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MFN 07-541

Docket No. 52-010

November 8, 2007

U.S. Nuclear Regulatory Commission
Document Control Desk
Washington, D.C. 20555-0001

Subject: **Response to Portion of NRC Request for Additional Information Letter No. 100 Related to ESBWR Design Certification Application – Safety Analyses – RAI Number 15.3-28**

The purpose of this letter is to submit the GE Hitachi Nuclear Energy (GEH) response to the U.S. Nuclear Regulatory Commission (NRC) Request for Additional Information (RAI) sent by NRC letter dated May 30, 2007. GEH response to RAI Number 15.3-28 is addressed in Enclosure 1.

If you have any questions or require additional information, please contact me.

Sincerely,

Kathy Sedney for

James C. Kinsey
Vice President, ESBWR Licensing

D068

NRO

Reference:

1. MFN 07-327, Letter from U.S. Nuclear Regulatory Commission to James C. Kinsey, GEH, *Request For Additional Information Letter No. 100 Related To ESBWR Design Certification Application*, dated May 30, 2007

Enclosure:

1. Response to Portion of NRC Request for Additional Information Letter No. 100 Related to ESBWR Design Certification Application ESBWR – Safety Analyses – RAI Number 15.3-28

cc:	AE Cubbage	USNRC (with enclosure)
	GB Stramback	GEH/San Jose (with enclosure)
	RE Brown	GEH/Wilmington (with enclosure)
	eDRF	0000-0075-8045

Enclosure 1

MFN 07-541

Response to NRC Request for Additional Information Letter No. 100 Related to ESBWR Design Certification Application

Safety Analyses

RAI Number 15.3-28

NRC RAI 15.3-28:

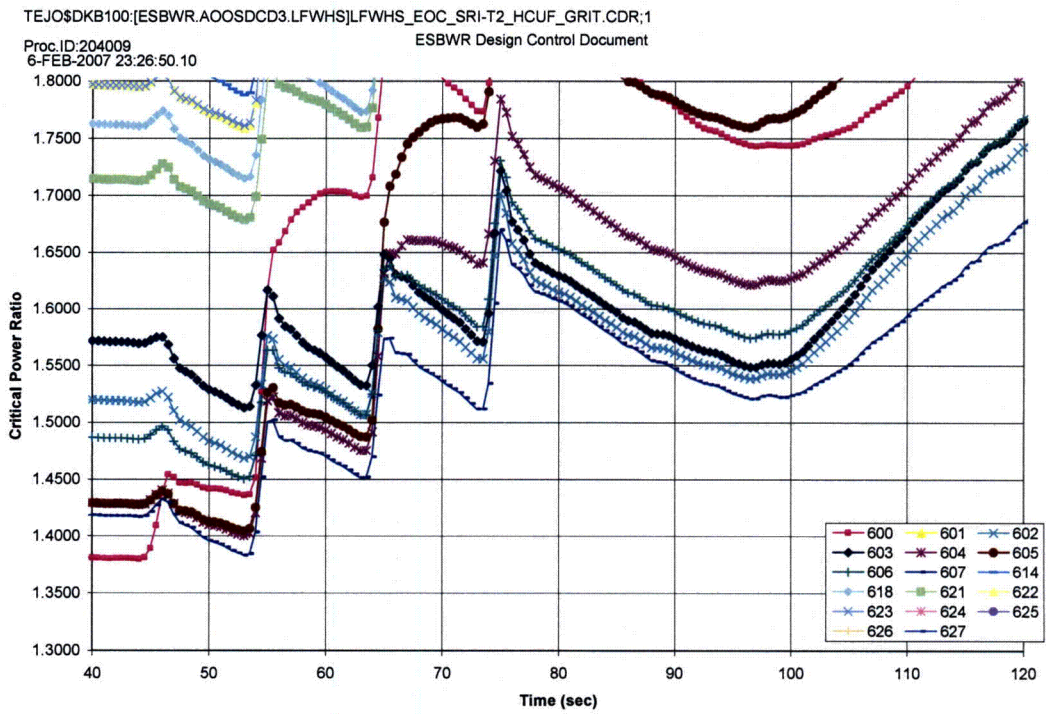
Add " Minimum Critical Power Ratio" to the following DCD Figures: Figure 15.3-1g, 15.3.2g, 15.3.3g, 15.3.4g, 15.3.5g, 15.3.8g and 15.3.9g

GEH Response:

GE has added "Critical Power Ratio" which is the appropriate legend for the y-axis as opposed to "Minimum Critical Power Ratio" to the following DCD Figures: 15.3-1g, 15.3-2g, 15.3-3g, 15.3-4g, 15.3-5g, 15.3-6g, 15.3-8g and 15.3-9g. The same change is made to the following figures in DCD Section 15.2: 15.2-1g, 15.2-2g, 15.2-3g, 15.2-4g, 15.2-5g, 15.2-6g, 15.2-7g, 15.2-8g, 15.2-9g, 15.2-10g, 15.2-11g, 15.2-13g, 15.2-14g, 15.2-15g and 15.2-16g.

DCD Impact:

DCD Tier 2, Figures 15.2-1g, 15.2-2g, 15.2-3g, 15.2-4g, 15.2-5g, 15.2-6g, 15.2-7g, 15.2-8g, 15.2-9g, 15.2-10g, 15.2-11g, 15.2-13g, 15.2-14g, 15.2-15g, 15.2-16g, 15.3-1g, 15.3-2g, 15.3-3g, 15.3-4g, 15.3-5g, 15.3-6g, 15.3-8g and 15.3-9g will be revised as noted for DCD Revision 5.



