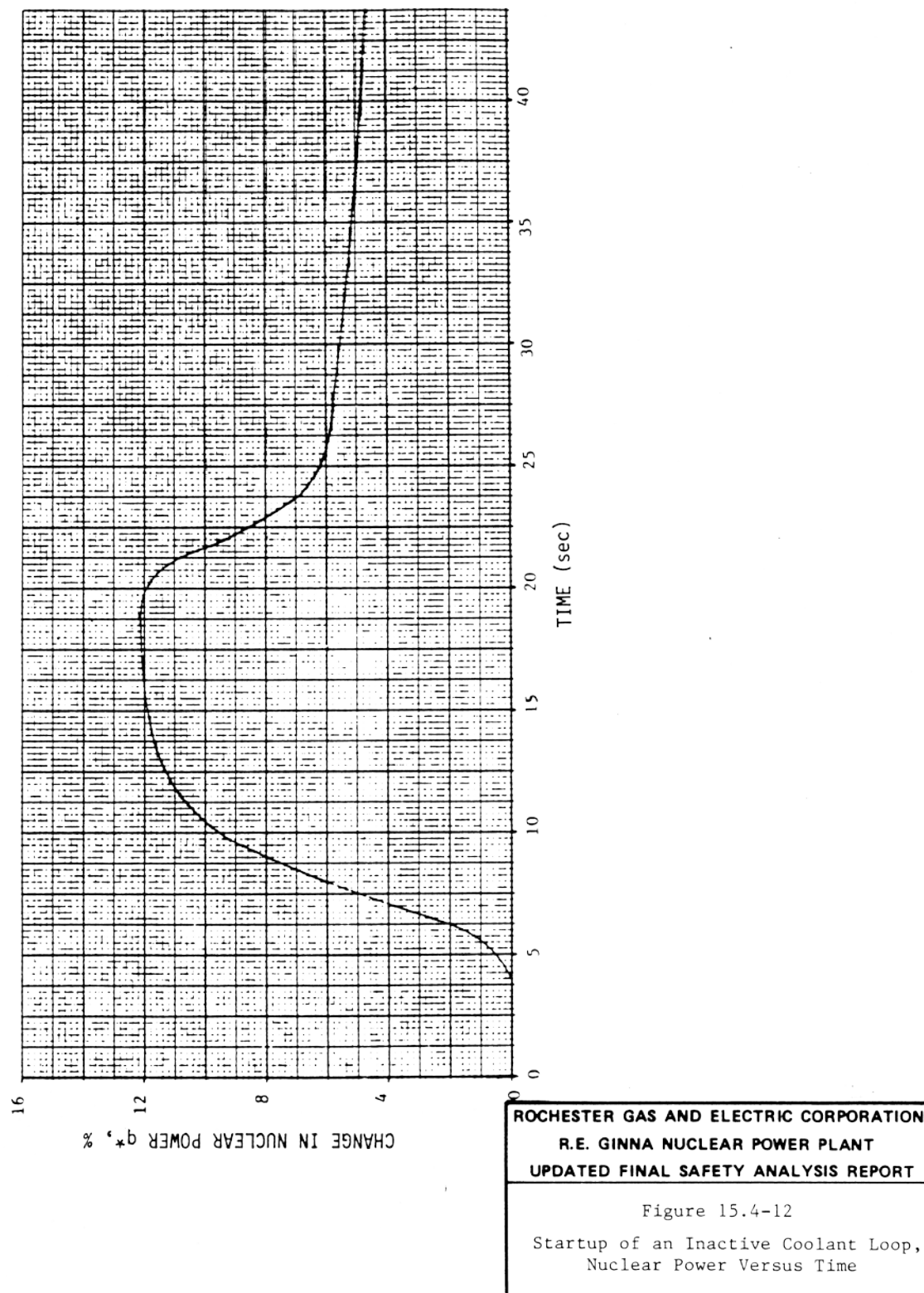
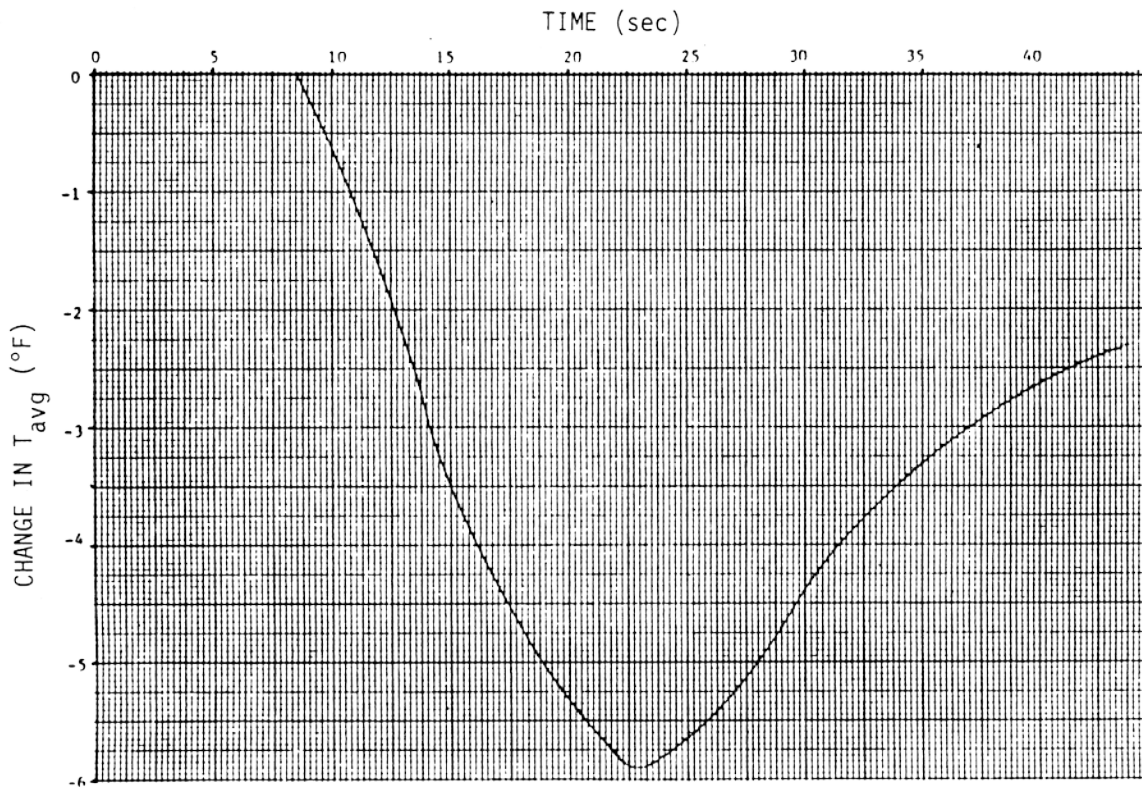


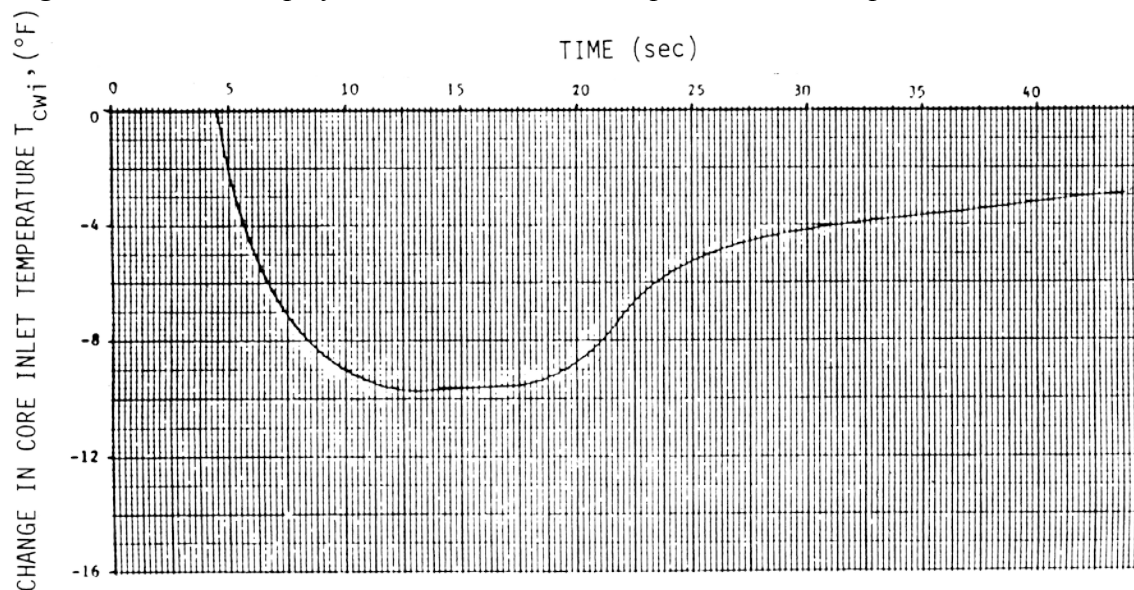
Figure 15.4-13 Startup of an Inactive Coolant Loop,  $T_{AVG}$  Versus Time



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Figure 15.4-13  
Startup of an Inactive Coolant Loop,  
 $T_{avg}$  Versus Time

Figure 15.4-14 Startup of an Inactive Coolant Loop, Core Inlet Temperature Versus Time

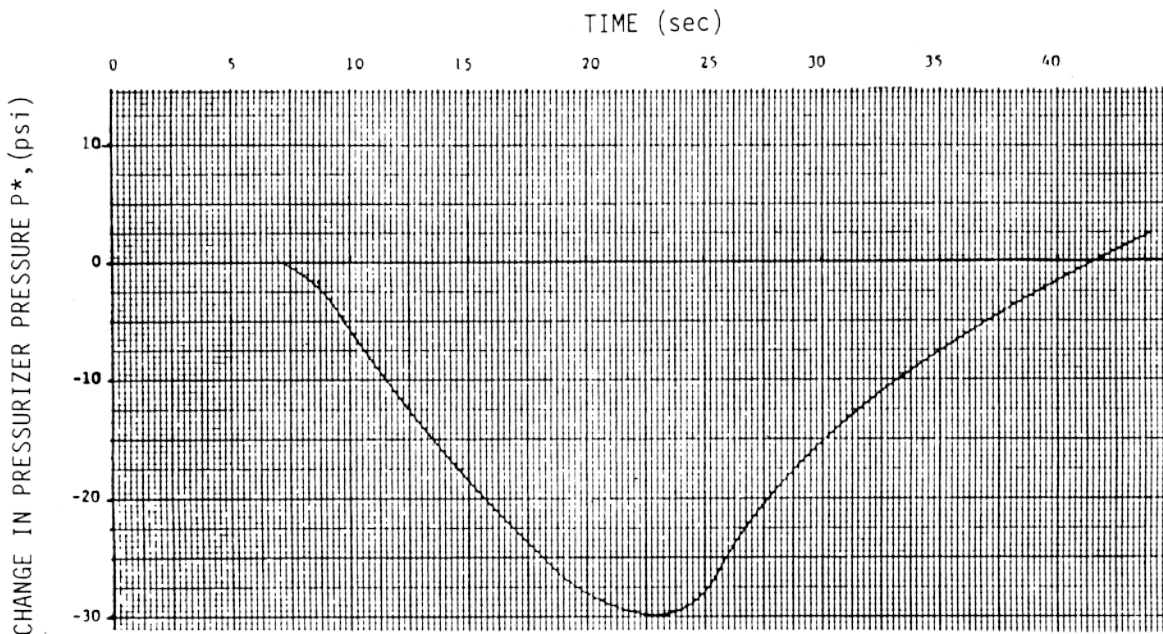


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Figure 15.4-14  
Startup of an Inactive Coolant Loop,  
Core Inlet Temperature Versus Time



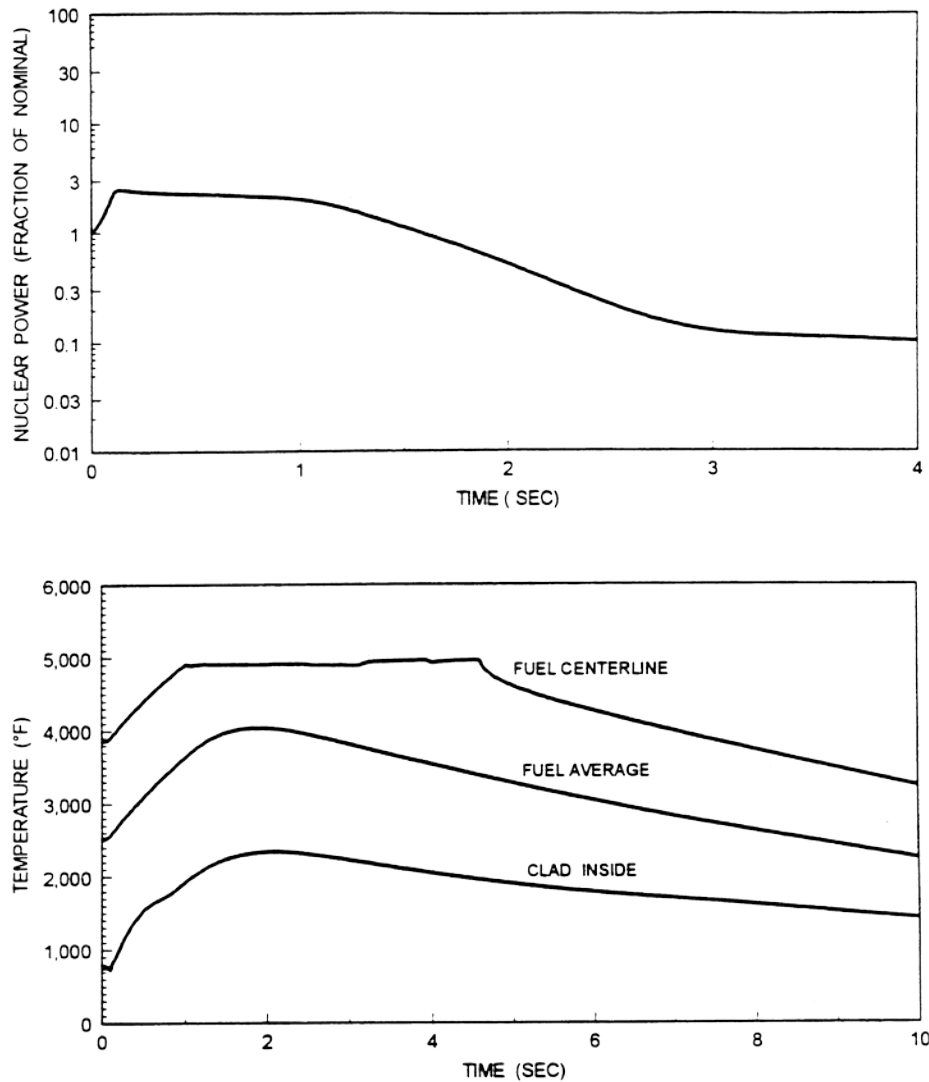
*Figure 15.4-15 Startup of an Inactive Coolant Loop, Pressurizer Pressure Versus Time*



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Figure 15.4-15  
Startup of an Inactive Coolant Loop,  
Pressurizer Pressure Versus Time

*Figure 15.4-16 Rod Cluster Control Assembly Ejection Beginning-of-Life, Full Power, Fuel and Clad Temperature and Nuclear Power Versus Time*

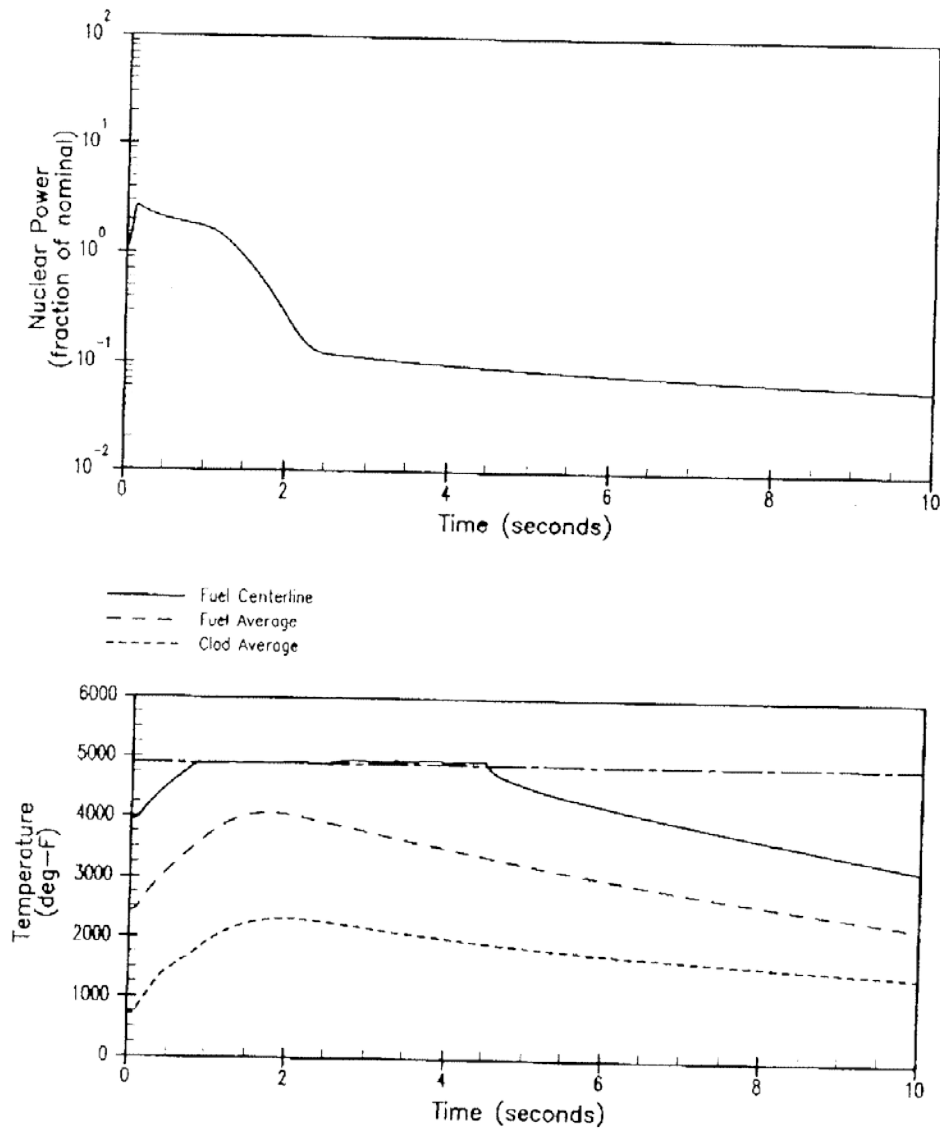


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Figure 15.4-16  
Rod Cluster Control Assembly Ejection  
Beginning-of-Life, Full Power, Fuel  
and Clad Temperature and Nuclear Power  
Versus Time

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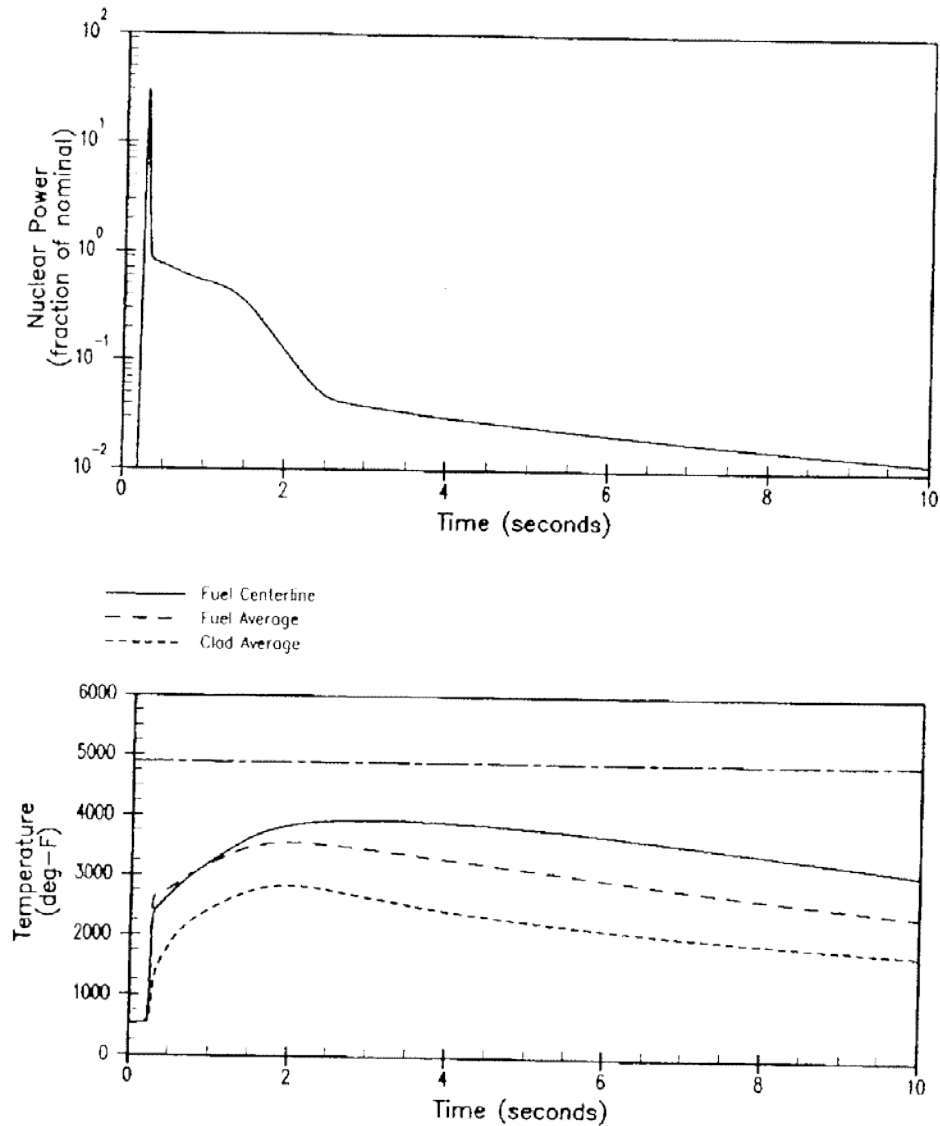
*Figure 15.4-16a Rod Cluster Control Assembly Ejection, Beginning of Life, Full Power, Fuel and Clad Temperature and Nuclear Power Versus Time*



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Figure 15.4-16a  
Rod Cluster Control Assembly Ejection,  
Beginning of Life, Full Power, Fuel  
and Clad Temperature and Nuclear Power  
versus Time

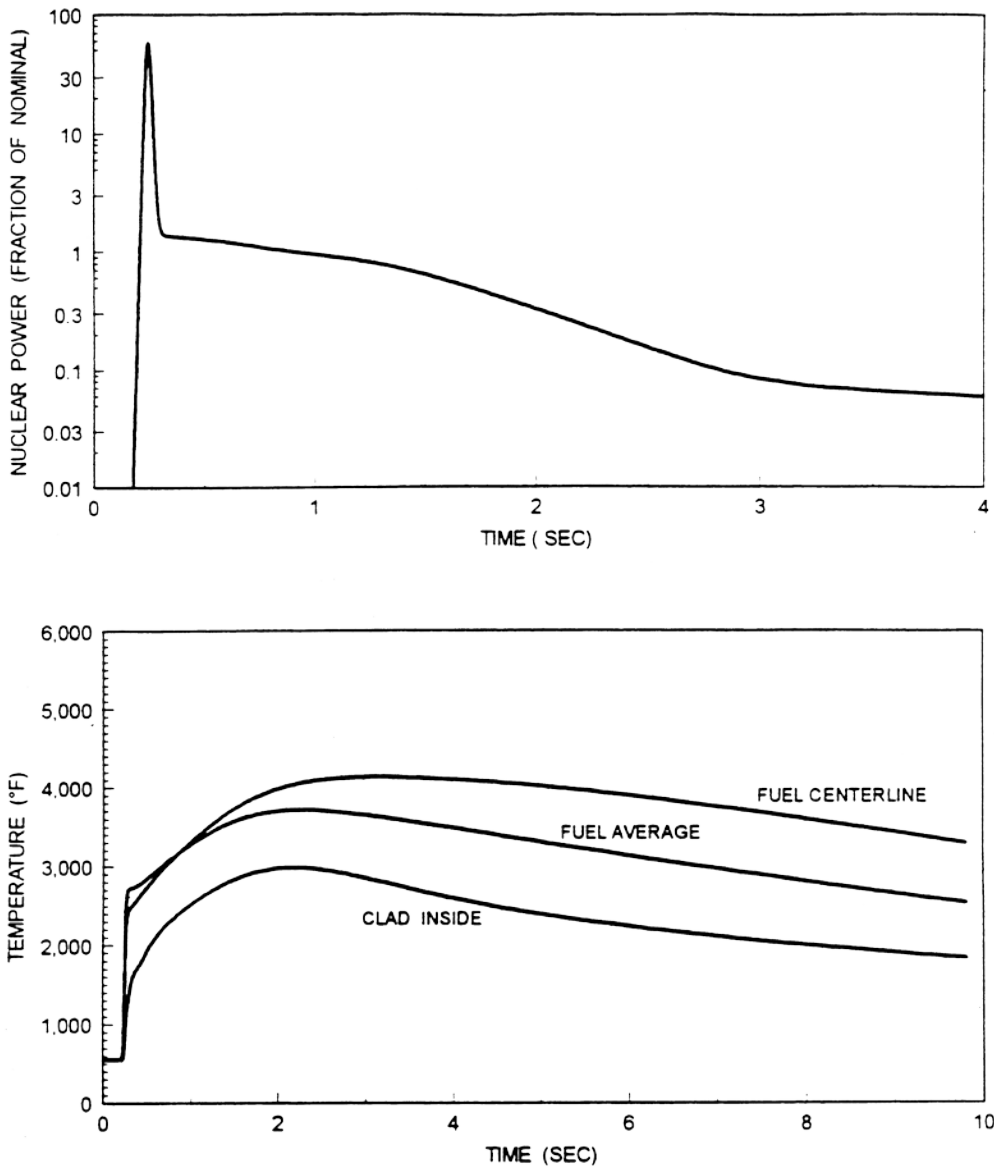
*Figure 15.4-16b Rod Cluster Control Assembly Ejection, Beginning of Life, Zero Power, Fuel and Clad Temperature and Nuclear Power Versus Time*



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Figure 15.4-16b  
Rod Cluster Control Assembly Ejection.  
Beginning of Life. Zero Power. Fuel  
and Clad Temperature and Nuclear Power  
versus Time

*Figure 15.4-17 Rod Cluster Control Assembly Ejection Beginning-of-Life, Zero Power, Fuel and Clad Temperature and Nuclear Power Versus Time*

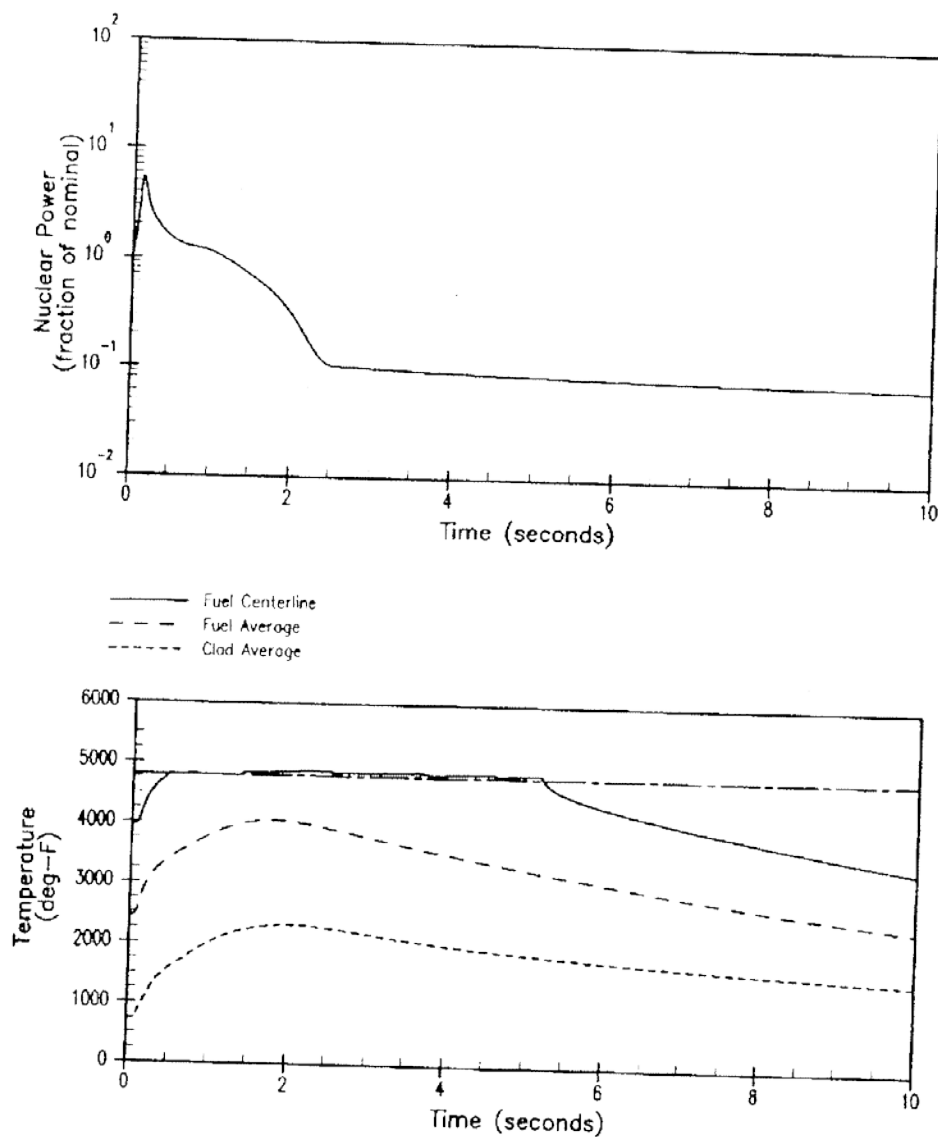


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Figure 15.4-17  
Rod Cluster Control Assembly Ejection  
Beginning-of-Life, Zero Power, Fuel  
and Clad Temperature and Nuclear Power  
Versus Time

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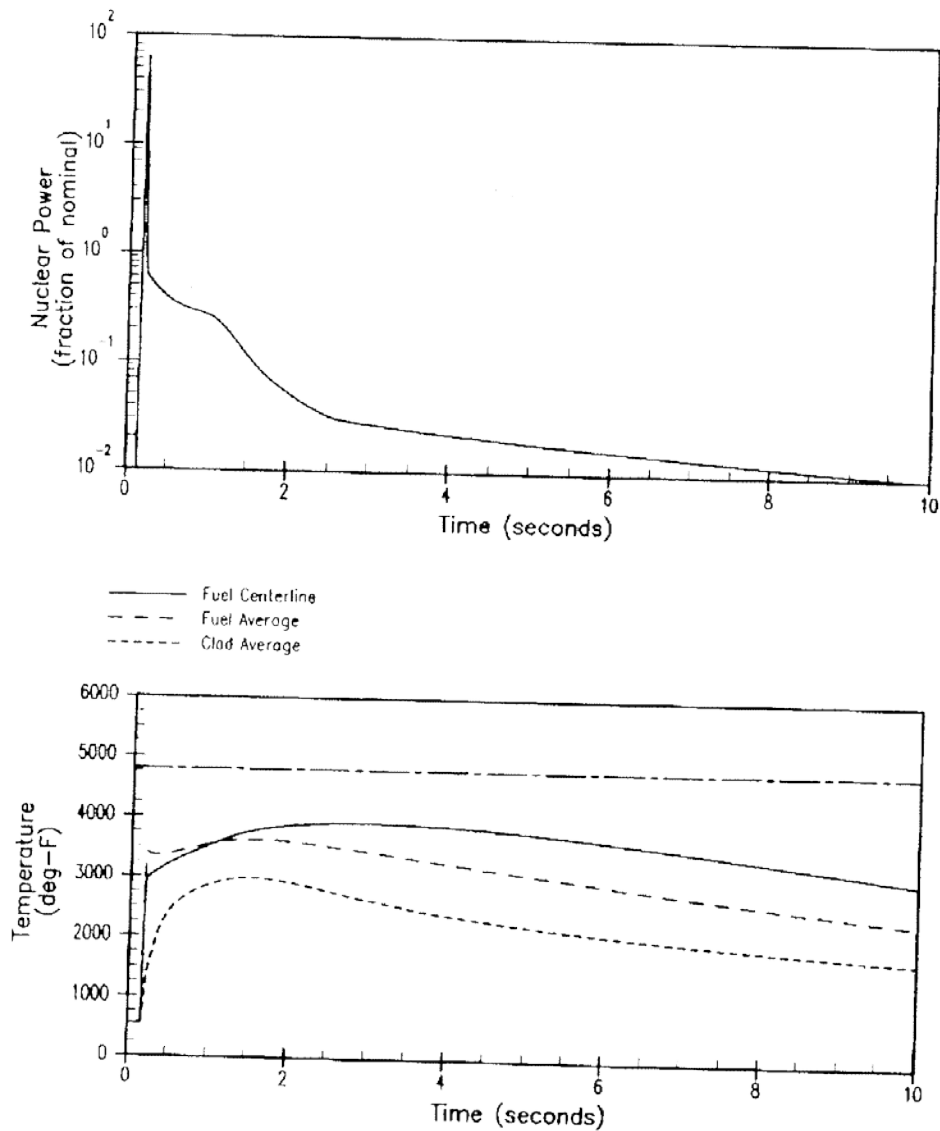
*Figure 15.4-17a Rod Cluster Control Assembly Ejection, End of Life, Full Power, Fuel and Clad Temperature and Nuclear Power Versus Time*



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Figure 15.4-17a  
Rod Cluster Control Assembly Ejection,  
End of Life, Full Power, Fuel  
and Clad Temperature and Nuclear Power  
versus Time

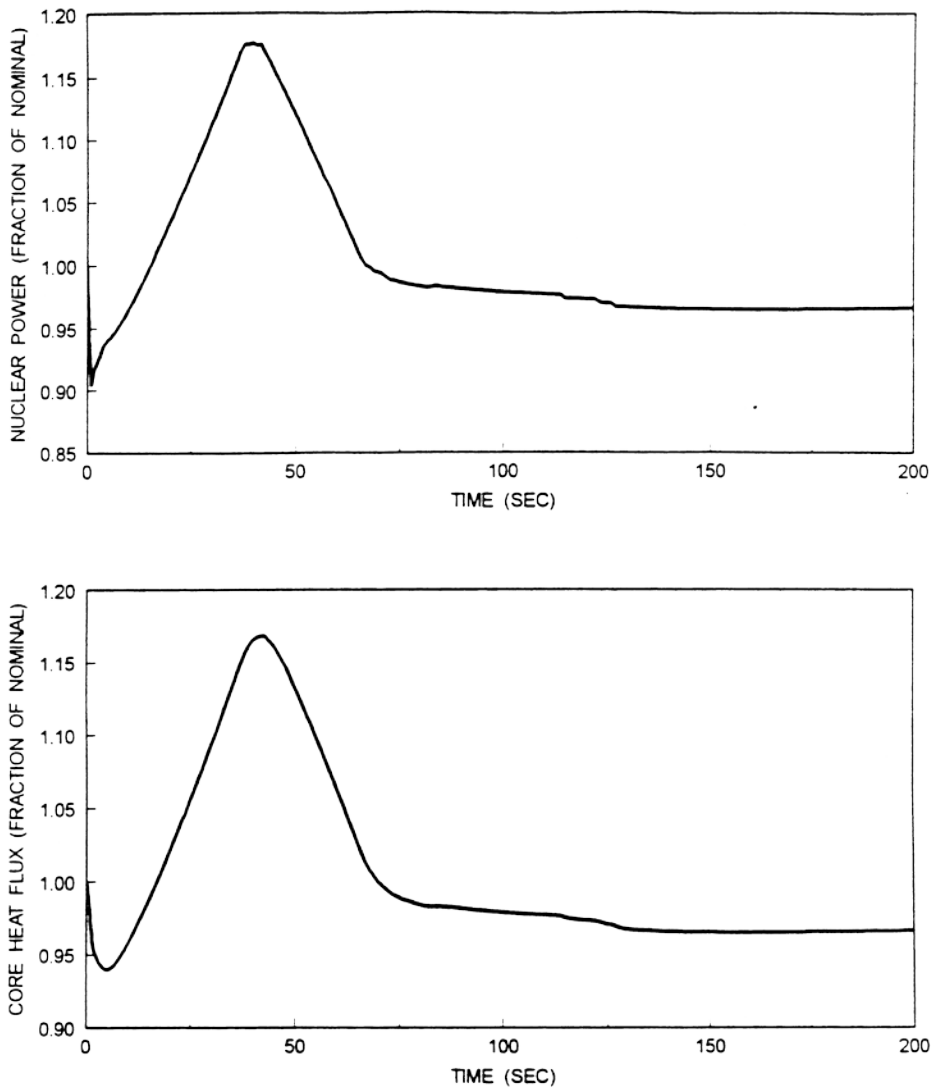
*Figure 15.4-17b Rod Cluster Control Assembly Ejection, End of Life, Zero Power, Fuel and Clad Temperature and Nuclear Power Versus Time*



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Figure 15.4-17b  
Rod Cluster Control Assembly Ejection,  
End of Life, Zero Power, Fuel  
and Clad Temperature and Nuclear Power  
versus Time

*Figure 15.4-18 Rod Cluster Control Assembly Drop Heat Flux and Nuclear Power Versus Time*



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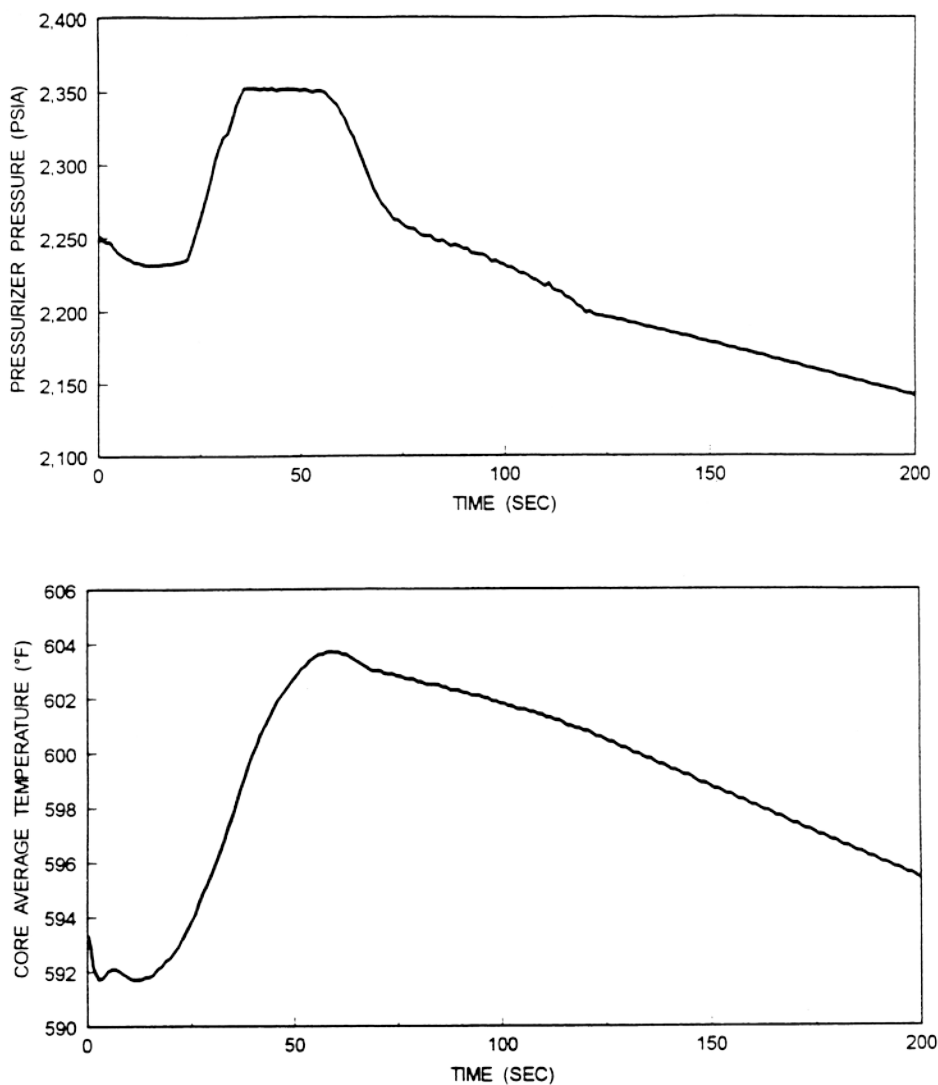
Figure 15.4-18