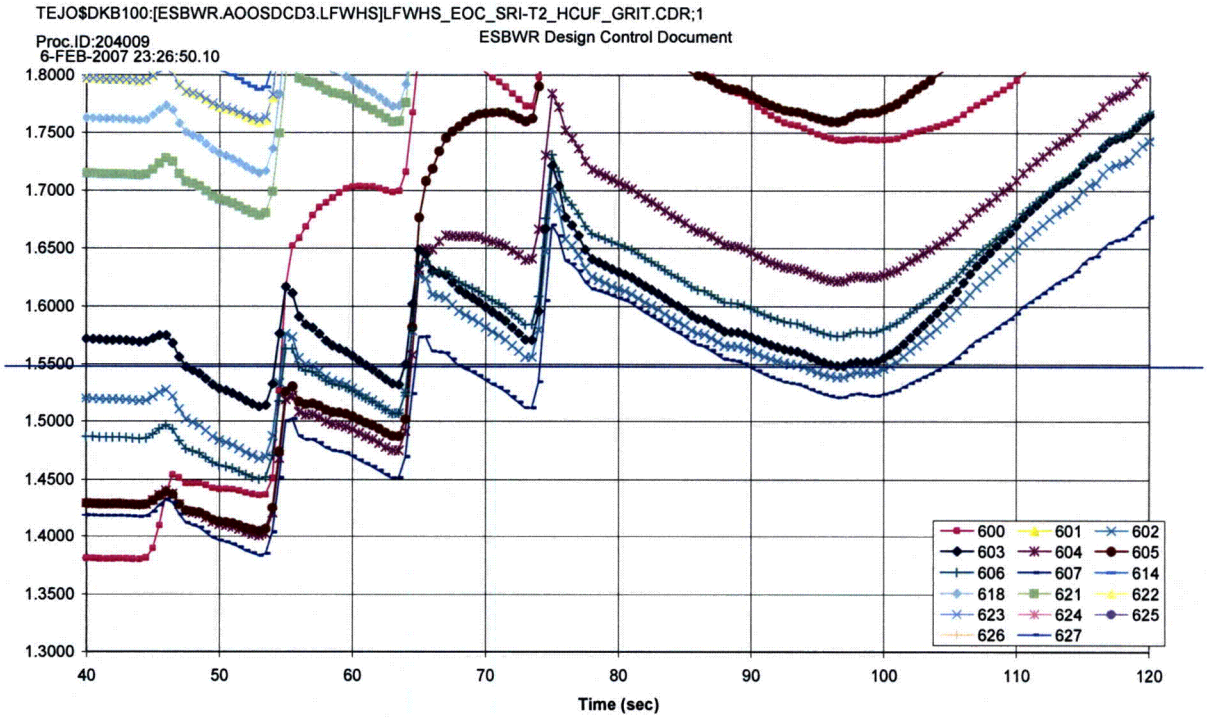
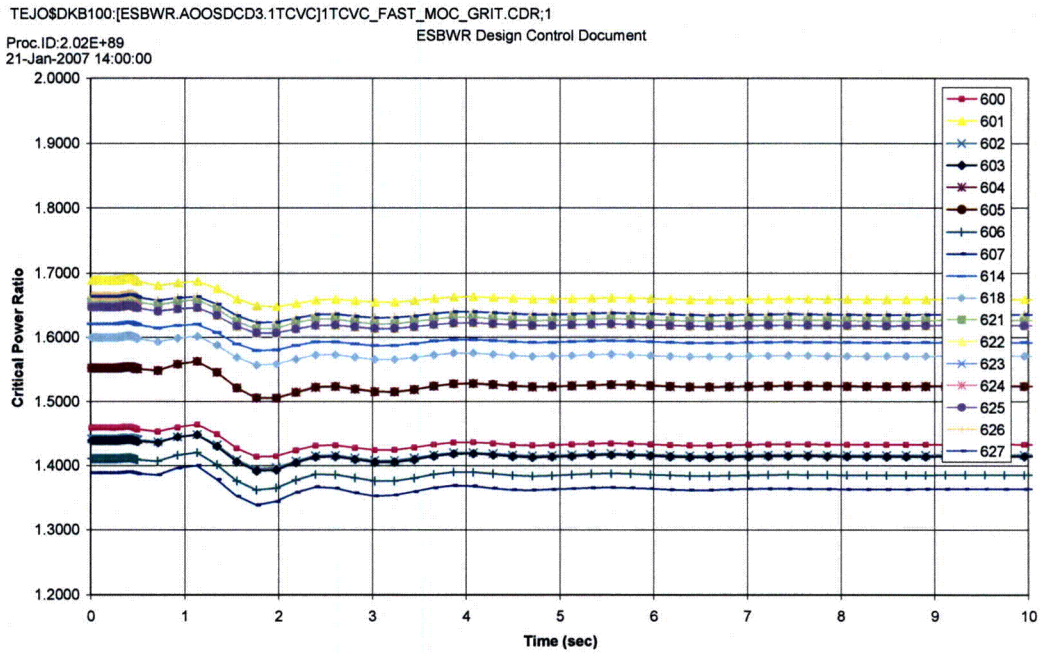


Figure 15.2-1g. Loss of Feedwater Heating



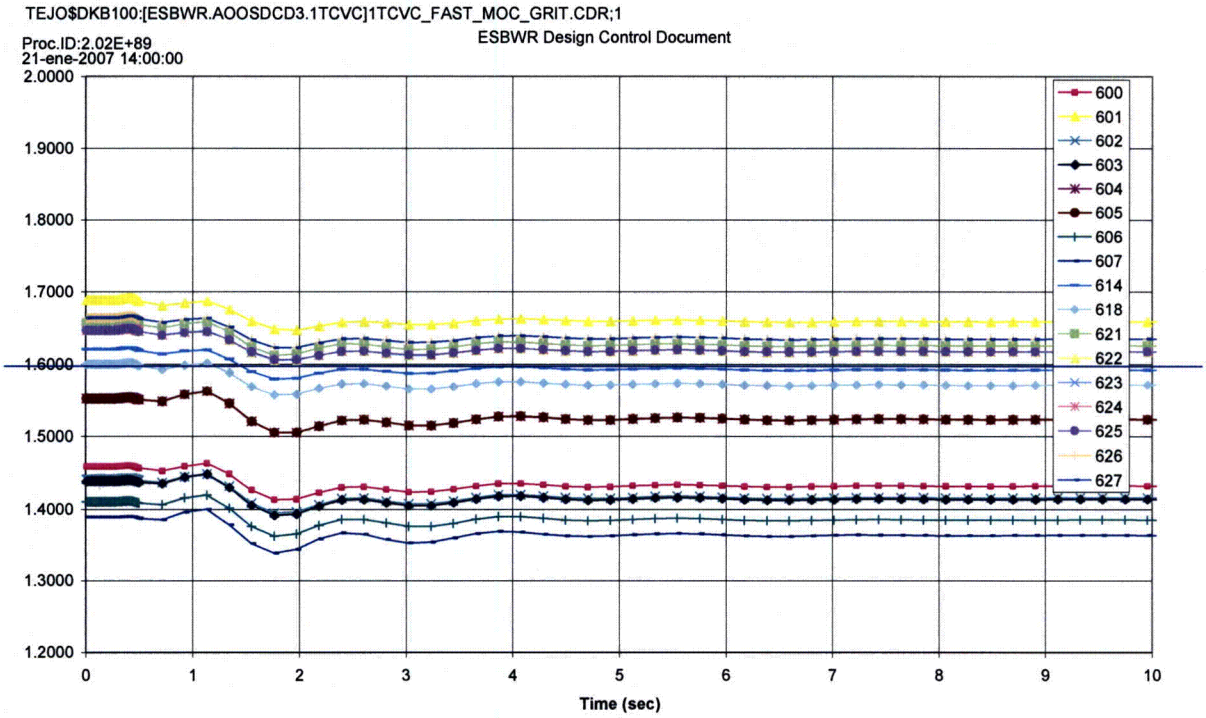
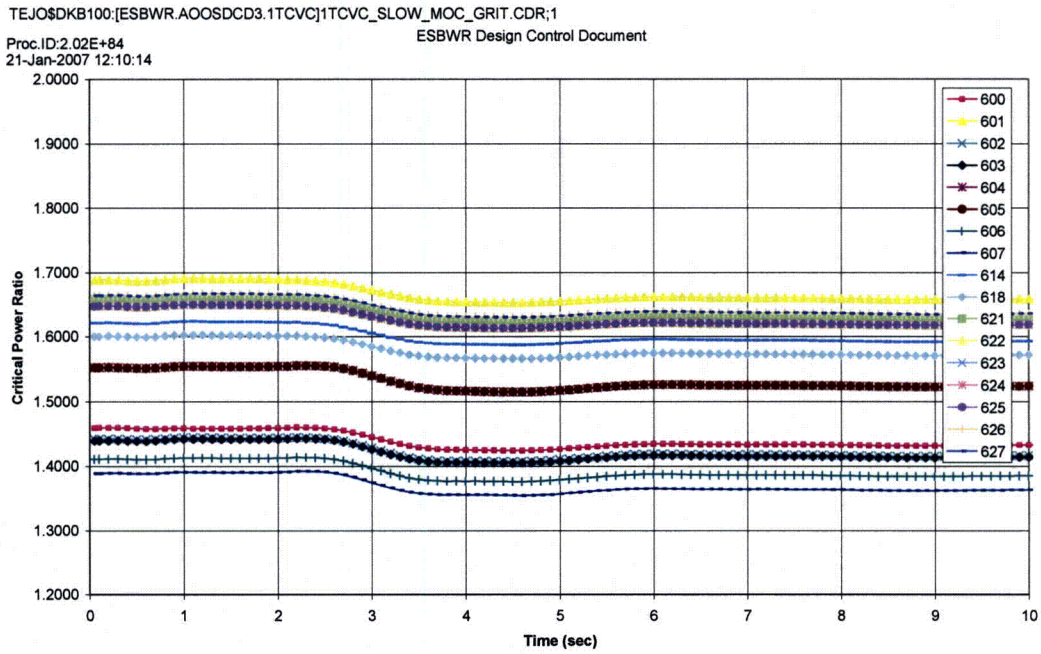