Rod Cluster Control Assembly Drop  
Heat Flux and Nuclear Power  
Versus Time

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*Figure 15.4-19 Rod Cluster Control Assembly Drop Pressurizer Pressure and Core Average Temperature Versus Time*



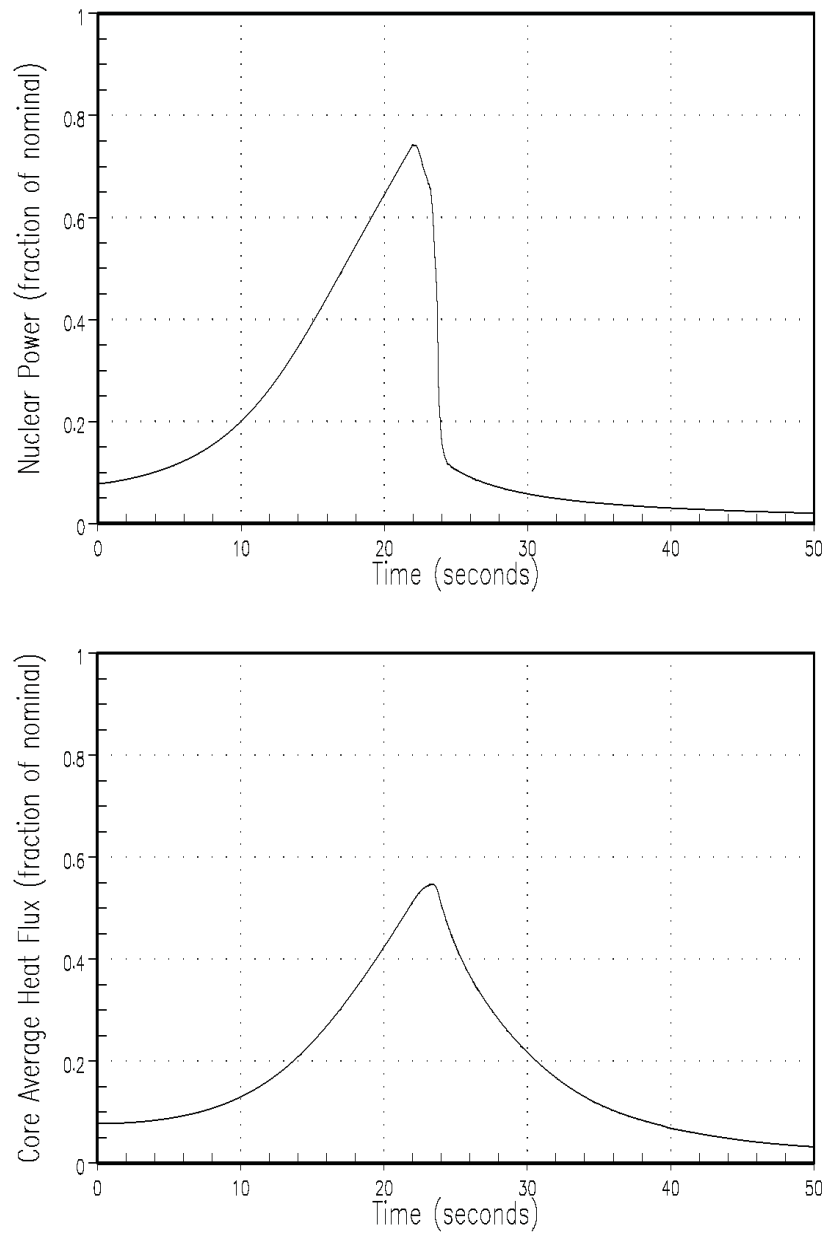
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Figure 15.4-19

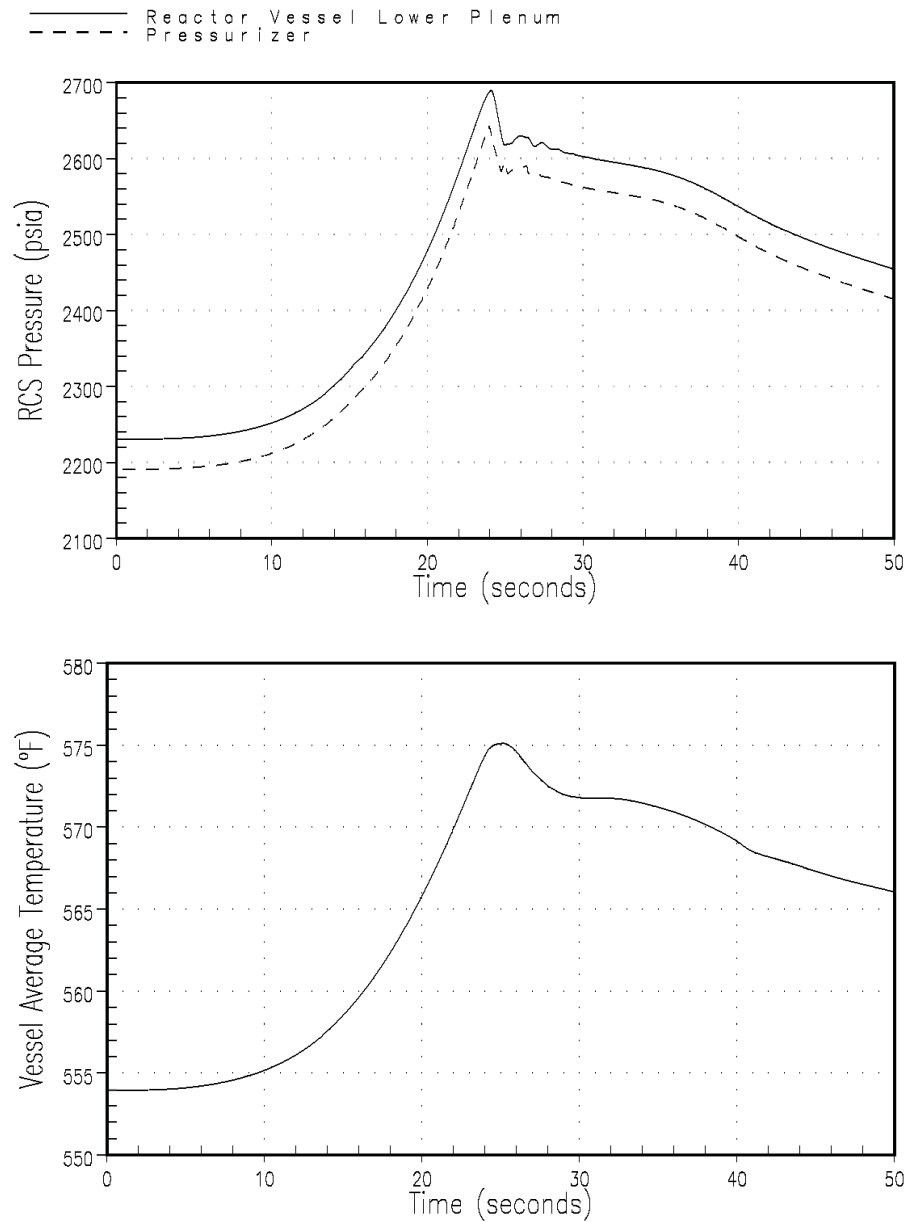
Rod Cluster Control Assembly Drop  
Pressurizer Pressure and Core Average  
Temperature Versus Time

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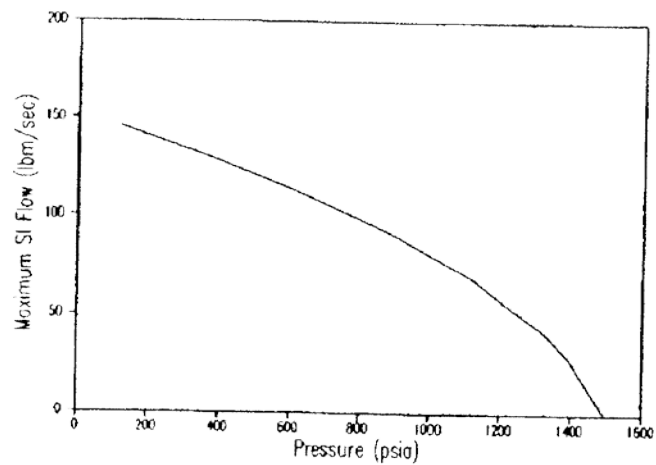
Figure 15.4-20 Uncontrolled Rod Cluster Control Assembly Bank Withdrawal from 8% Power (RCS Pressure Case), Minimum Feedback, 31 pcm/sec, Nuclear Power and Heat Flux versus Time



*Figure 15.4-21 Uncontrolled Rod Cluster Control Assembly Bank Withdrawal from 8% Power (RCS Pressure Case), Minimum Feedback, 31 pcm/sec, RCS Pressures and  $T_{avg}$  versus Time*



*Figure 15.6-1 Steam Generator Tube Rupture (Overfill), Maximum Safety Injection Flow Versus Pressure*

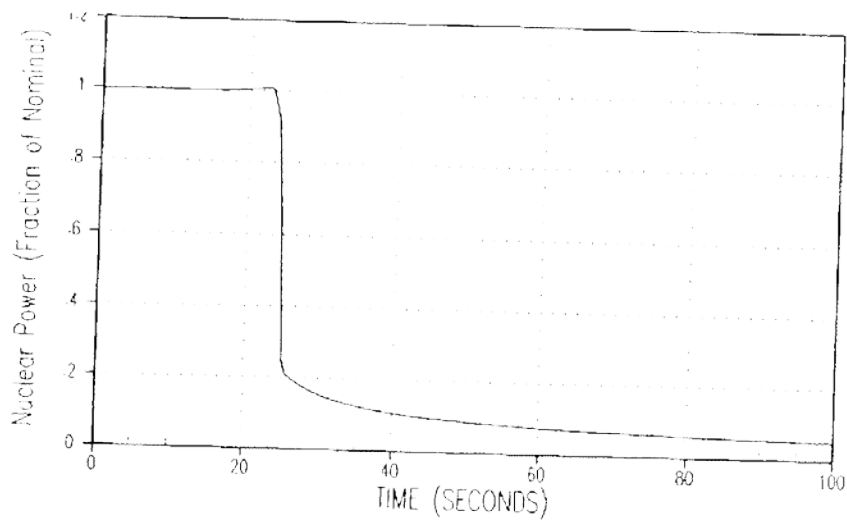


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Figure 15.6-1

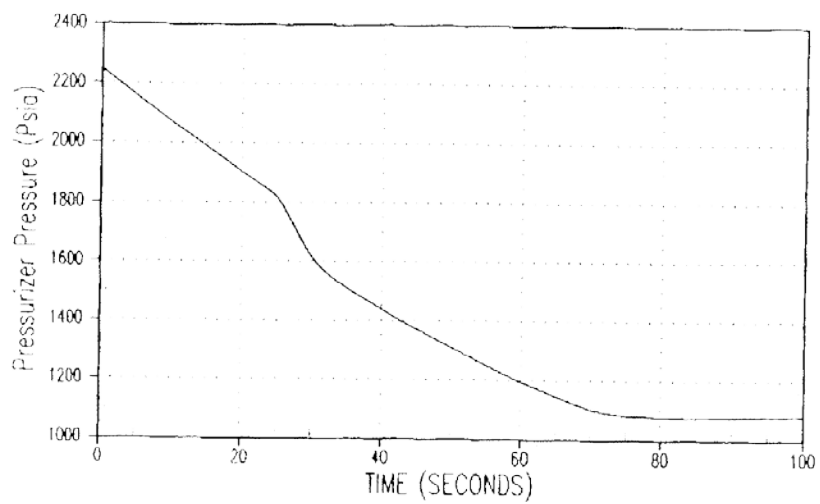
Steam Generator Tube Rupture (Overfill), Maximum Safety  
Injection Flow Versus Pressure

*Figure 15.6-1a RCS Depressurization, Nuclear Power Versus Time*



**Figure 15.6-1a**  
**RCS Depressurization**  
**Nuclear Power versus Time**

*Figure 15.6-1b RCS Pressurization, Pressurizer Pressure Versus Time*



**Figure 15.6-1b**  
**RCS Depressurization**  
**Pressurizer Pressure versus Time**

*Figure 15.6-1c RCS Depressurization, Indicated Loop Average Temperature Versus Time*

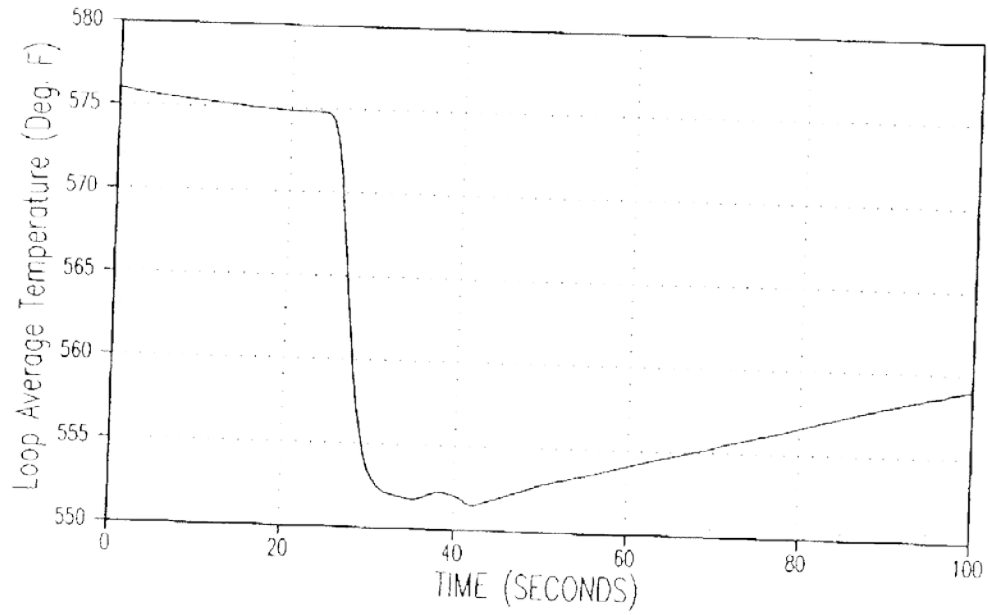
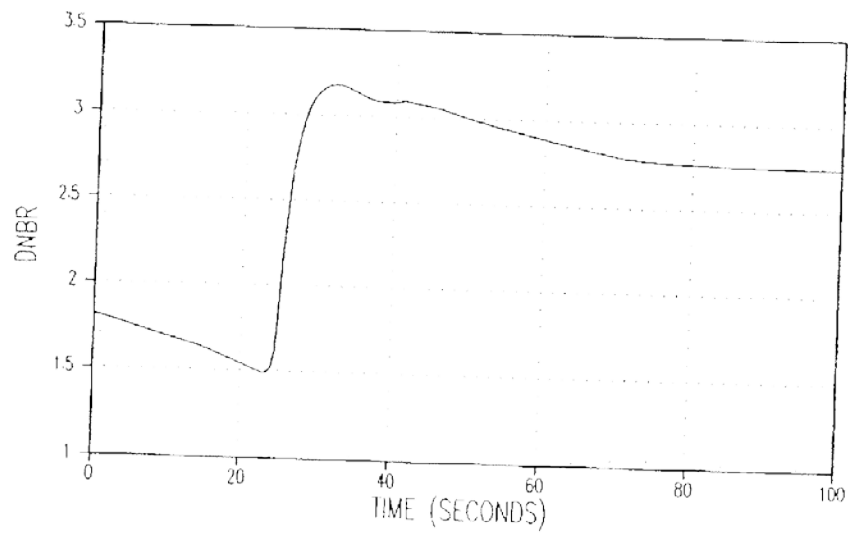


Figure 15.6-1c  
RCS Depressurization  
Indicated Loop Average Temperature versus Time

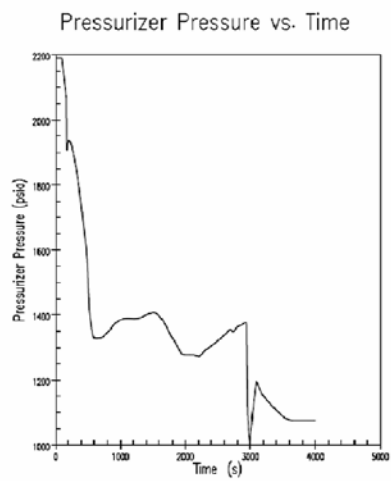
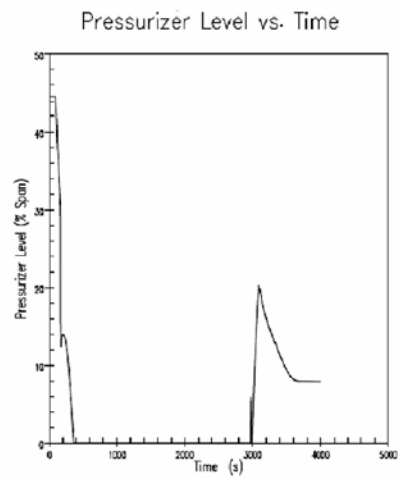
*Figure 15.6-1d RCS Depressurization, DNBR Versus Time*



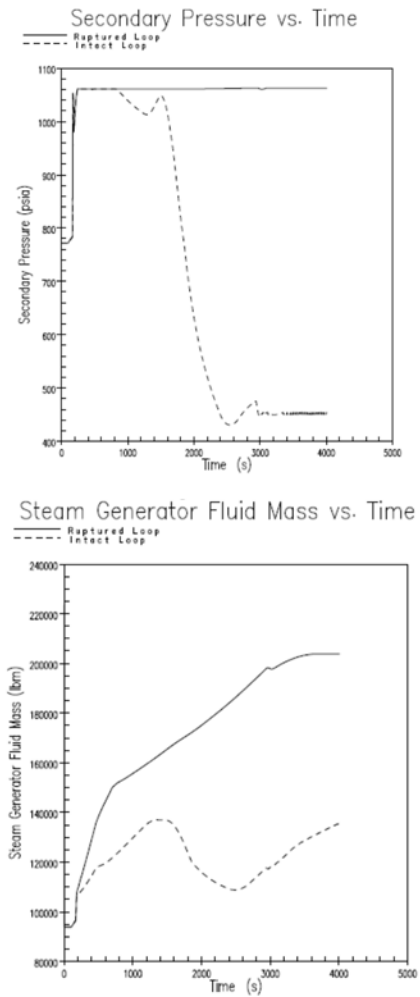
**Figure 15.6-1d  
RCS Depressurization  
DNBR versus Time**



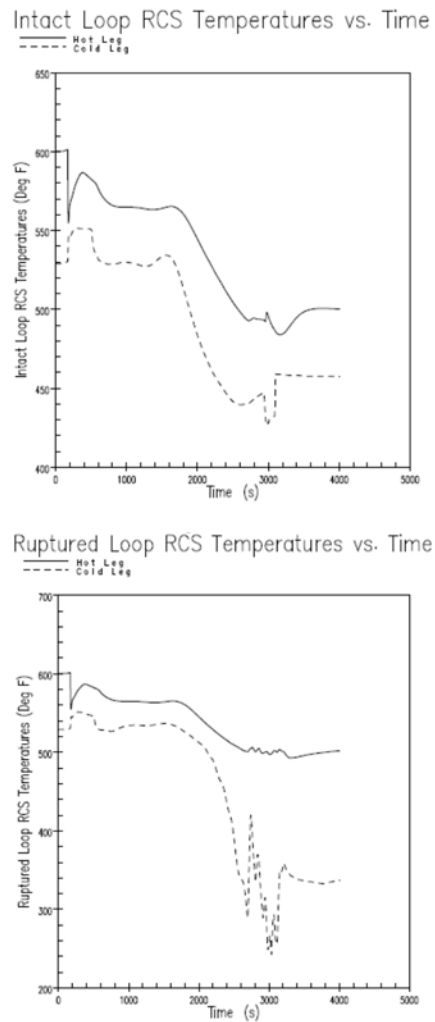
*Figure 15.6-2 SGTR (Overfill), Pressurizer Level and Pressurizer Pressure Versus Time*



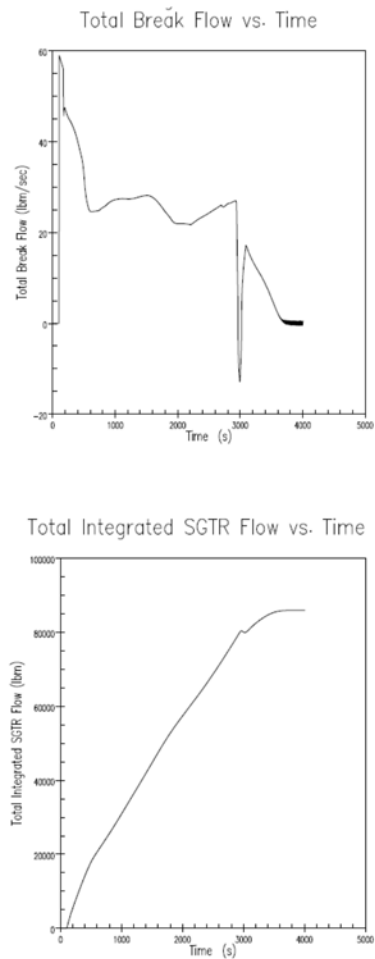
*Figure 15.6-3 SGTR (Overfill), Secondary Pressure and Steam Generator Liquid Mass Versus Time*



*Figure 15.6-4 SGTR (Overfill), Hot and Cold Leg Temperatures for Intact and Ruptured Steam Generators Versus Time*



*Figure 15.6-5 SGTR (Overfill), Total Primary to Secondary Leakage and Total Integrated Primary to Secondary Leakage Versus Time*



*Figure 15.6-6 SGTR (Overfill), Steam Generator Relief Flow and Integrated Steam Generator Relief Flow Versus Time*

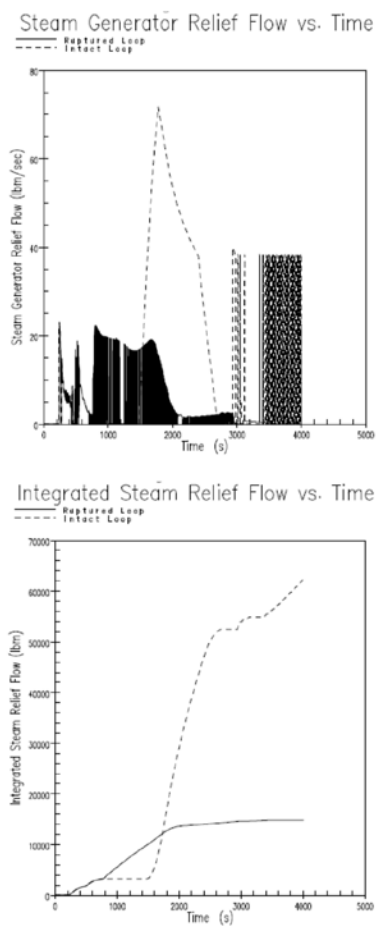
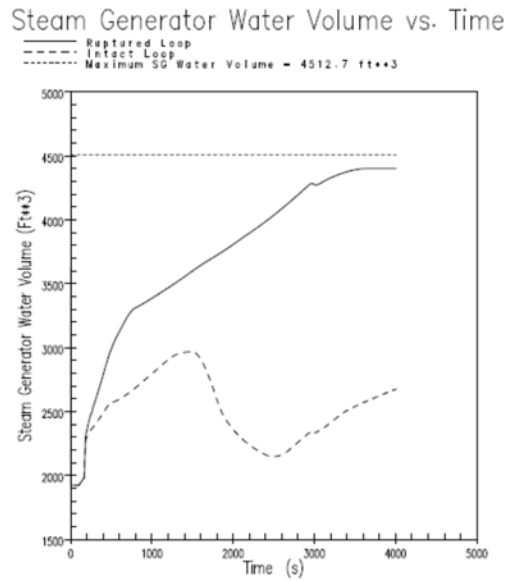


Figure 15.6-7 SGTR (Overfill), Steam Generator Water Volume Versus Time



*Figure 15.6-8 SGTR (Dose), Pressurizer Level and Pressurizer Pressure Versus Time*

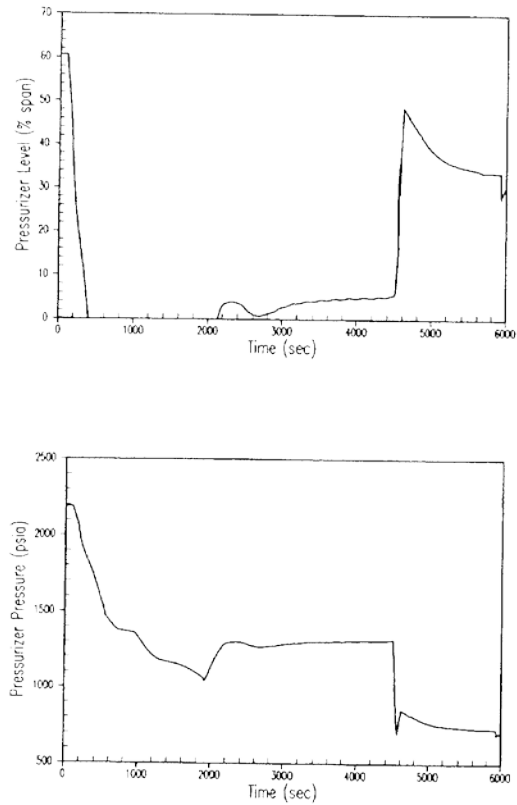
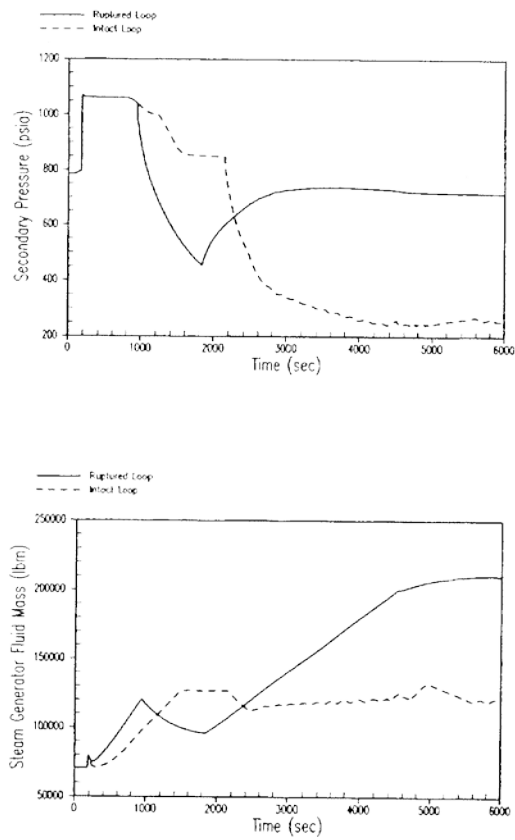


Figure 15.6-8  
SGTR (Dose), Pressurizer Level and  
Pressurizer Pressure vs. Time

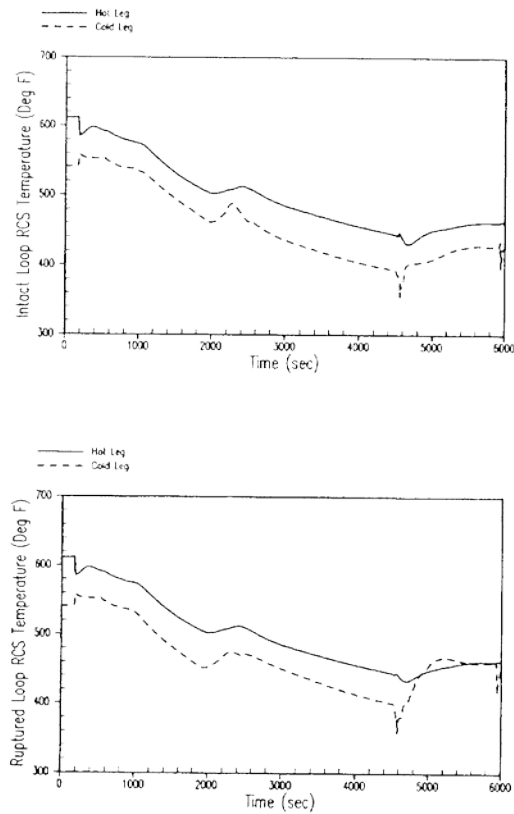
*Figure 15.6-9 SGTR (Dose), Secondary Pressure and Steam Generator Liquid Mass Versus Time*



**Figure 15.6-9**  
**SGTR (Dose), Secondary Pressure and Steam Generator Liquid Mass vs. Time**

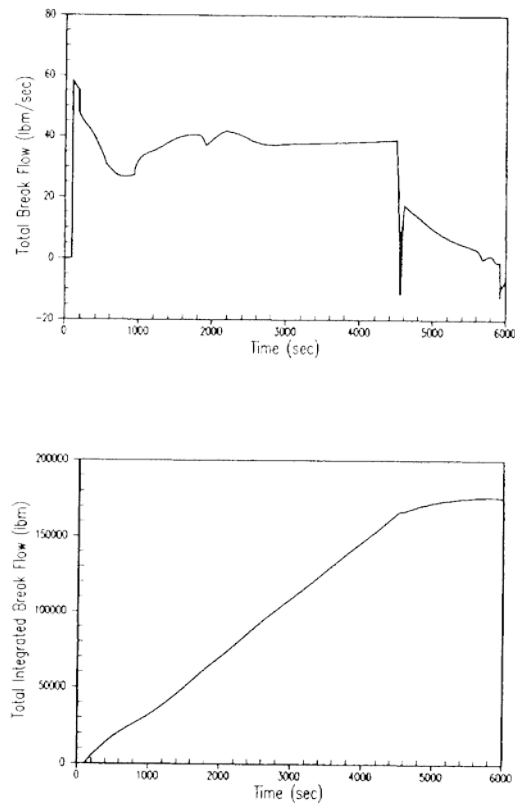


*Figure 15.6-10 SGTR (Dose), Hot and Cold Leg Temperatures for Intact and Ruptured Steam Generators Versus Time*



**Figure 15.6-10**  
**SGTR (Dose), Hot and Cold Leg Temperatures for Intact and**  
**Ruptured Steam Generators vs. Time**

*Figure 15.6-11 SGTR (Dose), Total Primary to Secondary Leakage and Total Integrated Primary to Secondary Leakage Versus Time*



**Figure 15.6-11**  
**SGTR (Dose), Total Primary to Secondary Leakage and**  
**Total Integrated Primary to Secondary Leakage vs. Time**

*Figure 15.6-12 SGTR (Dose), Steam Generator Relief Flow and Integrated Steam Generator Relief Flow Versus Time*

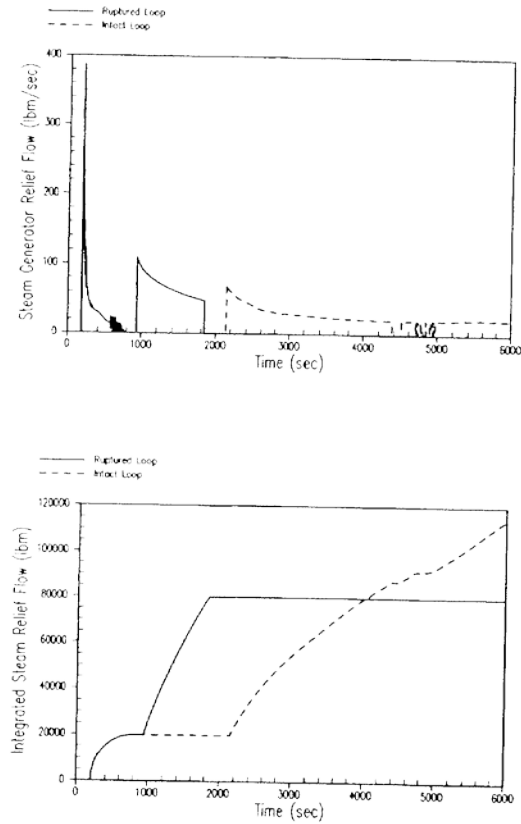


Figure 15.6-12  
SGTR (Dose), Steam Generator Relief Flow and  
Integrated Steam Generator Relief Flow vs. Time

*Figure 15.6-13 SGTR (Dose), Steam Generator Water Volume Versus Time*

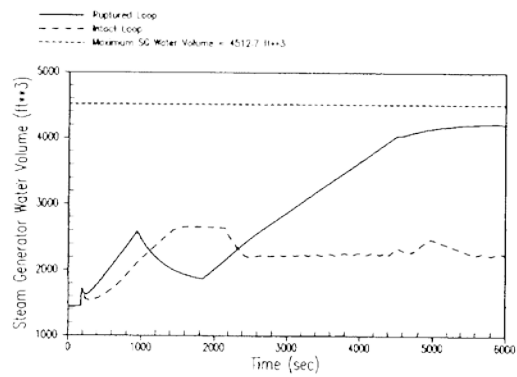
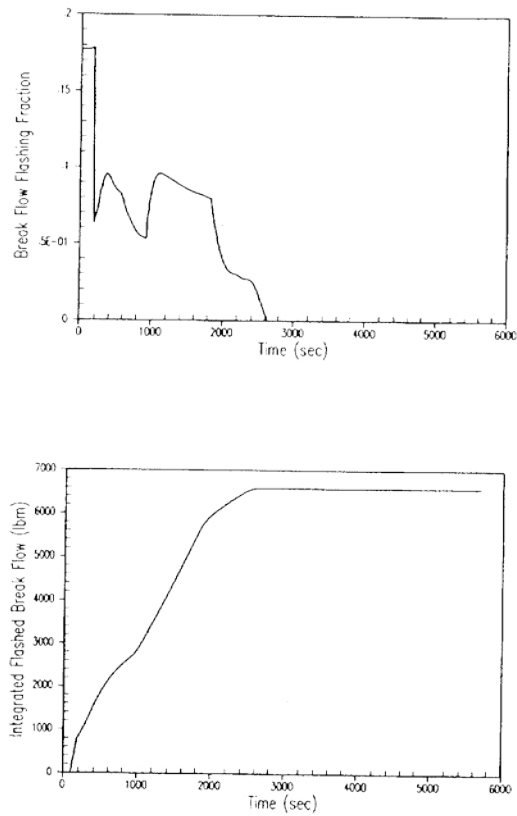


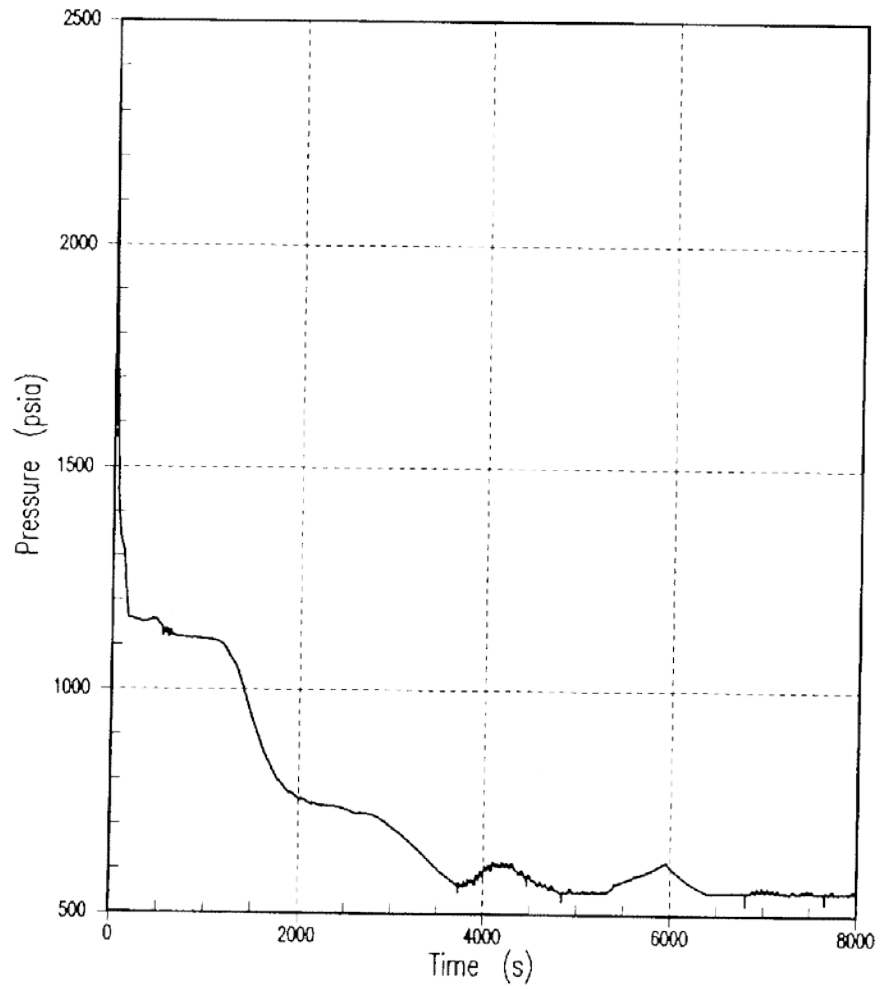
Figure 15.6-13  
SGTR (Dose), Steam Generator Water Volume vs. Time

*Figure 15.6-14 SGTR (Dose), Tube Rupture Flow Flashing Fraction and Integrated Flashed Break Versus Time*

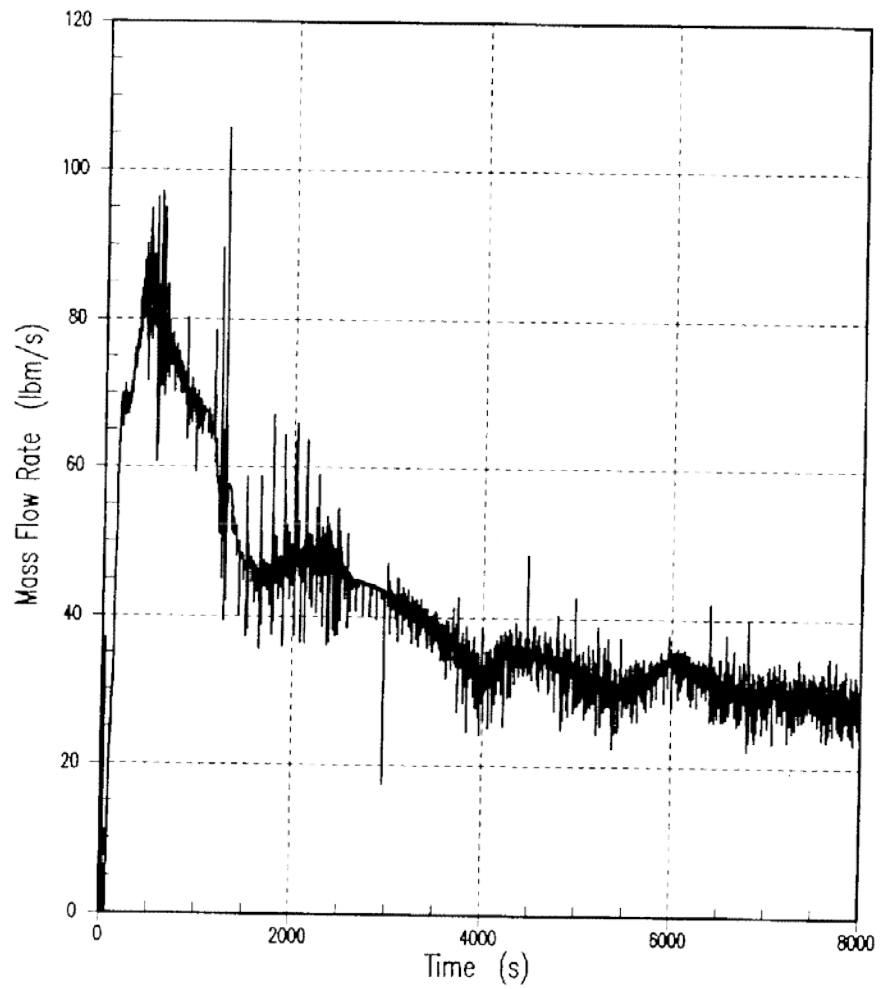


**Figure 15.6-14**  
**SGTR (Dose), Tube Rupture Flow Flashing Fraction and**  
**Integrated Flashed Break Flow vs. Time**