Figure 15.2-2g. Fast Closure of One Turbine Control Valve



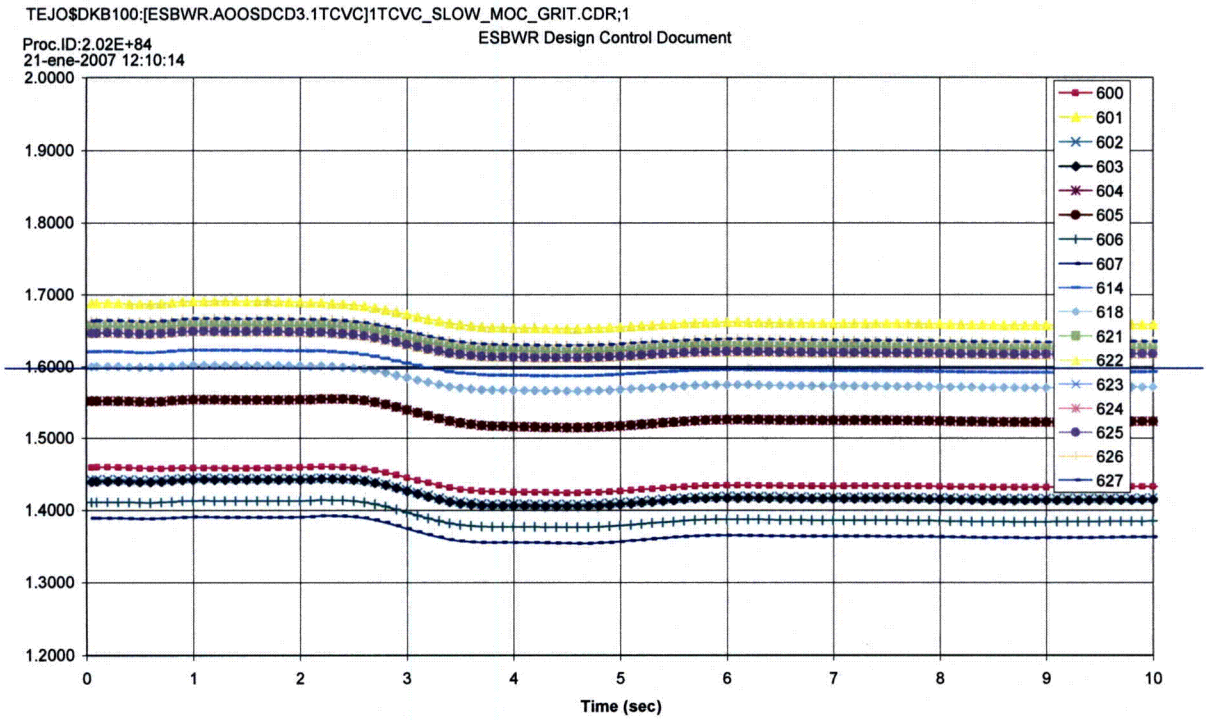
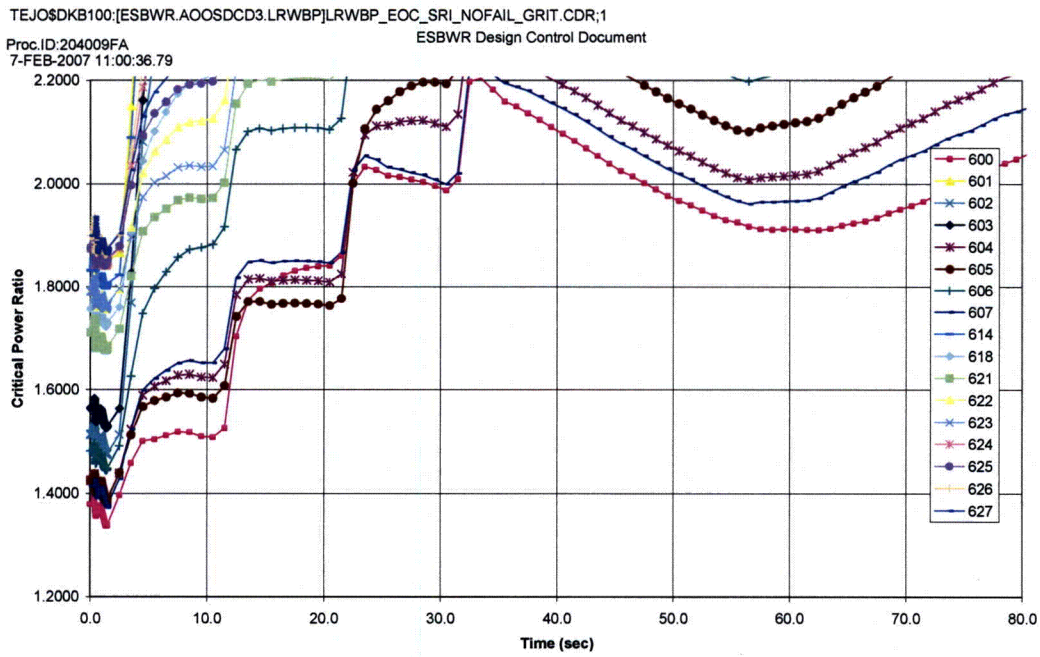


Figure 15.2-3g. Slow Closure of One Turbine Control Valve



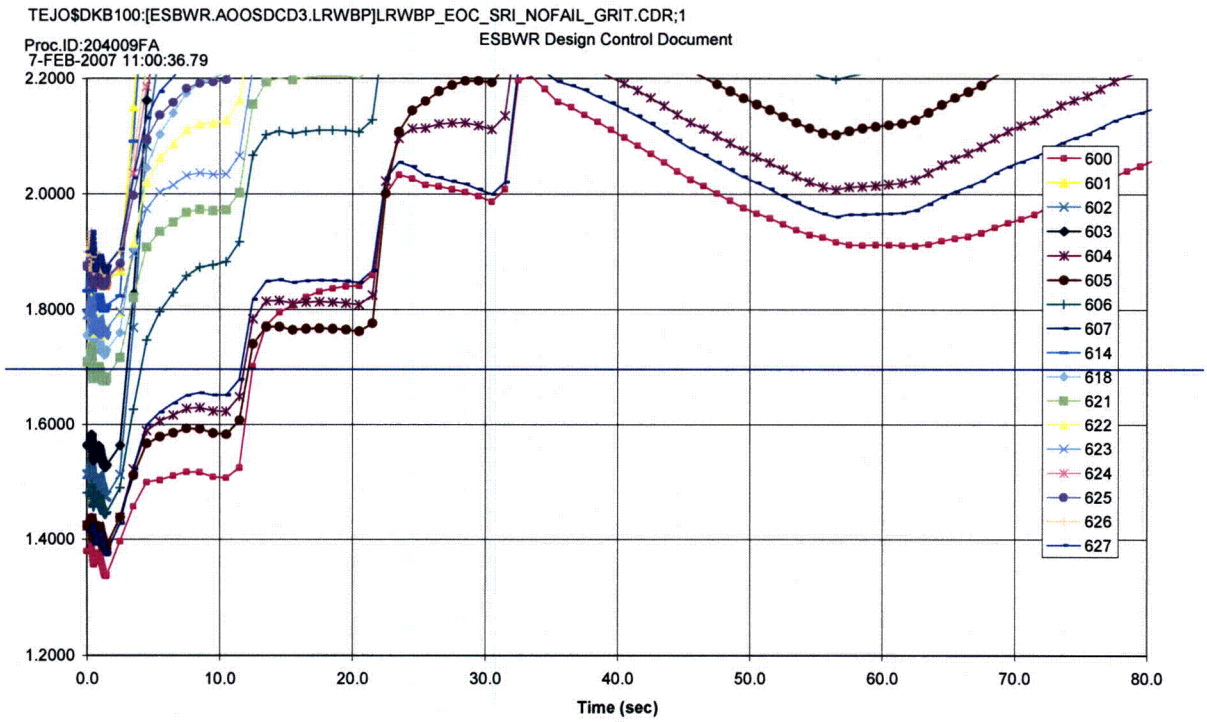
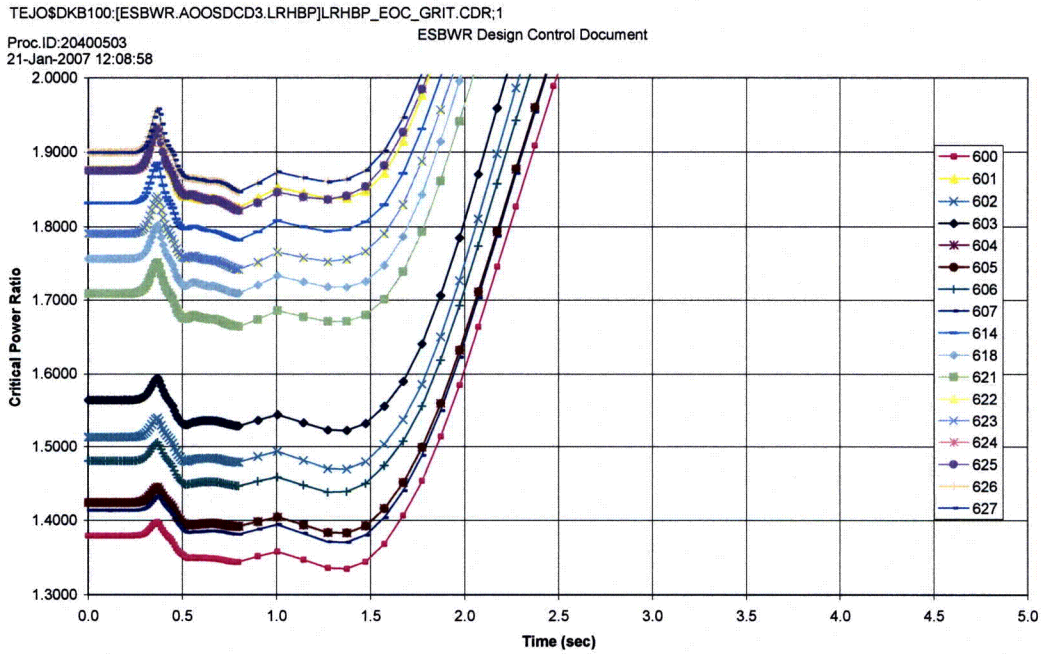


Figure 15.2-4g. Generator Load Rejection with Turbine Bypass



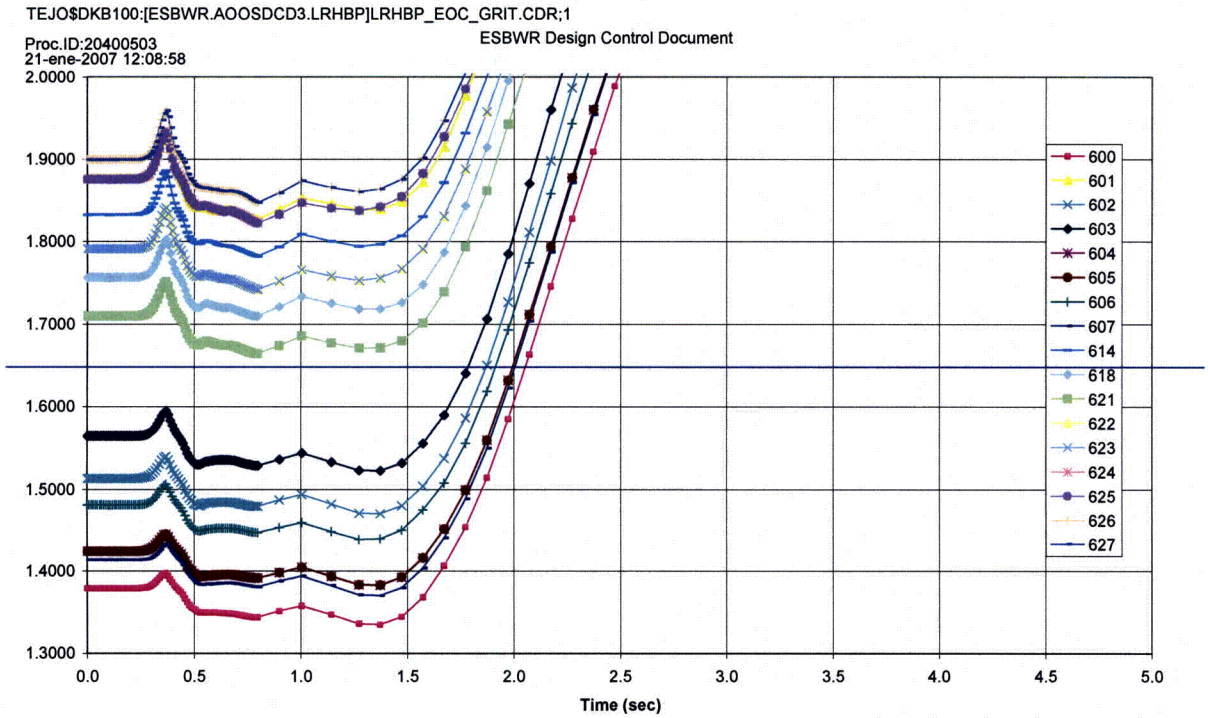
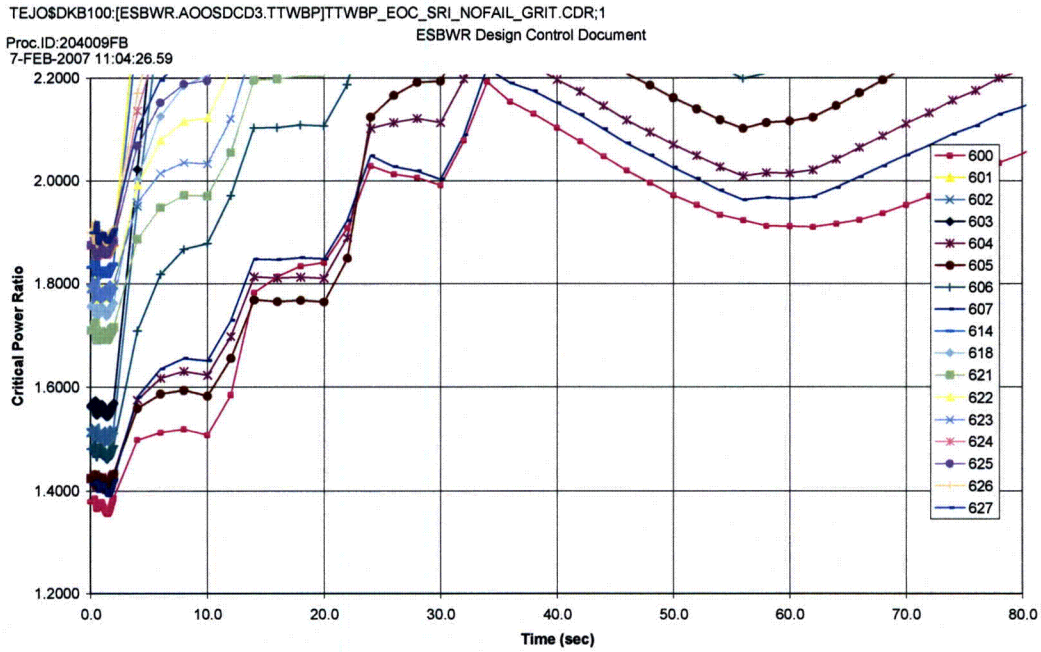