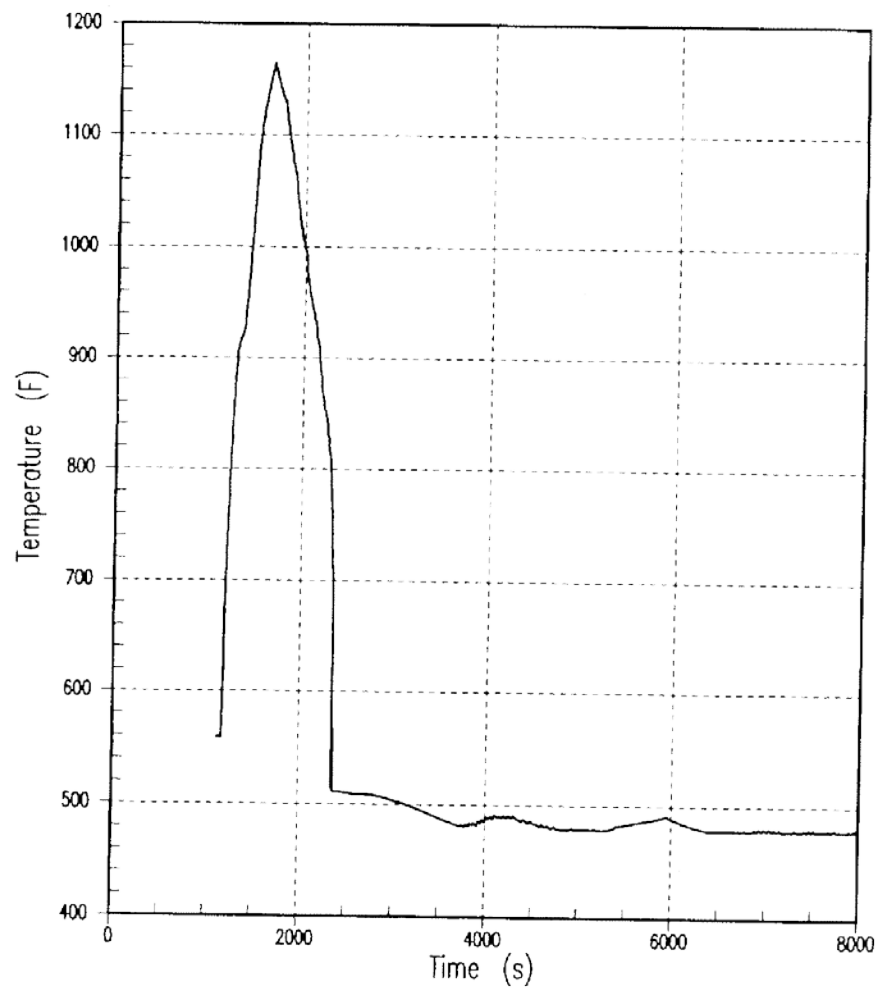
*Figure 15.6-15 Small Break LOCA - 2-Inch Break, Pressurizer Pressure Versus Time*



*Figure 15.6-16 Small Break LOCA - 2-Inch Break, Core Mixture Level Versus Time*

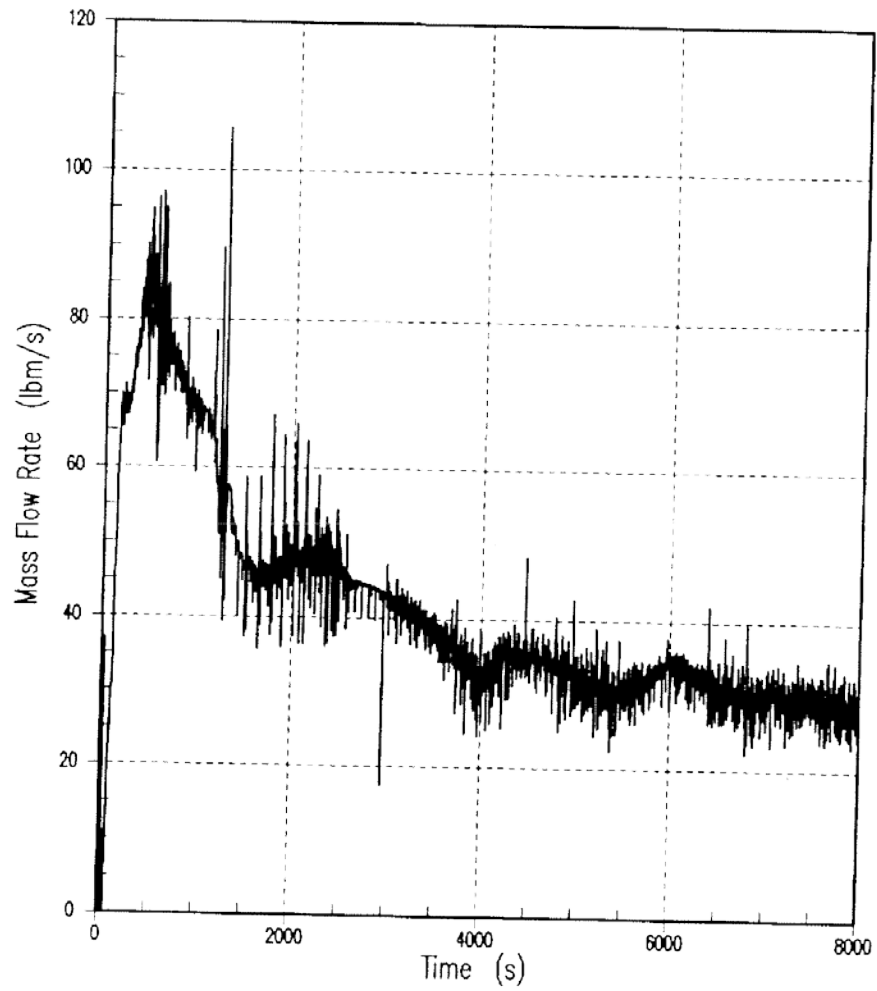


*Figure 15.6-17 Small Break LOCA - 2-Inch High Break, Peak Cladding Temperature at PCT  
Elevation Versus Time*

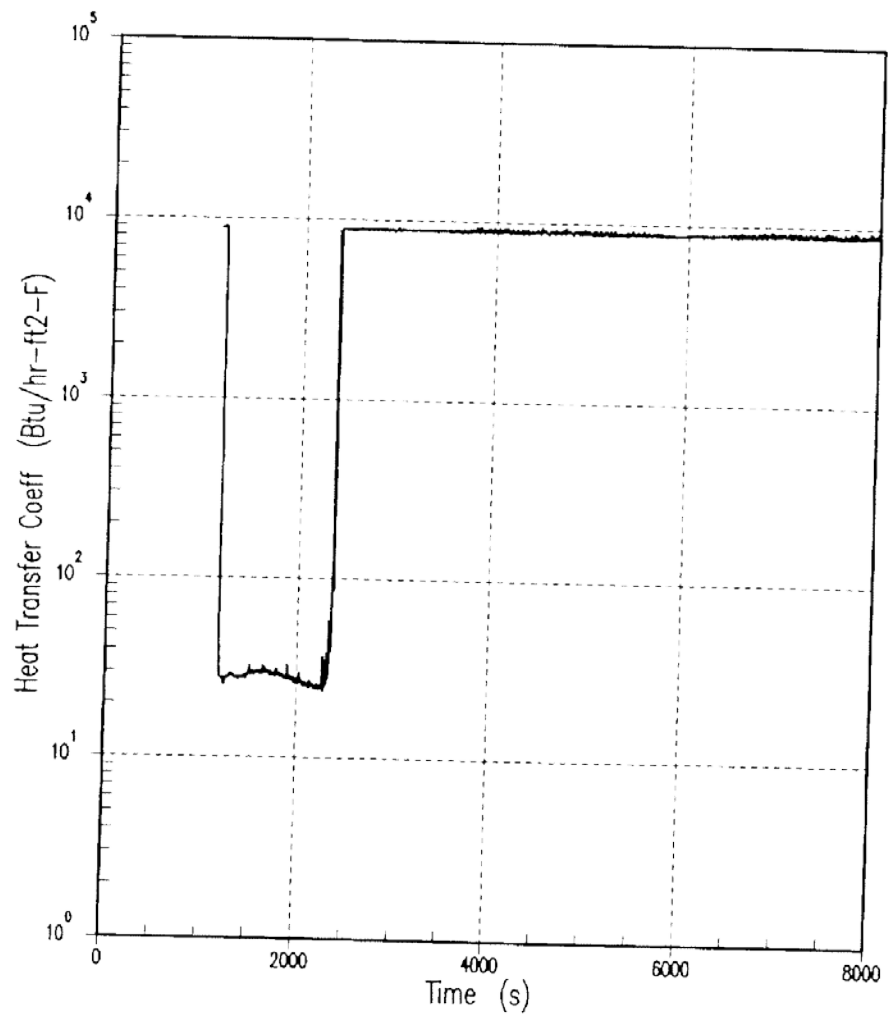




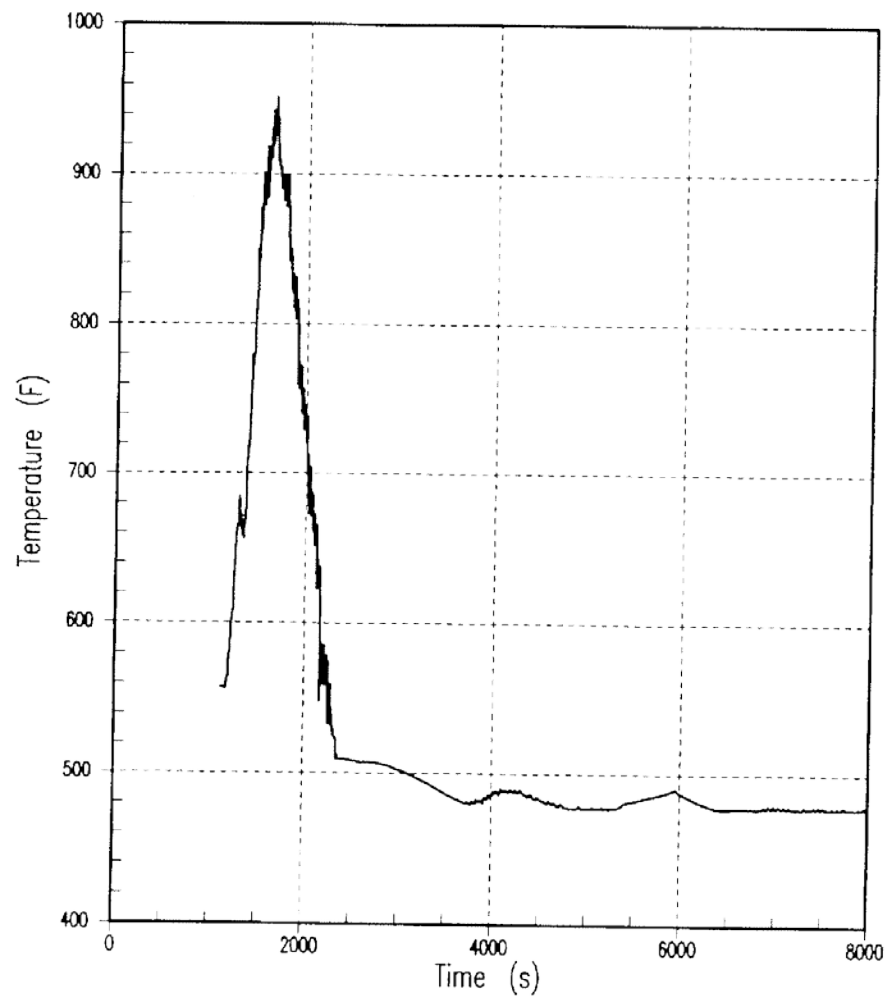
*Figure 15.6-18 Small Break LOCA - 2-Inch High Break, Core Exit Vapor Flow Versus Time*



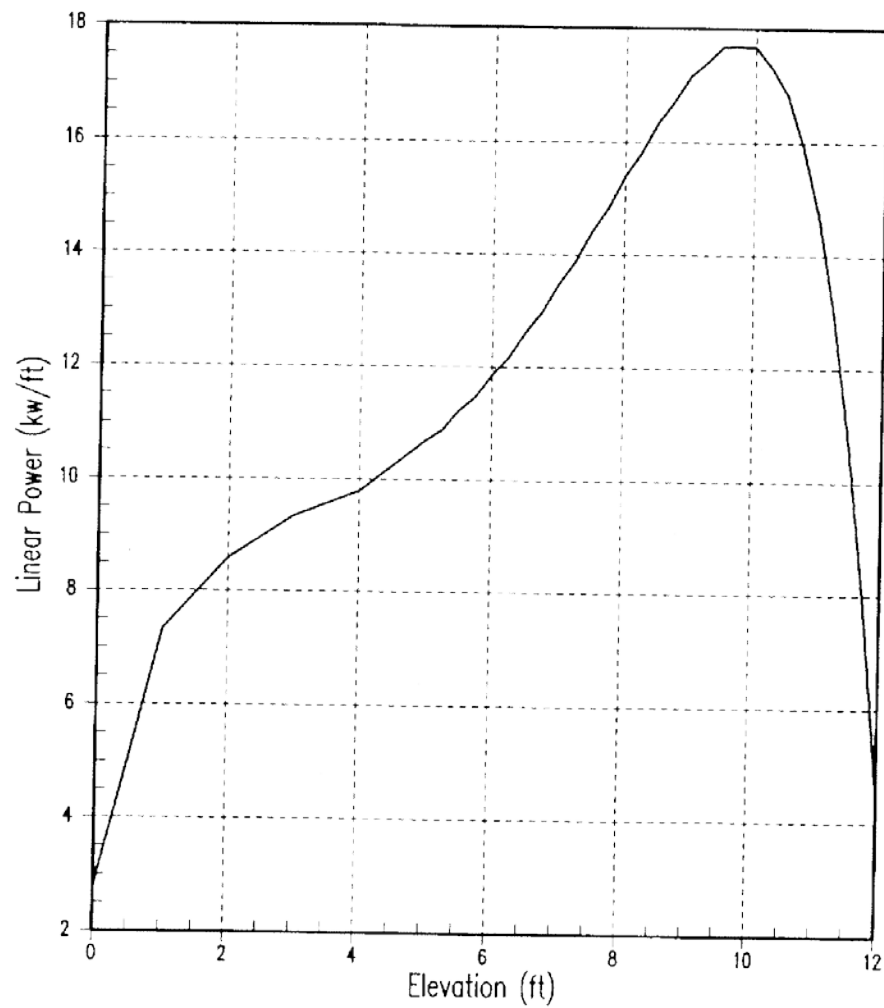
*Figure 15.6-19 Small Break LOCA - 2-Inch Break, Hot Rod Heat Transfer Coefficient at PCT  
Elevation Versus Time*



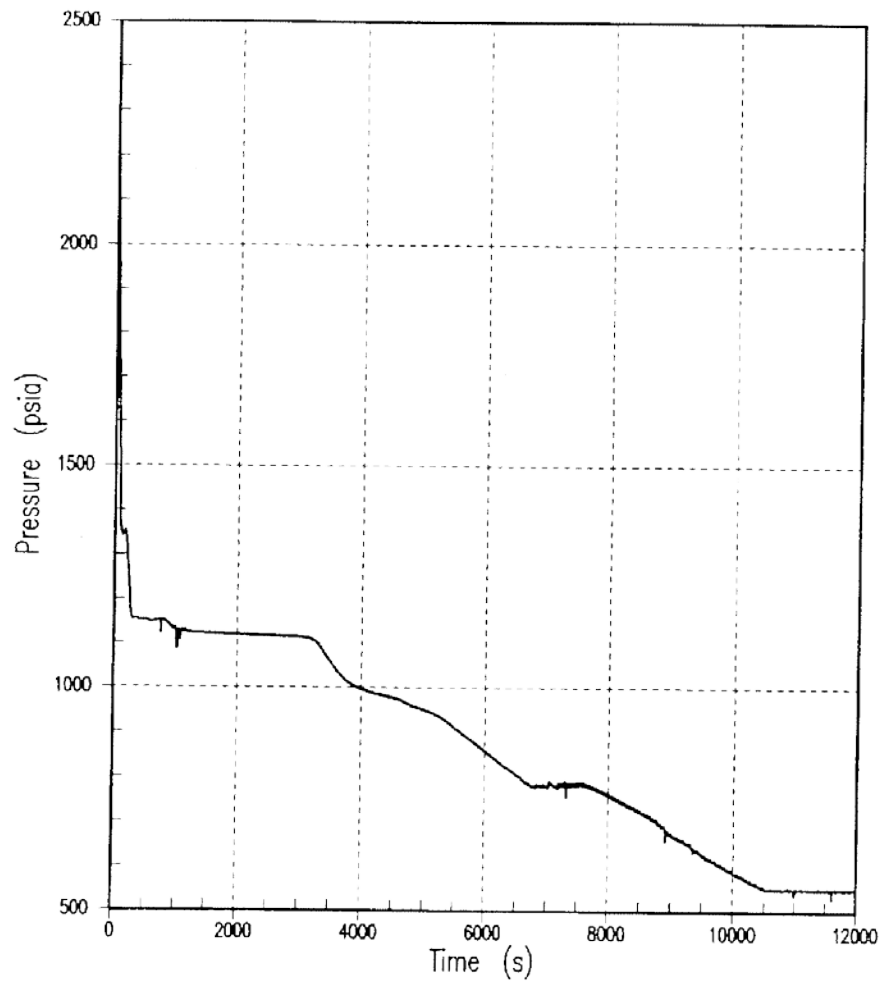
*Figure 15.6-20 Small Break LOCA - 2-Inch Break, Fluid Temperature at PCT Elevation Versus Time*



*Figure 15.6-21 Small Break LOCA - Axial Power Distribution, Heat Rate Versus Core Elavation*



*Figure 15.6-22 Small Break LOCA - 1.5-Inch Break, Pressurizer Pressure Versus Time*



*Figure 15.6-23 Small Break LOCA - 3-Inch High Break, Pressurizer Pressure Versus Time*