Figure 15.2-5g. Generator Load Rejection with a Single Failure in the Turbine Bypass System



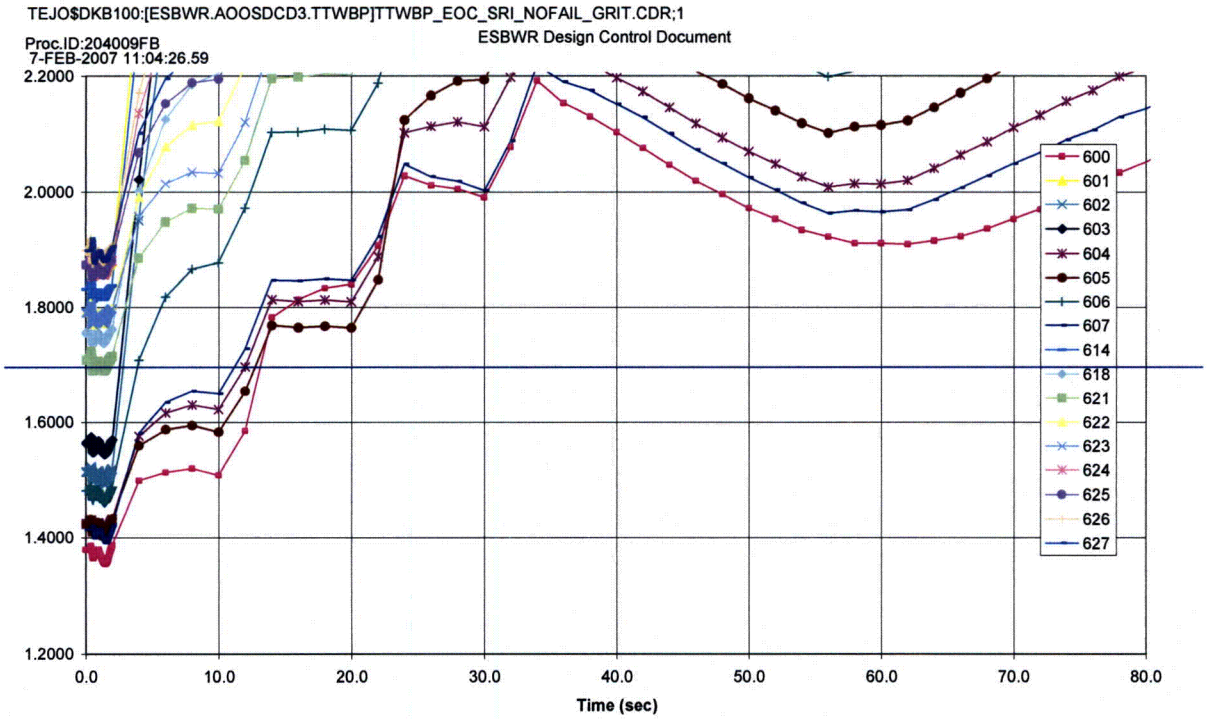
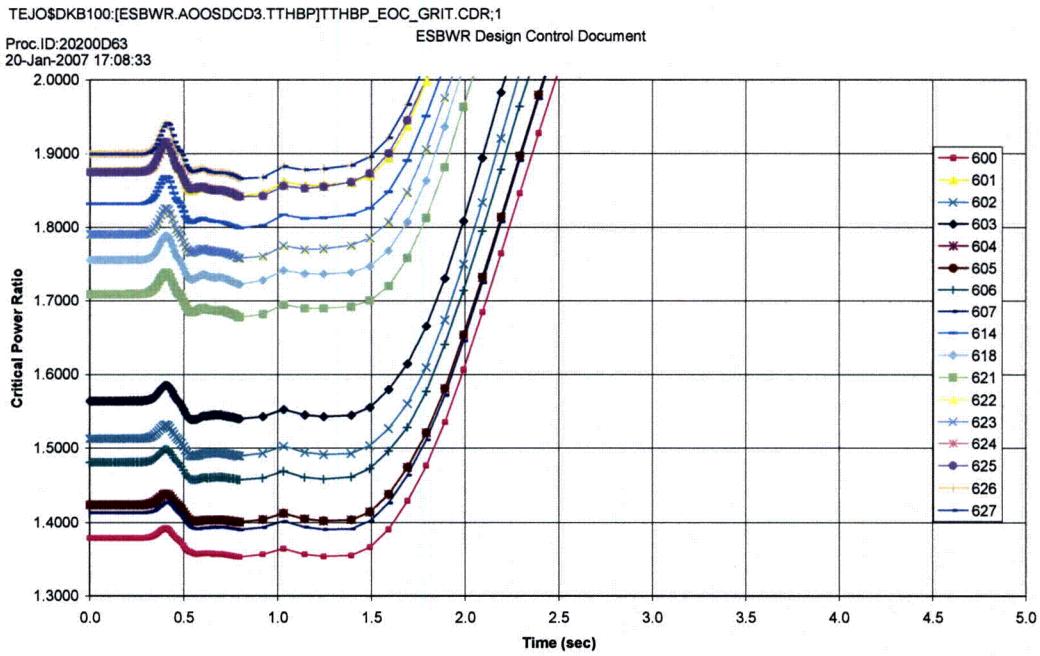