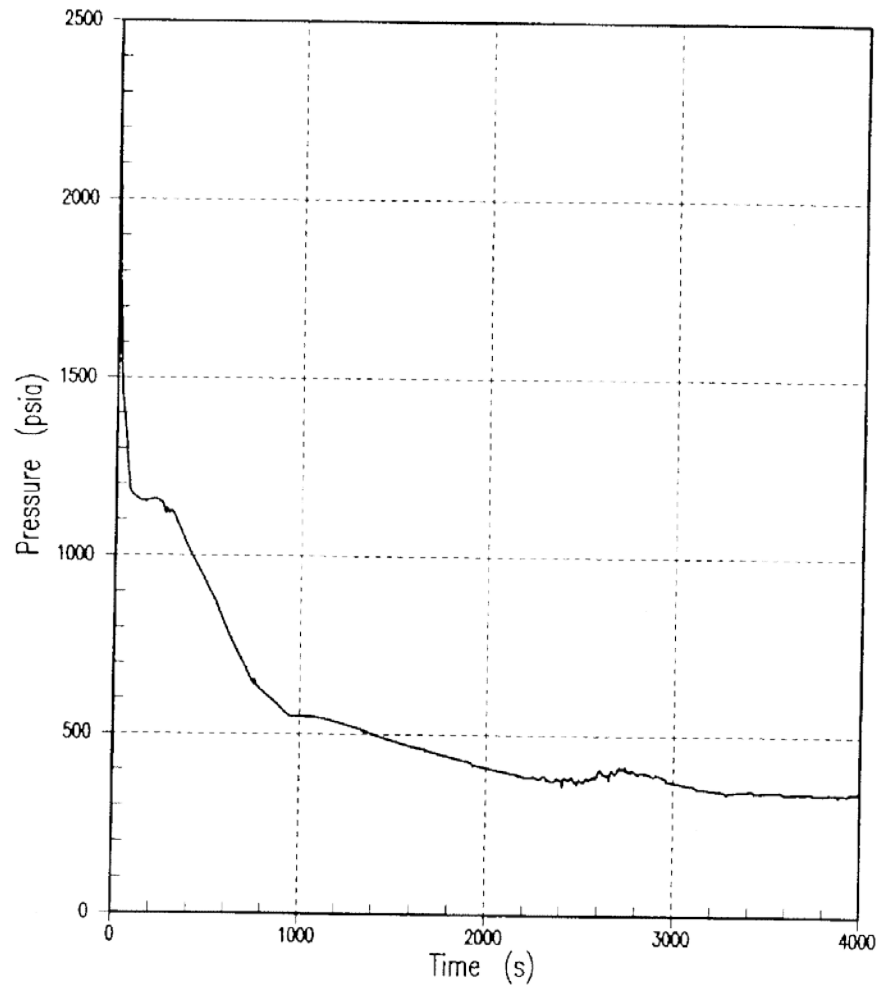
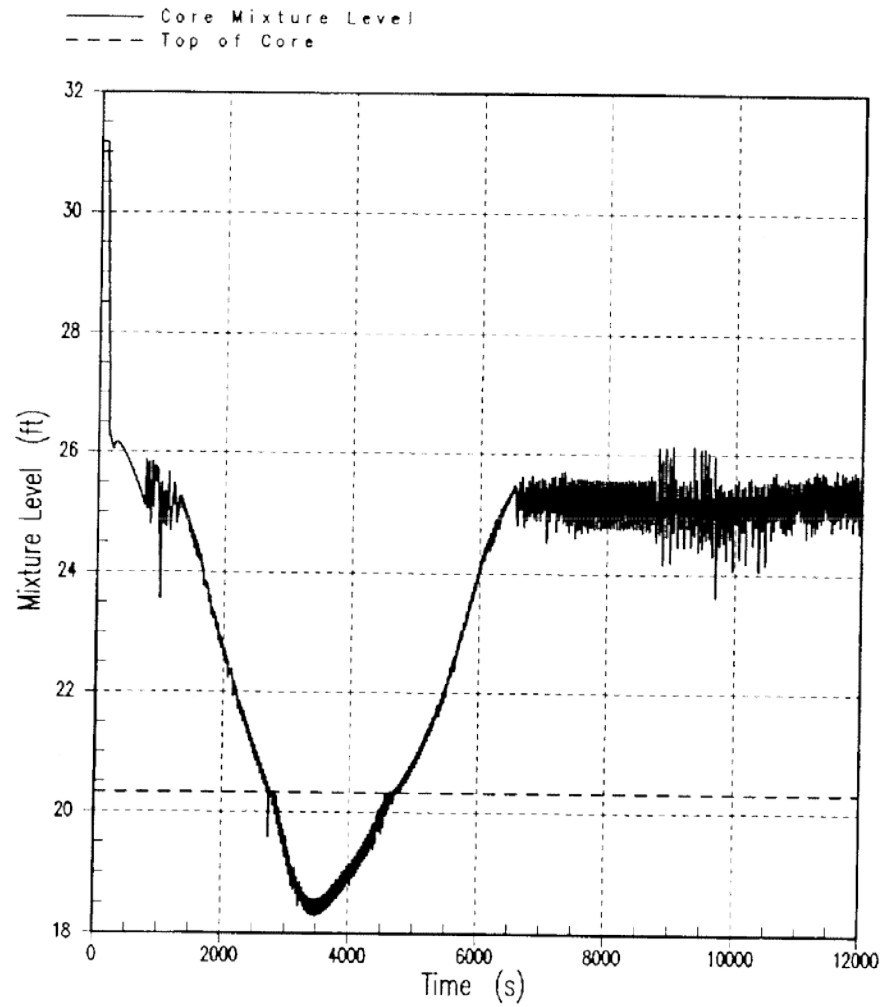
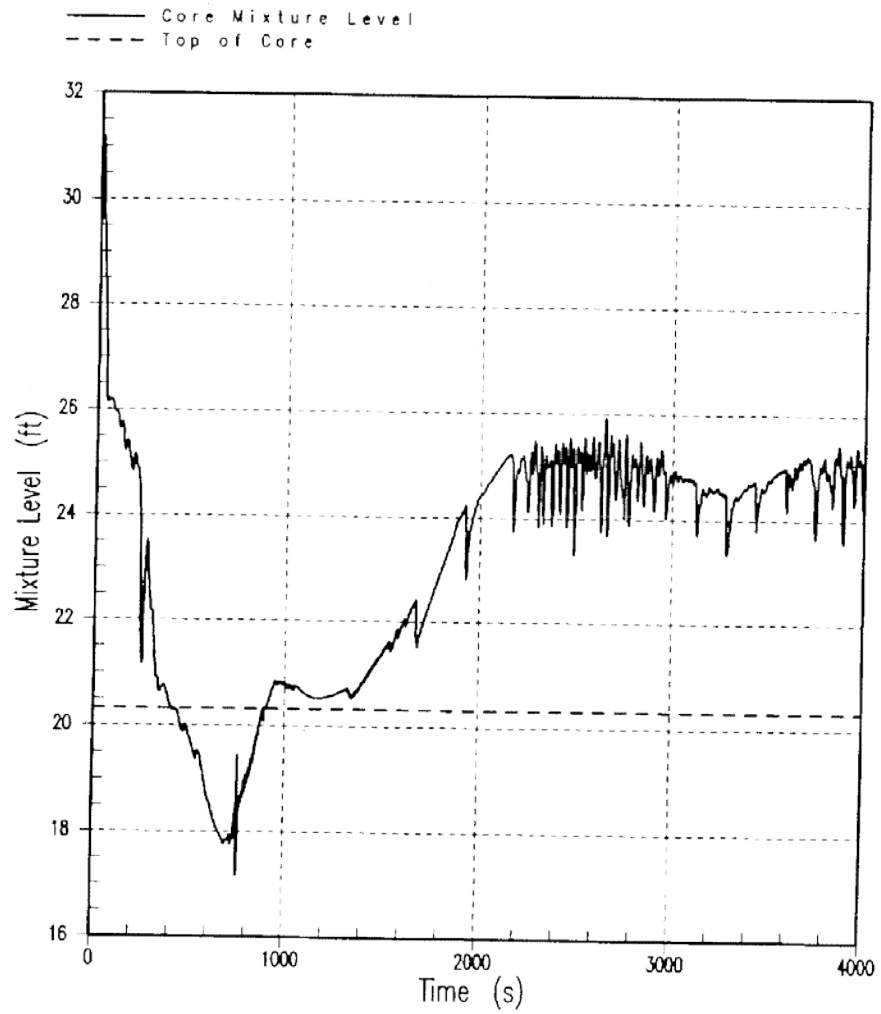


Figure 15.6-24 Small Break LOCA - 1.5-Inch Break, Core Mixture Level Versus Time

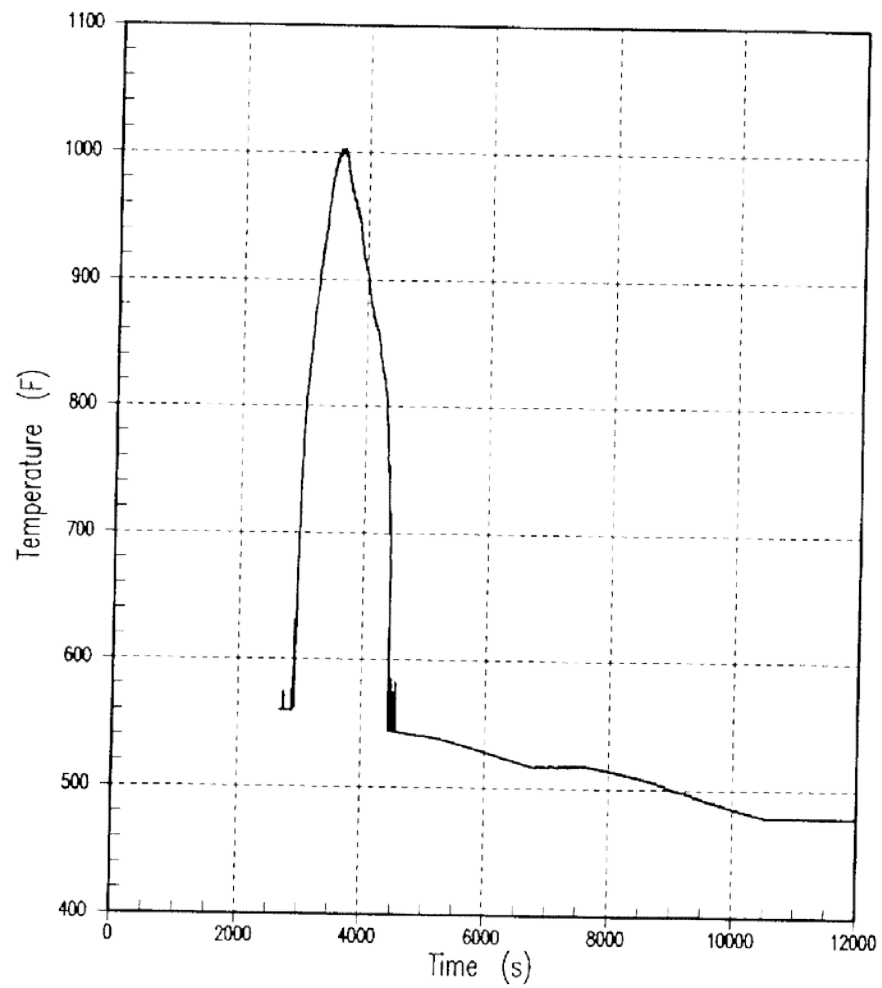


*Figure 15.6-25 Small Break LOCA - 3-Inch Break, Core Mixture Level Versus Time*

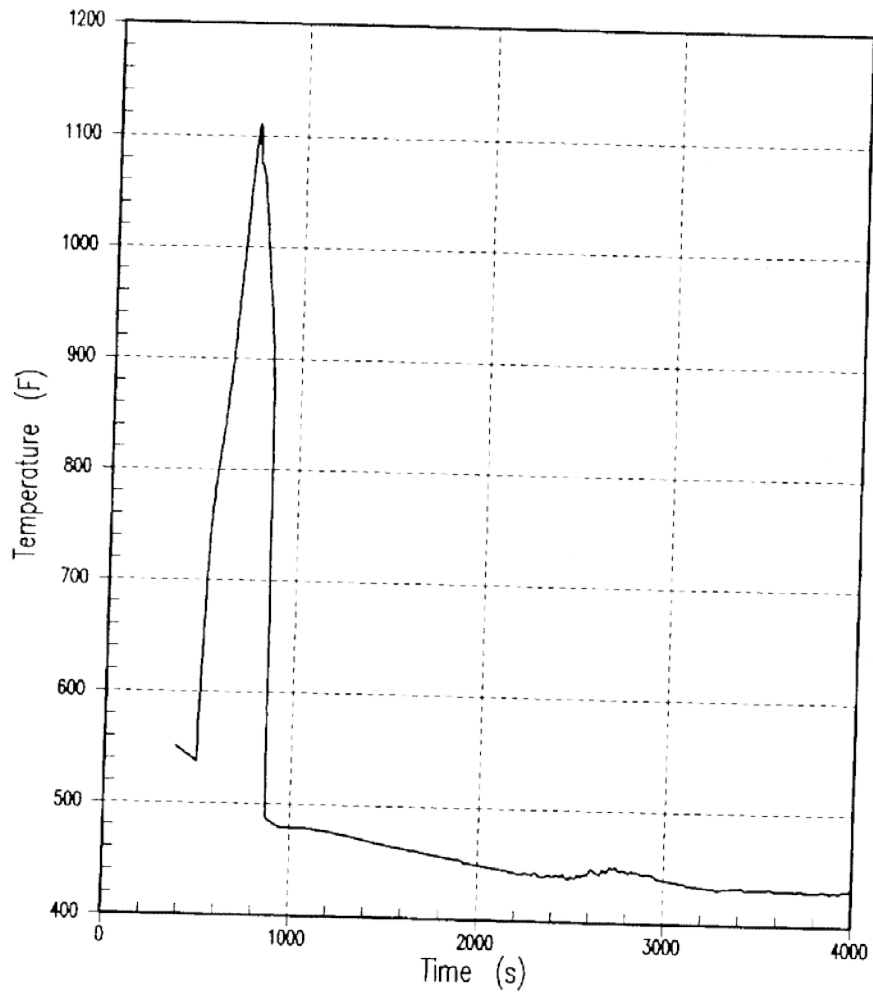




*Figure 15.6-26 Small Break LOCA - 1.5-Inch Break, Peel Cladding Temperature at PCT  
Elavation Versus Time*



*Figure 15.6-27 Small Break LOCA - 3-Inch Break, Peak Cladding Temperature at PCT  
Elevation Versus Time*



*Figure 15.6-28 Figure Deleted*

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*Figure 15.6-29 Figure Deleted*

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*Figure 15.6-30 Figure Deleted*

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Figure 15.6-31 R.E. Ginna Vessel Model Noding Diagram<sup>1</sup>

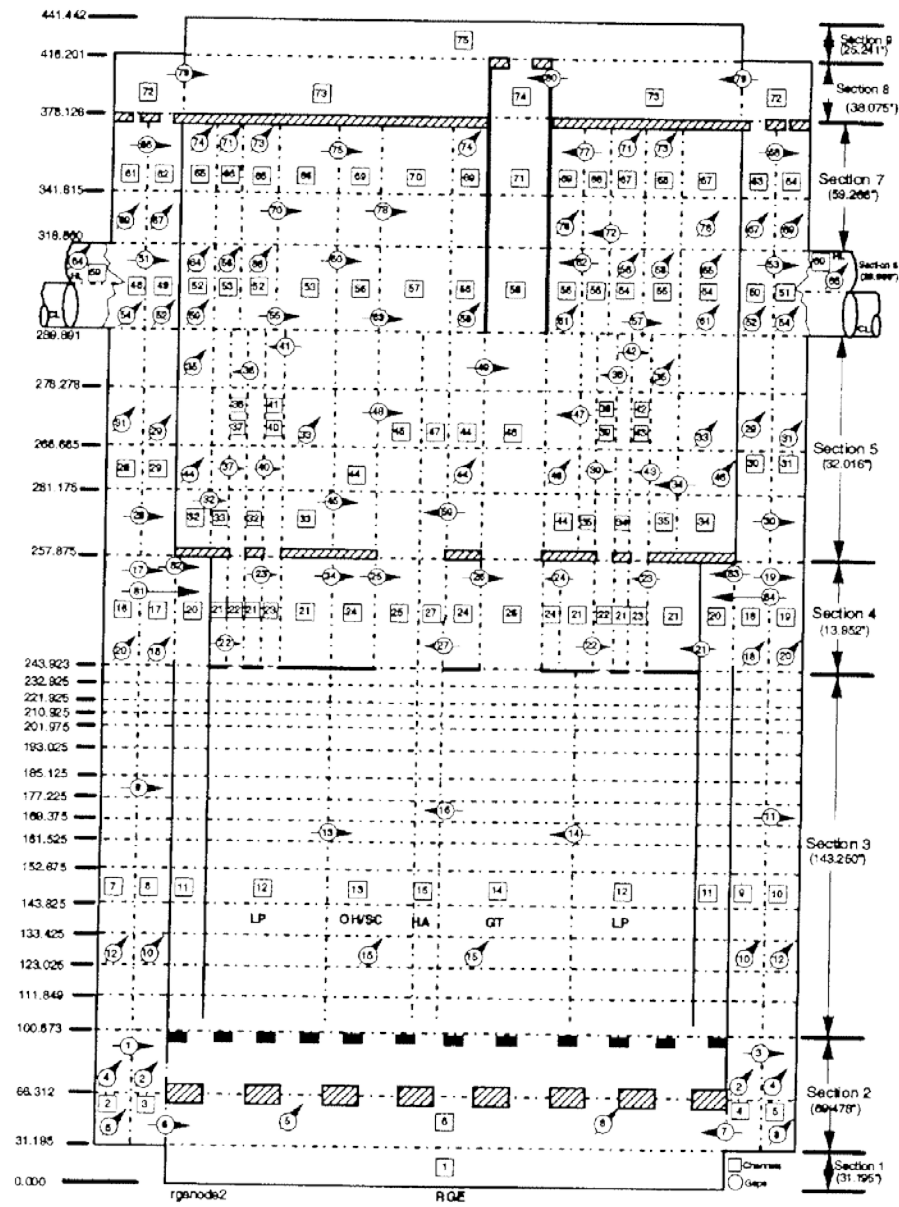


Figure 15.6-31 R. E. Ginna Vessel Model Noding Diagram<sup>1</sup>

<sup>1</sup> Note that Gaps 21, 51, and 53 are blocked, however, they appear on the noding diagram for completeness.