Figure 15.2-6g. Turbine Trip with Turbine Bypass



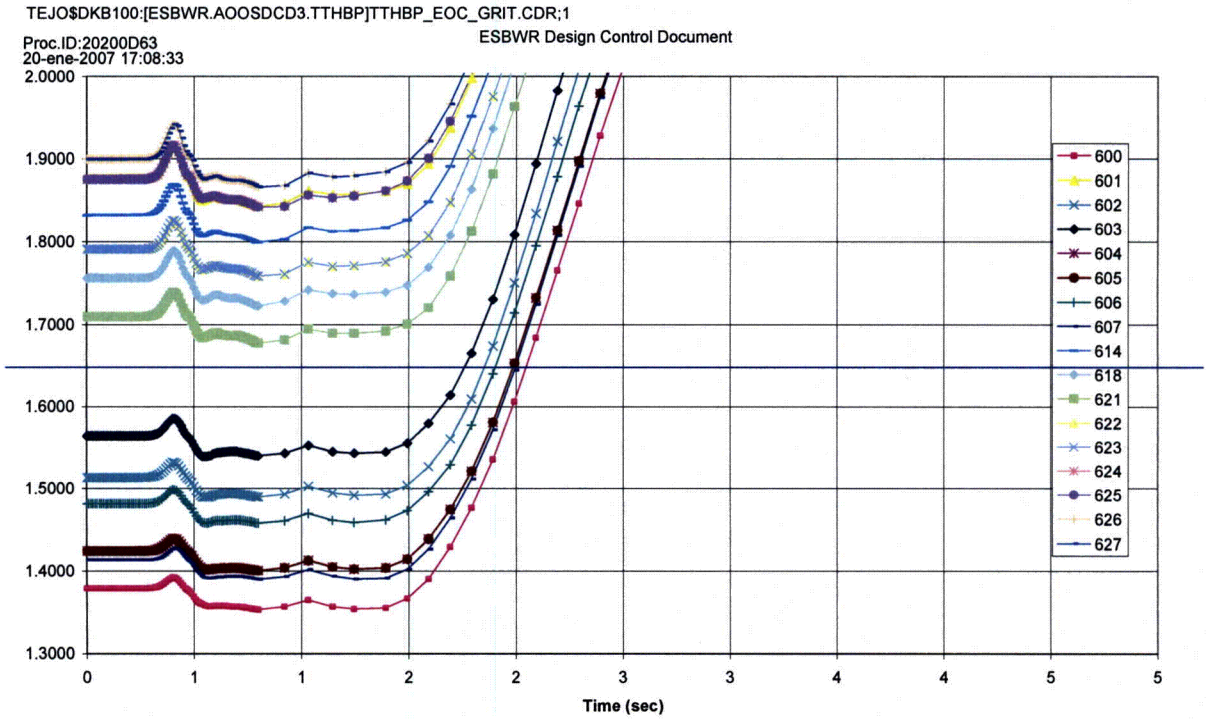
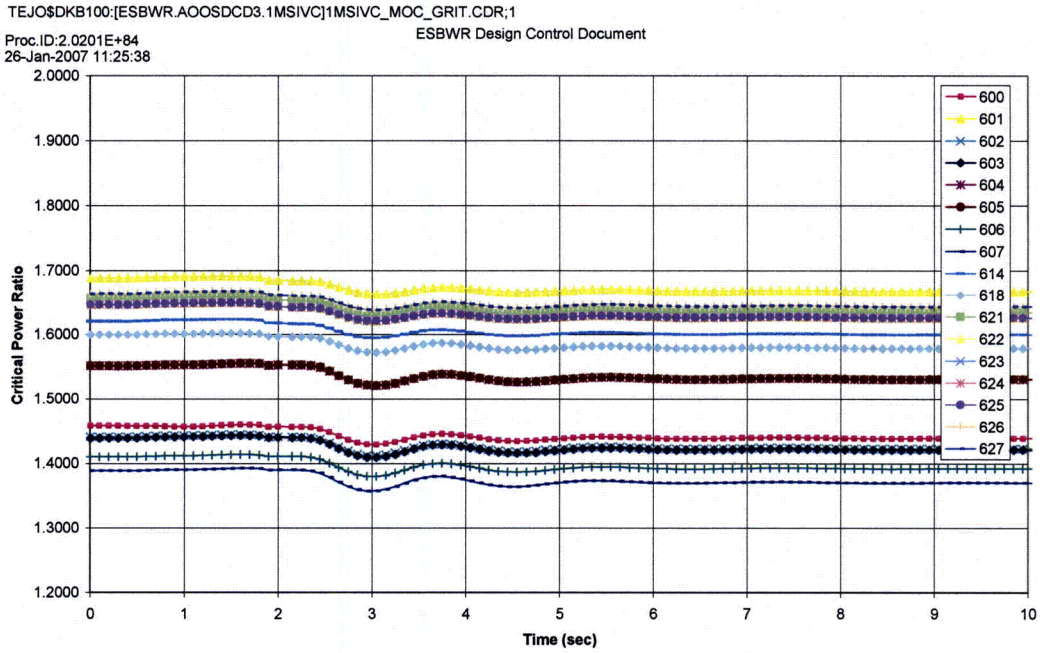


Figure 15.2-7g. Turbine Trip with a Single Failure in the Turbine Bypass System



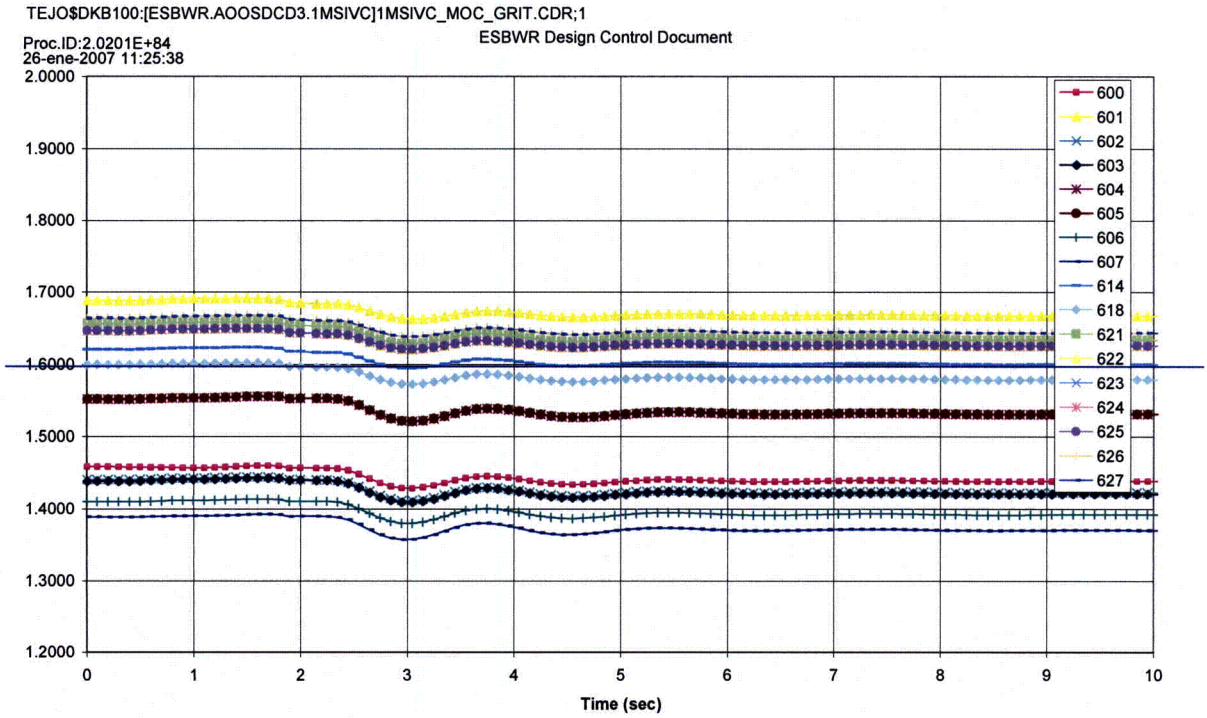
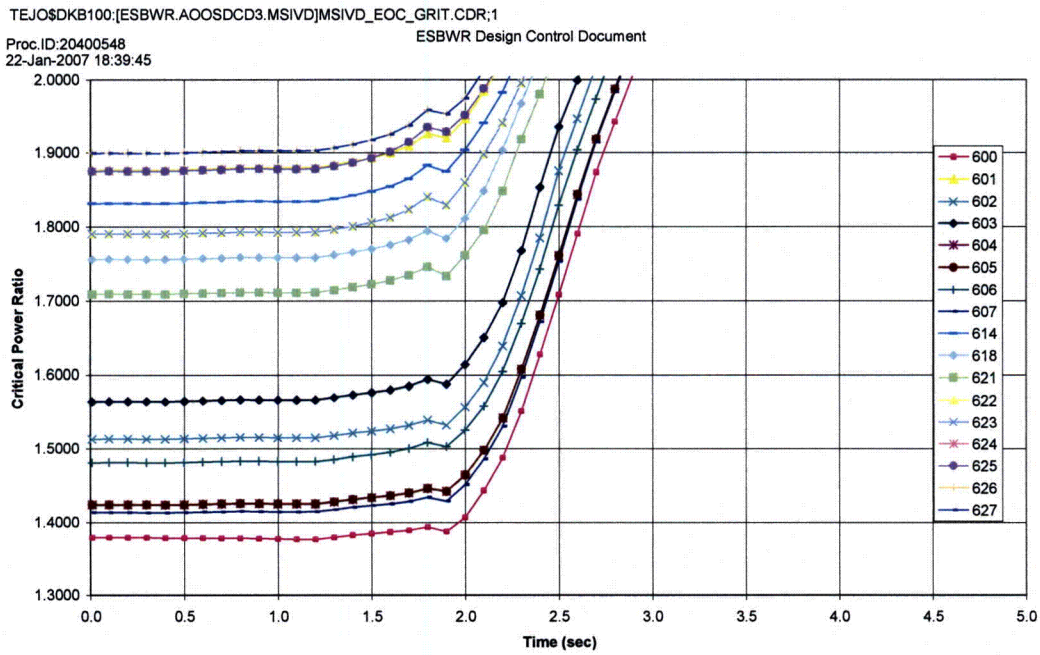