Figure 15.6-32 R.E. Ginna Loop Model Noding Diagram

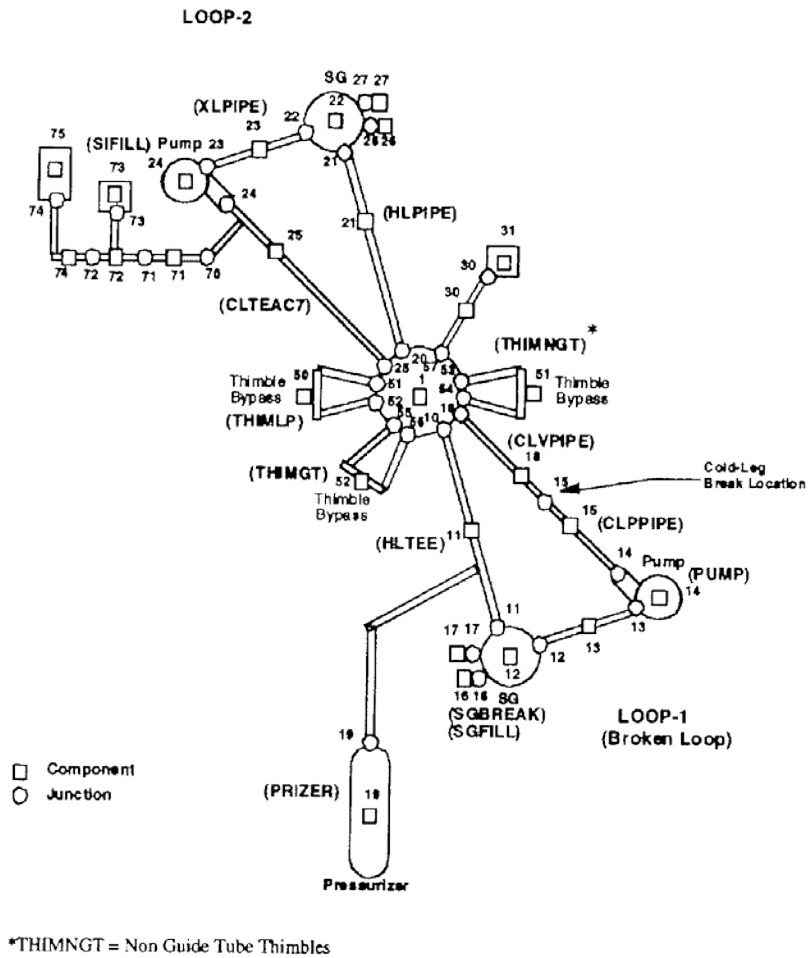
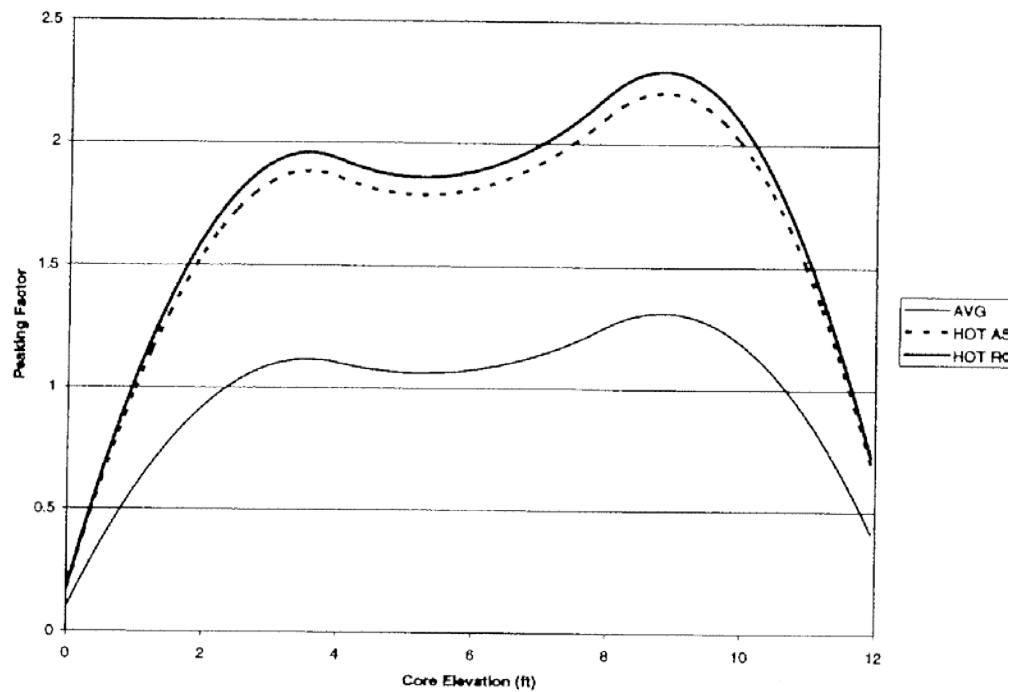


Figure 15.6-32 R. E. Ginna Loop Model Noding Diagram

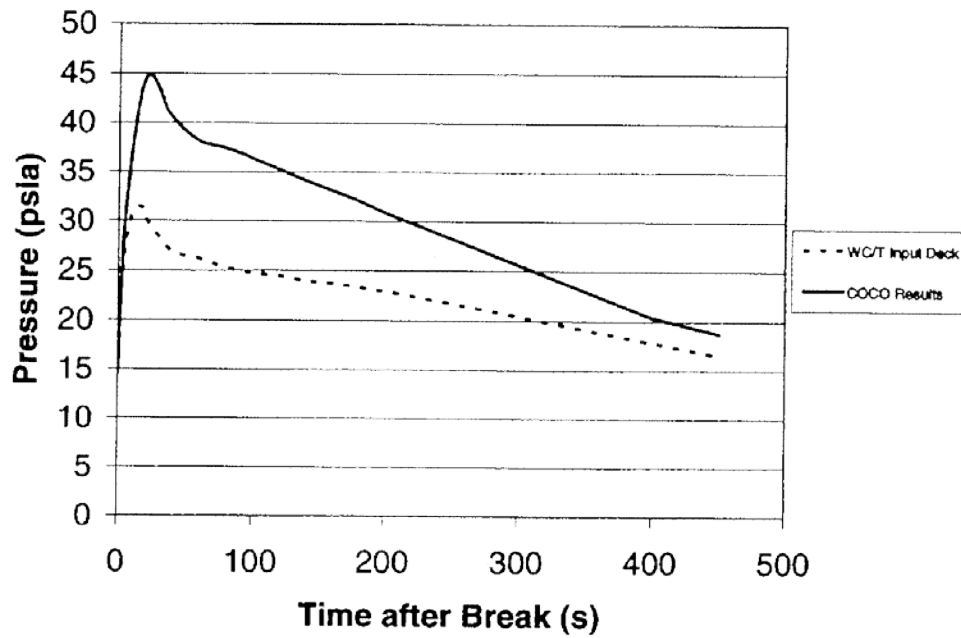
*Figure 15.6-33 R.E. Ginna Initial Transient Axial Power Distributions*



**Figure 15.6-33 R. E. Ginna Initial Transient Axial Power Distributions**

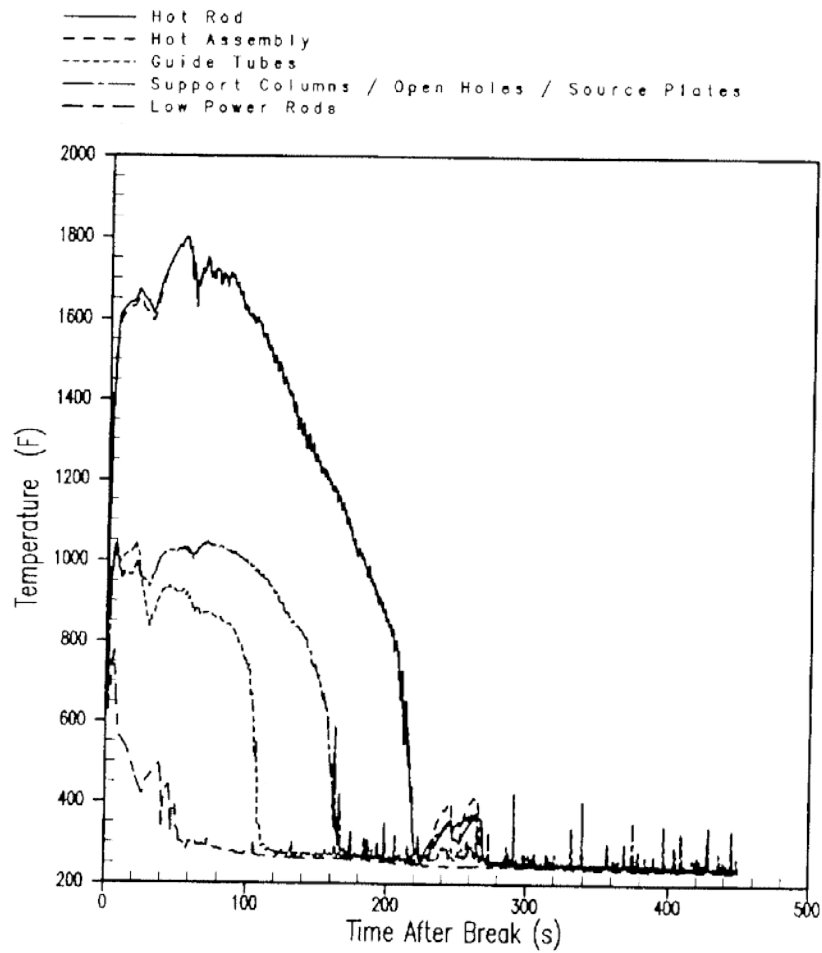


*Figure 15.6-34 Containment Pressure Used for the R.E. Ginna Best-Estimate Large Break  
LOCA Initial Transient*



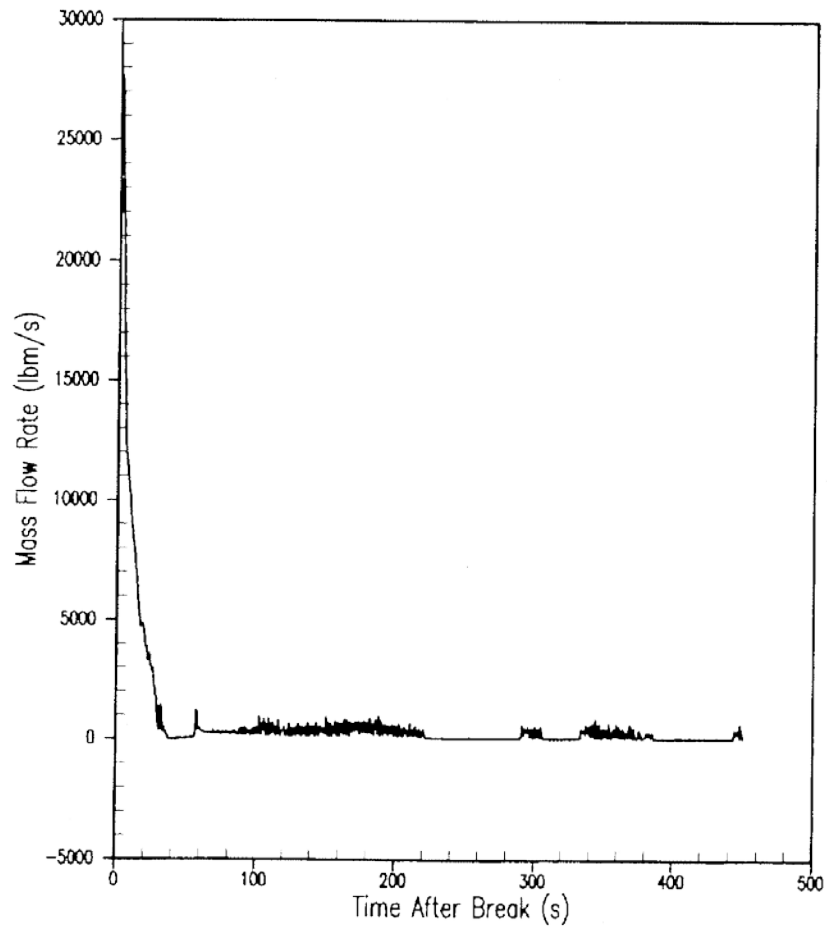
**Figure 15.6-34 Containment Pressure Used for the R. E. Ginna Best-Estimate Large Break  
LOCA Initial Transient**

*Figure 15.6-35 Peak Clad Temperature of the 5 rods for the Initial Transient*



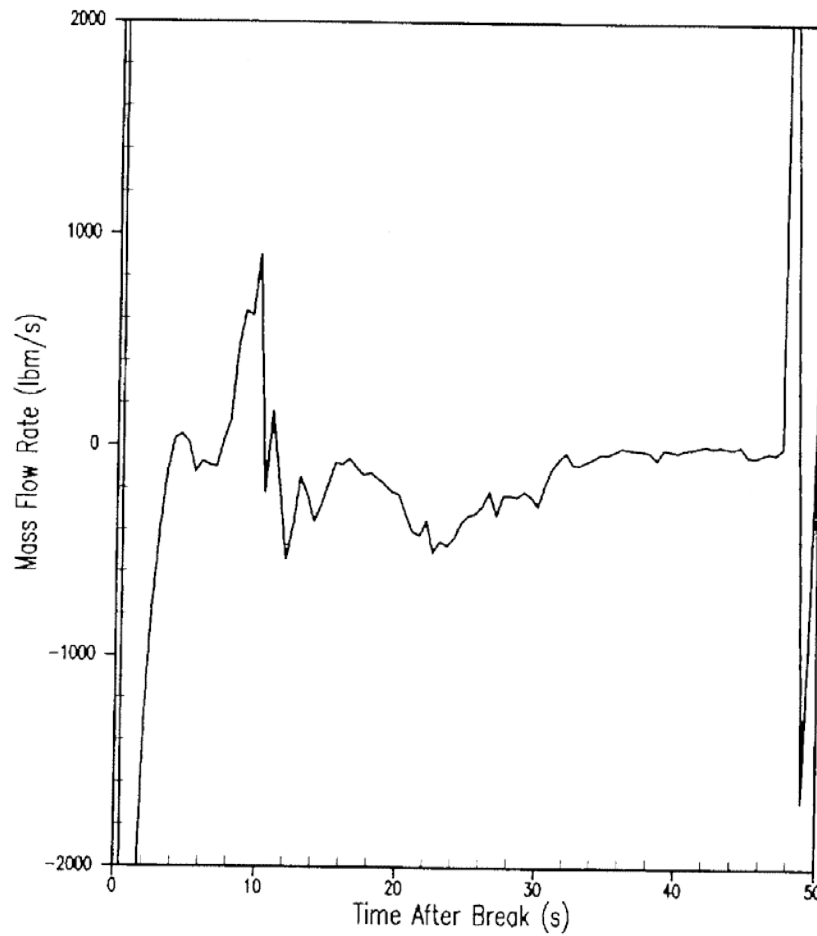
**Figure 15.6-35 Peak Clad Temperature of the 5 rods for the Initial Transient**

*Figure 15.6-36 Split Break Flow for the Initial Transient*



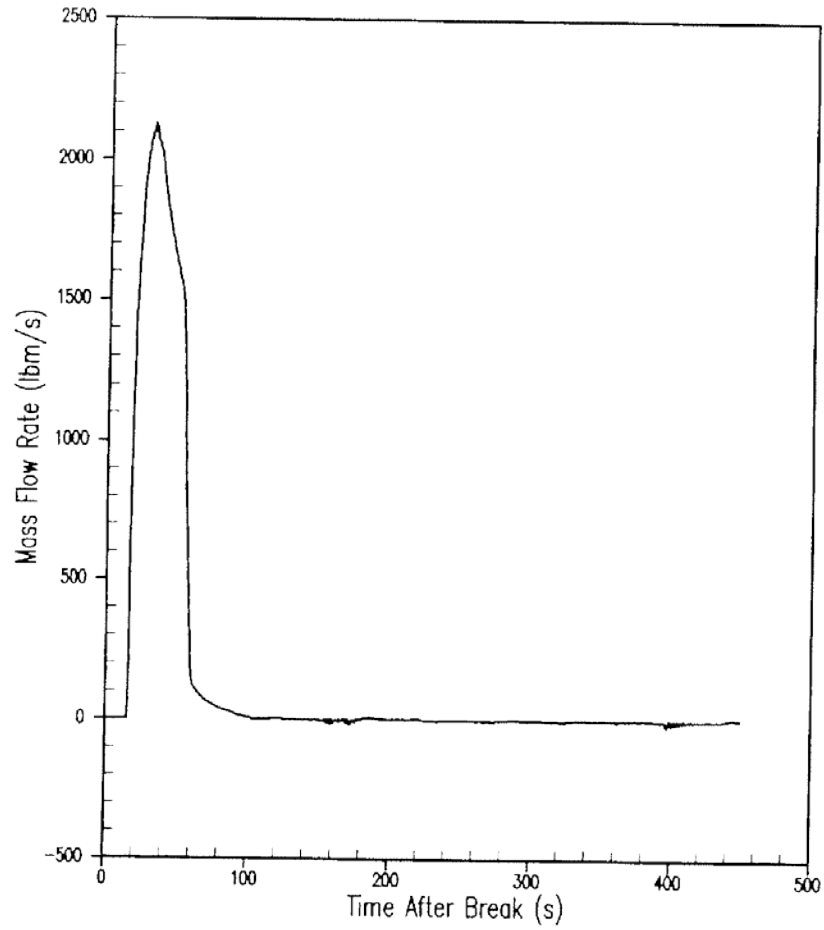
**Figure 15.6-36 Split Break Flow for the Initial Transient**

*Figure 15.6-37 Total Flow at the Bottom of the Core for the Initial Transient*



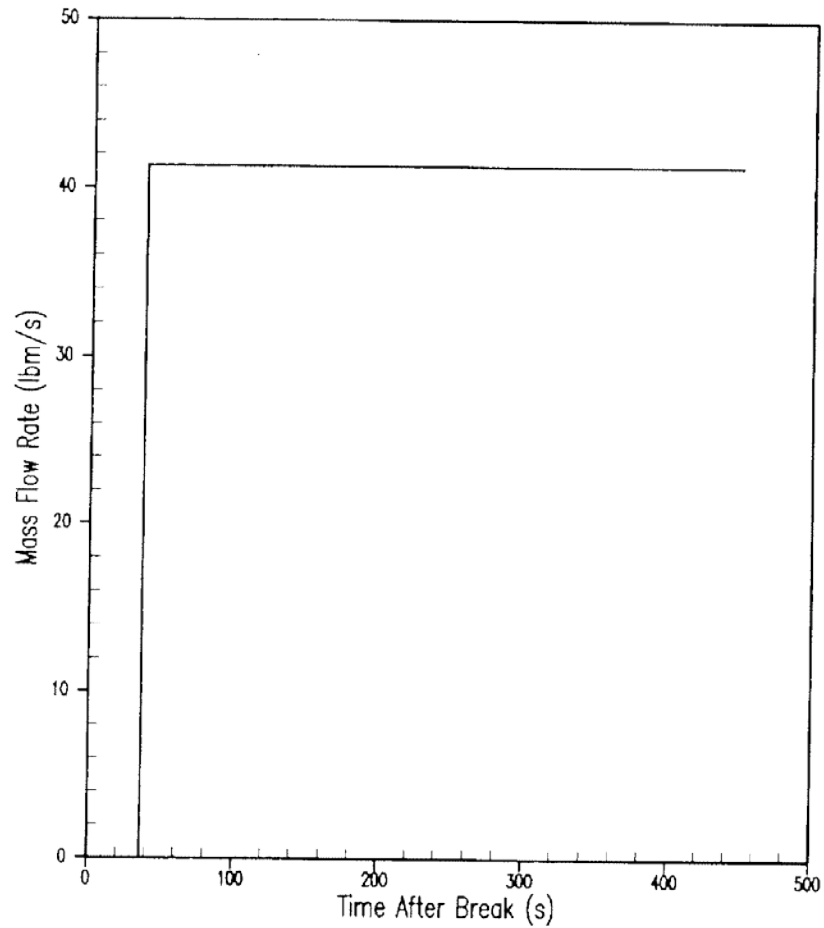
**Figure 15.6-37 Total Flow at the Bottom of the Core for the Initial Transient**

*Figure 15.6-38 Accumulator Injection Flow for the Initial Transient*



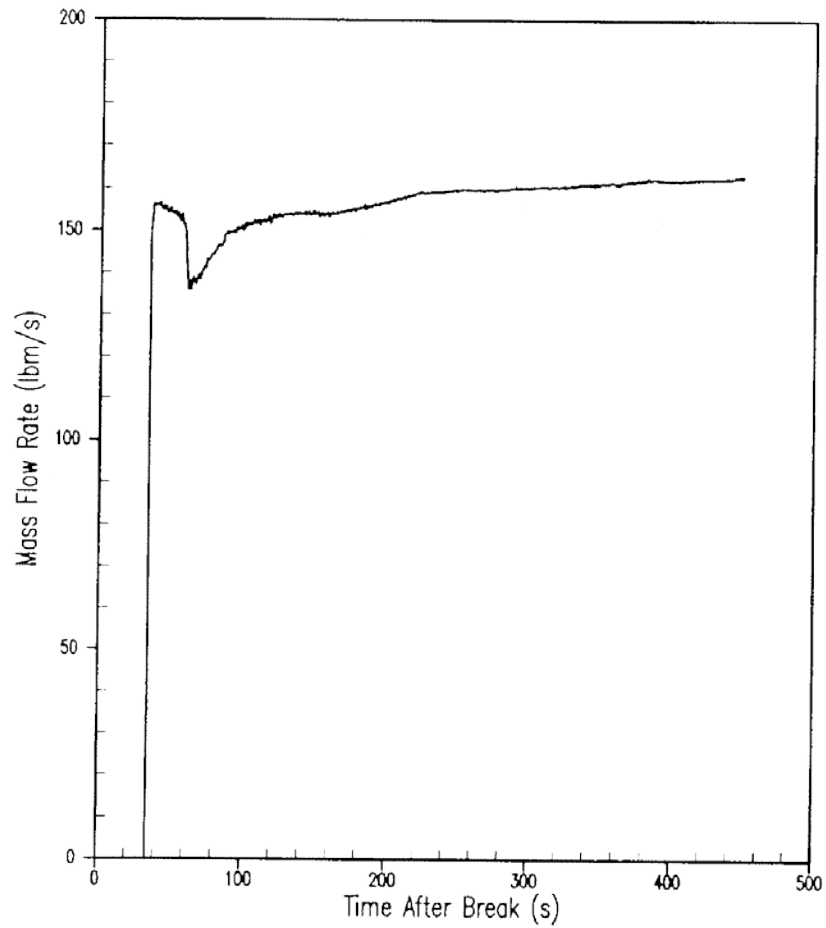
**Figure 15.6-38 Accumulator Injection Flow for the Initial Transient**