Figure 15.2-8g. One MSIV Closure



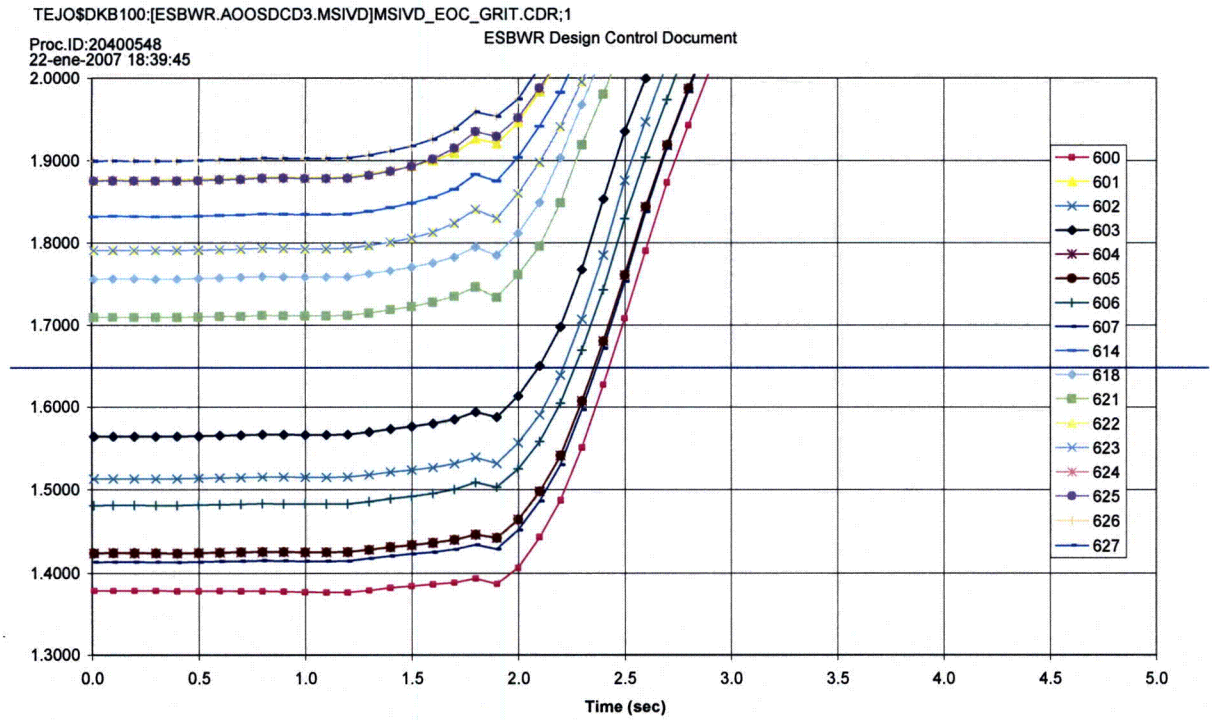
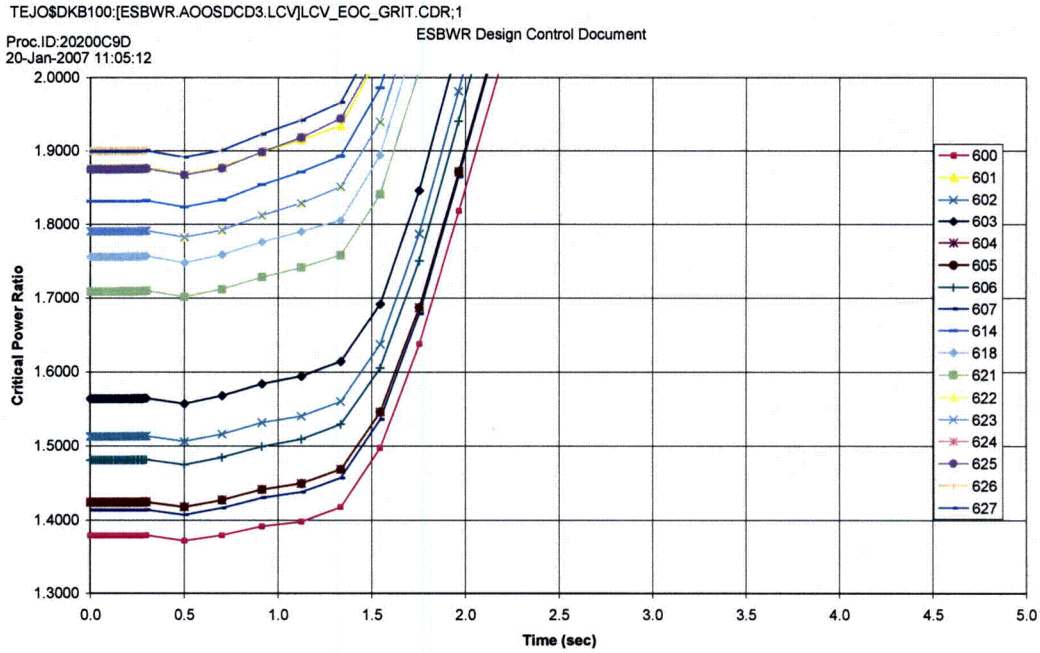