*Figure 15.6-39 High Head Safety Injection Flow for the Initial Transient*



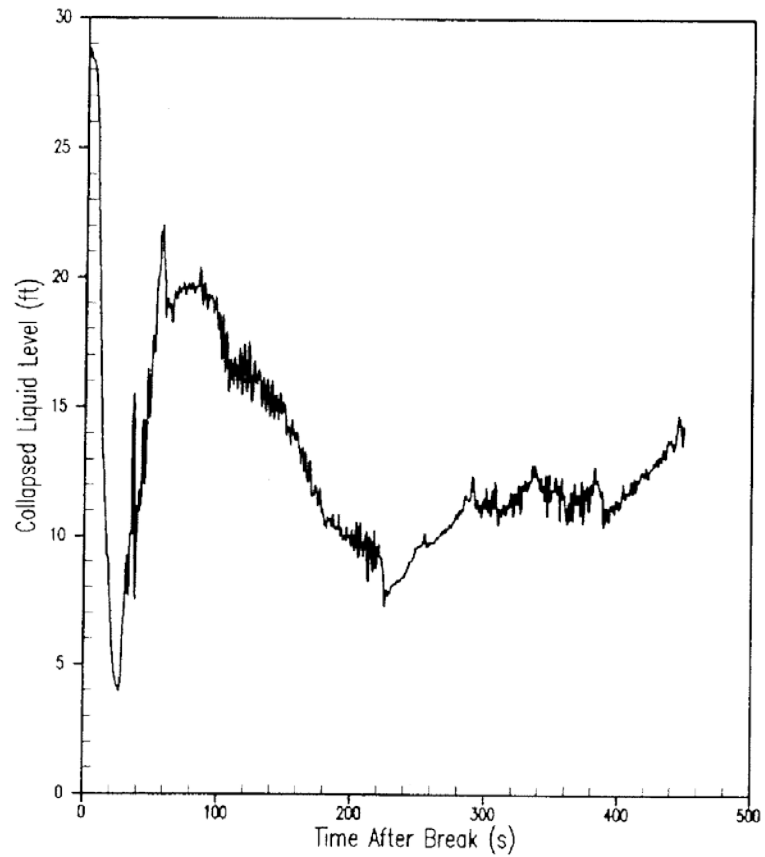
**Figure 15.6-39 High Head Safety Injection Flow for the Initial Transient**

*Figure 15.6-40 Low Head Safety Injection Flow for the Initial Transient*



**Figure 15.6-40 Low Head Safety Injection Flow for the Initial Transient**

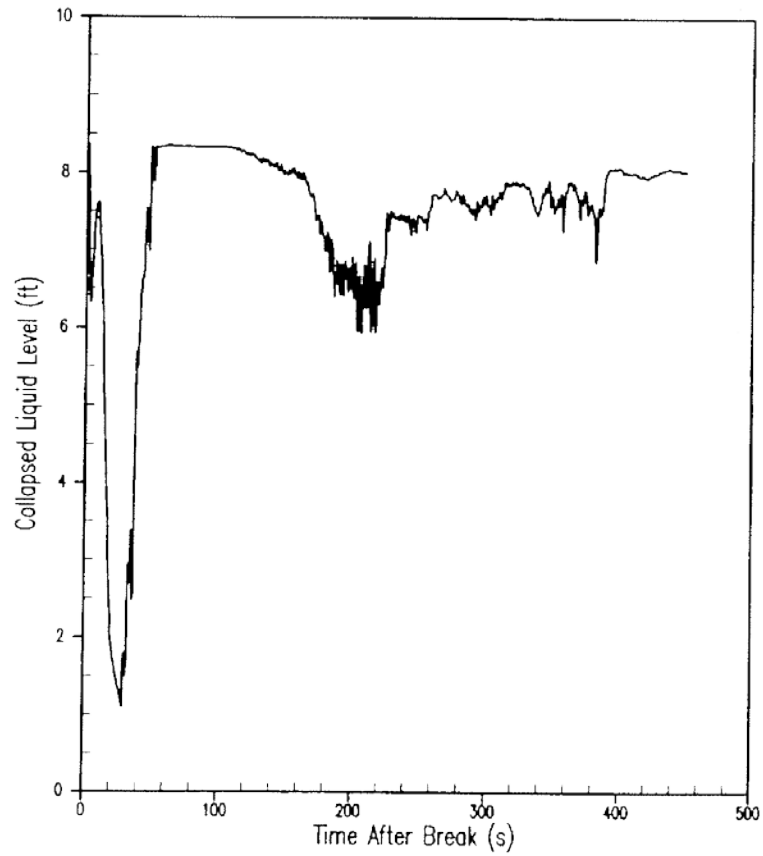
*Figure 15.6-41 Average Collapsed Liquid Level in the Downcomer for the Initial Transient*



**Figure 15.6-41 Average Collapsed Liquid Level in the Downcomer for the Initial Transient**

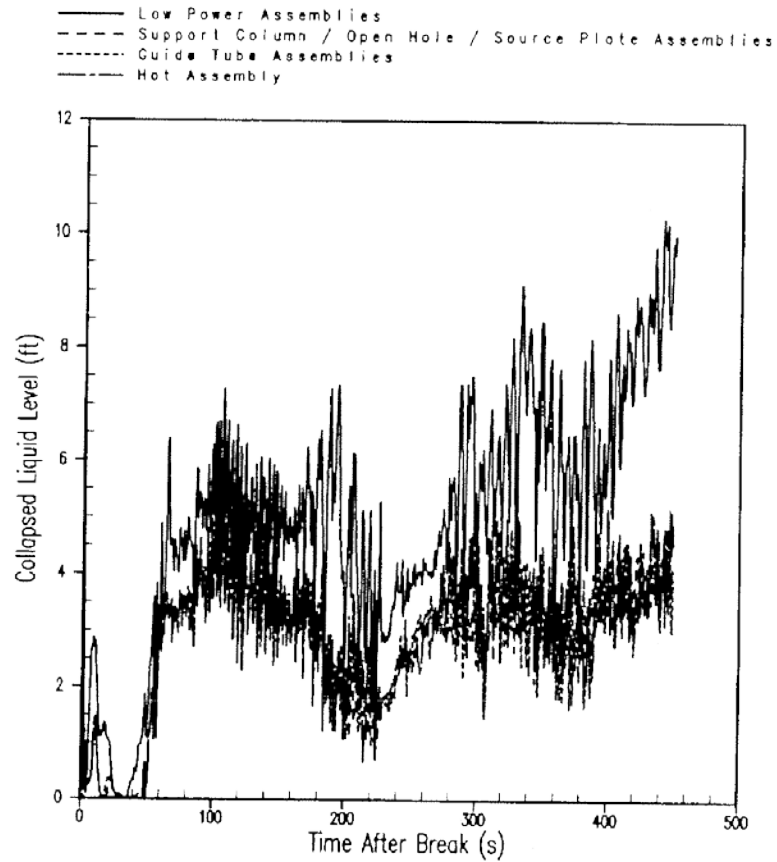


*Figure 15.6-42 Lower Plenum Collapsed Liquid Level for the Initial Transient*



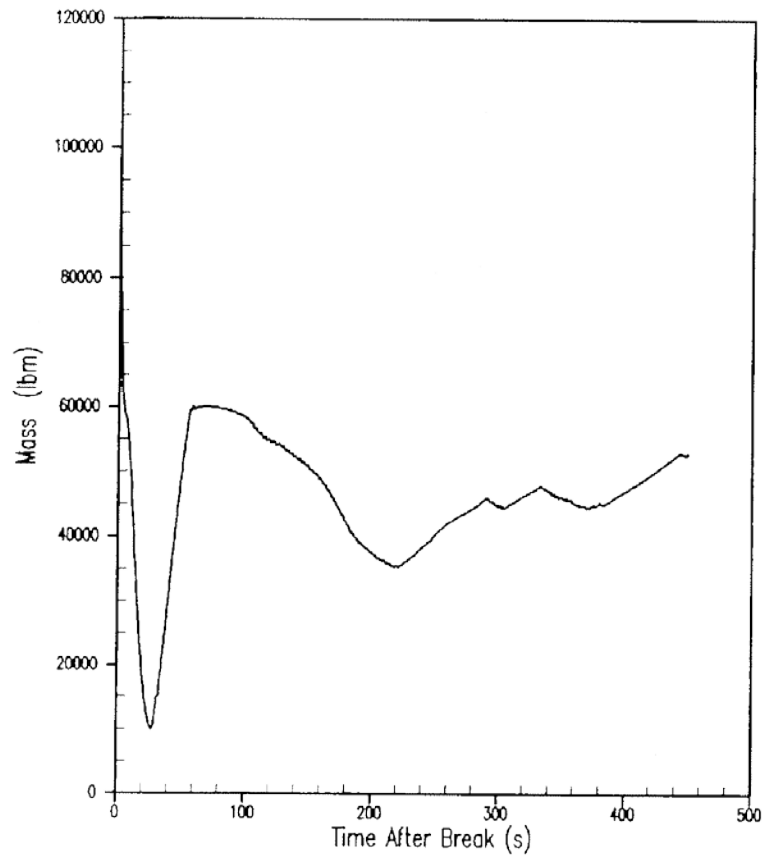
**Figure 15.6-42 Lower Plenum Collapsed Liquid Level for the Initial Transient**

*Figure 15.6-43 Core Collapsed Liquid Levels for the Initial Transient*



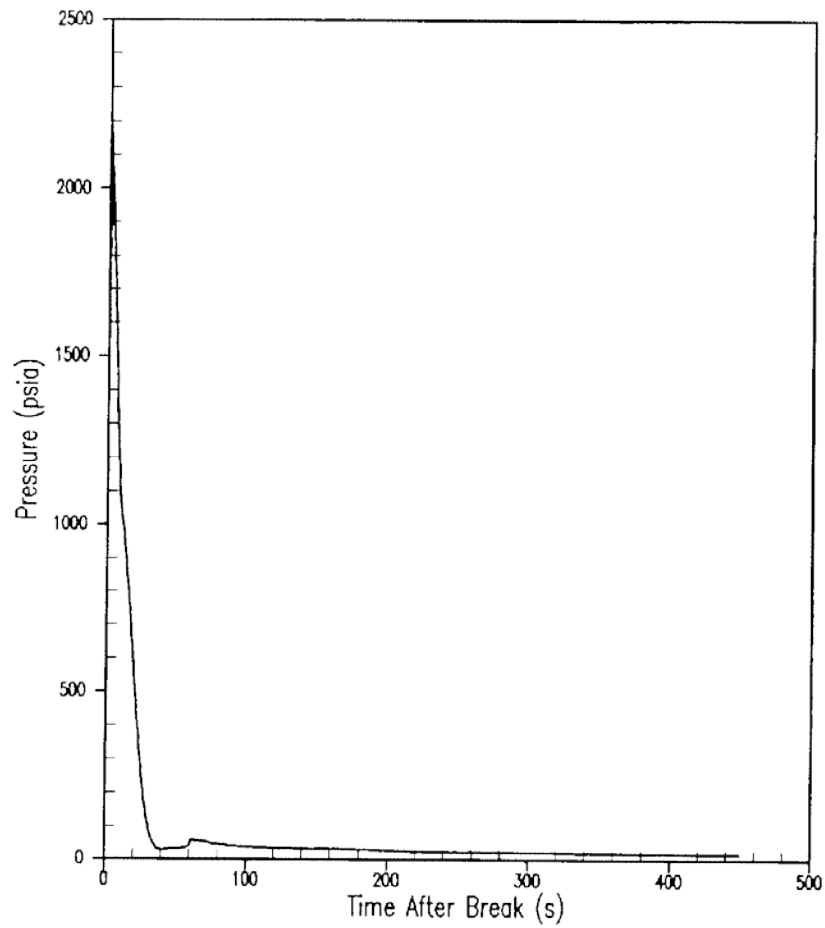
**Figure 15.6-43 Core Collapsed Liquid Levels for the Initial Transient**

*Figure 15.6-44 Vessel Liquid Mass for the Initial Transient*



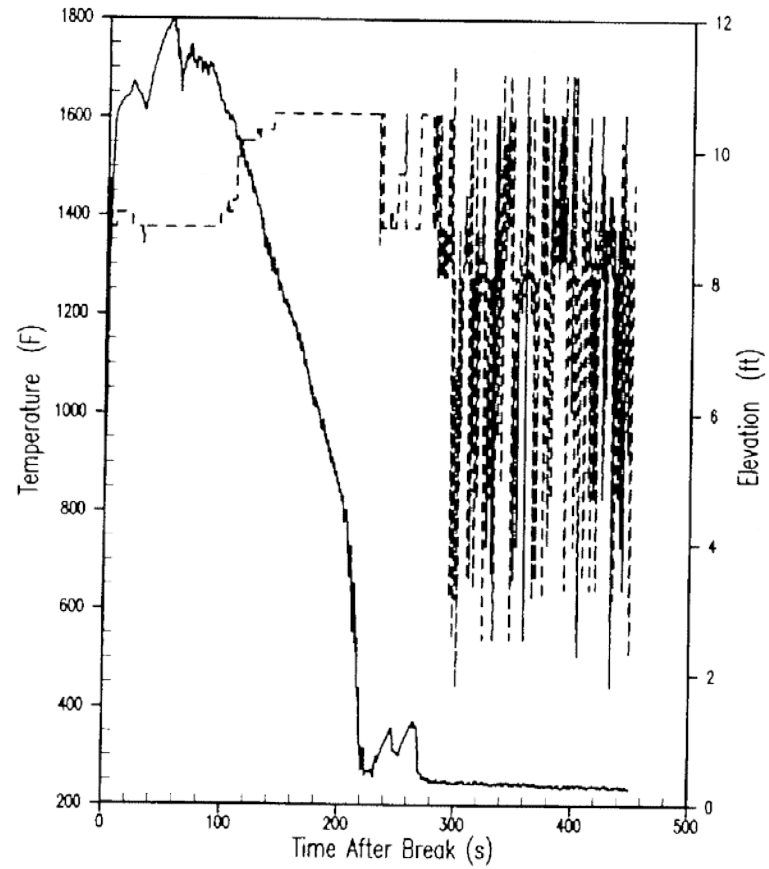
**Figure 15.6-44 Vessel Liquid Mass for the Initial Transient**

*Figure 15.6-45 Pressurizer Pressure for the Initial Transient*



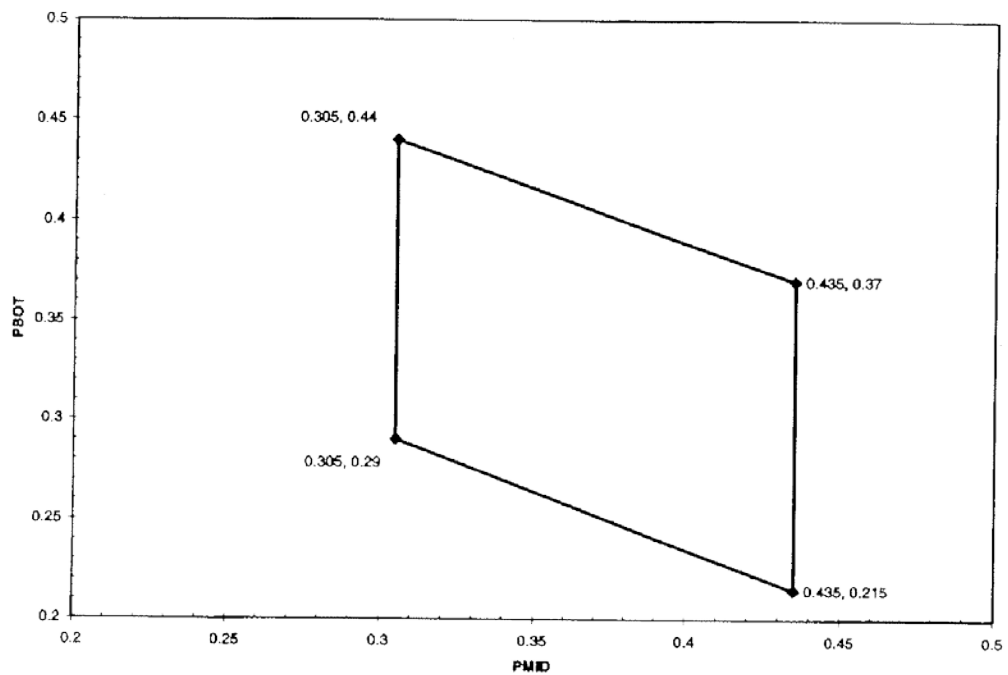
**Figure 15.6-45 Pressurizer Pressure for the Initial Transient**

*Figure 15.6-46 Hot Rod Peak Clad Temperature and Elevation for the Initial Transient*



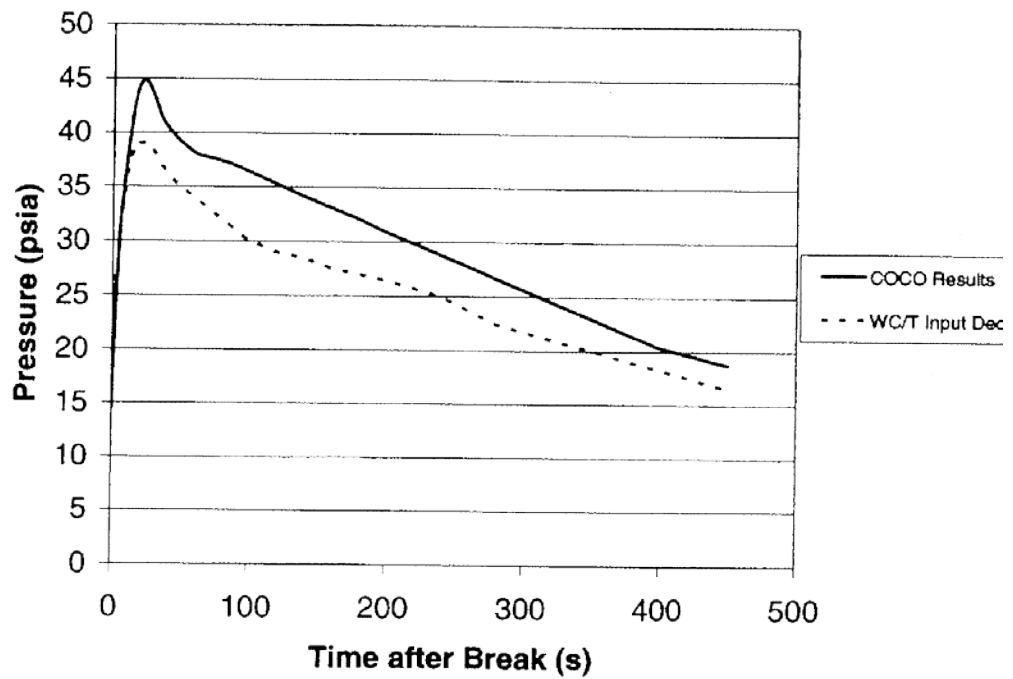
**Figure 15.6-46 Hot Rod Peak Clad Temperature and Elevation for the Initial Transient**

*Figure 15.6-47 R.E. Ginna PBOT/PMID Analysis and Operating Limits*



**Figure 15.6-47 R. E. Ginna PBOT/PMID Analysis and Operating Limits**

*Figure 15.6-48 Lower Bound Containment Pressure for R.E. Ginna Analysis*



**Figure 15.6-48 Lower Bound Containment Pressure for R. E. Ginna Analysis**