Figure 15.2-9g. MSIV Closure



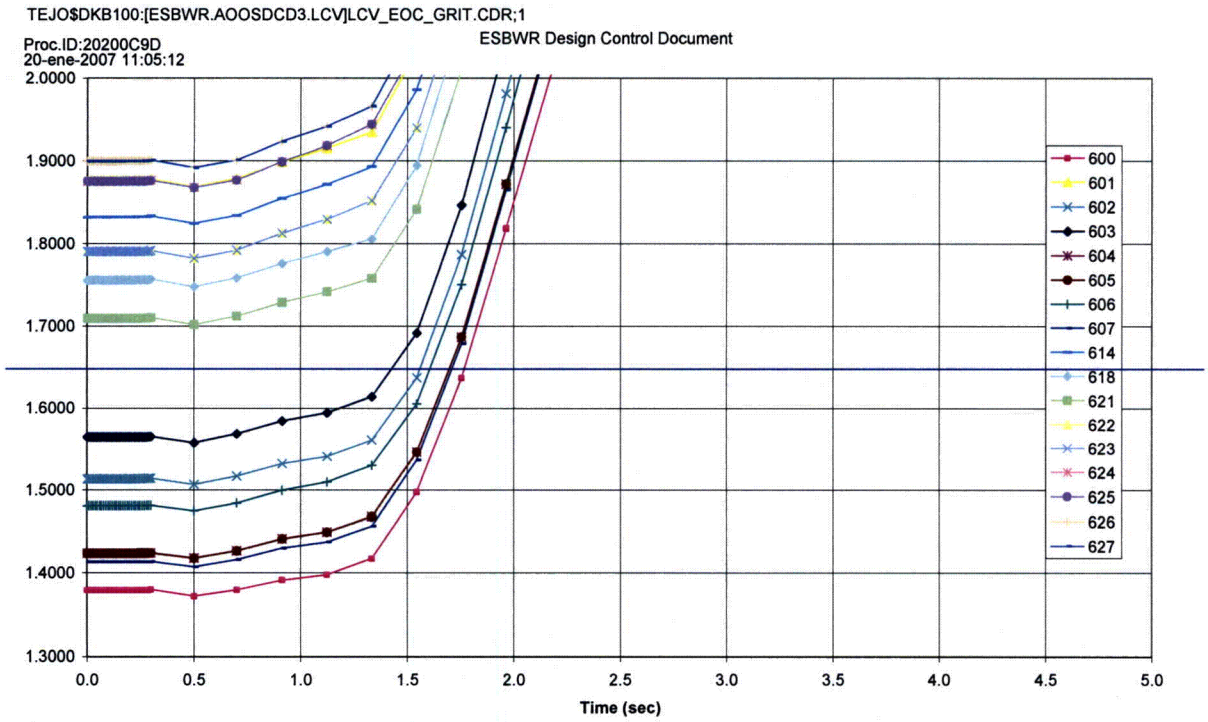
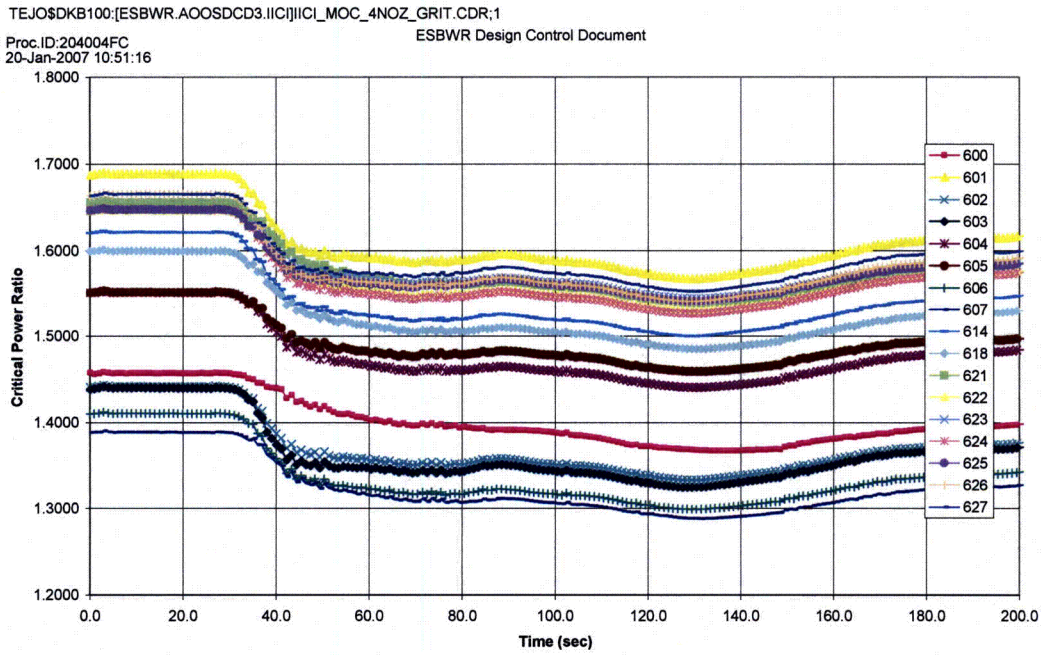


Figure 15.2-10g. Loss of Condenser Vacuum



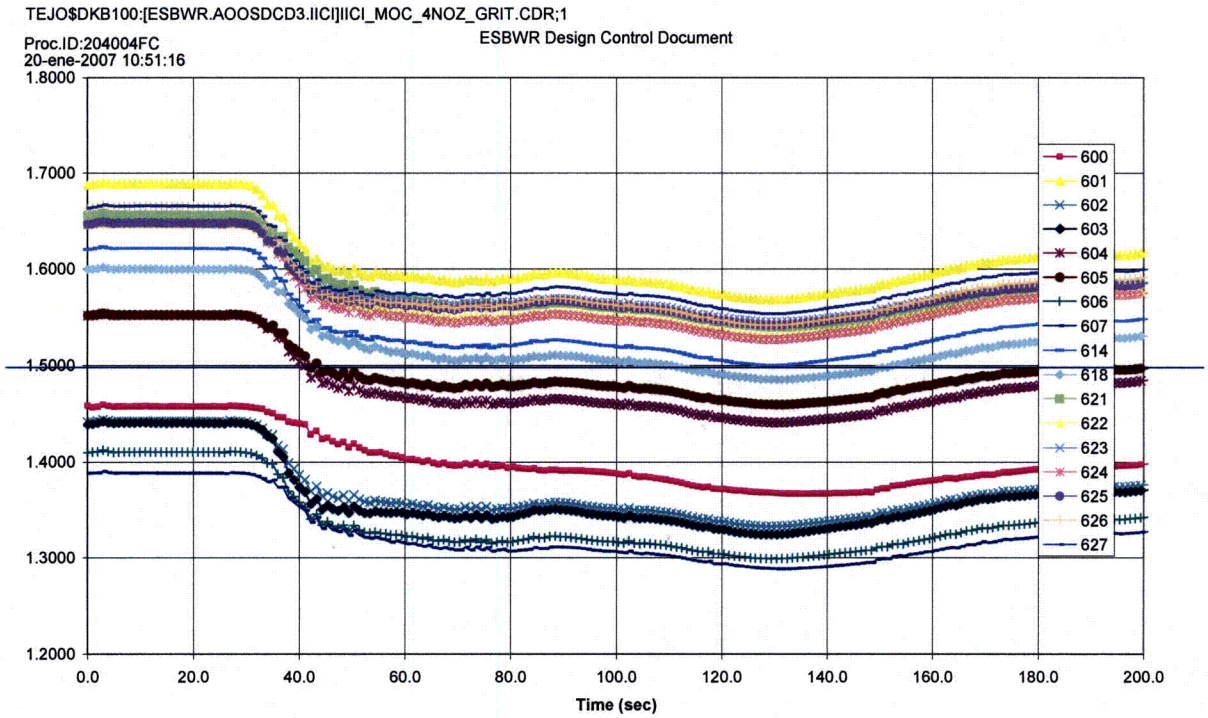
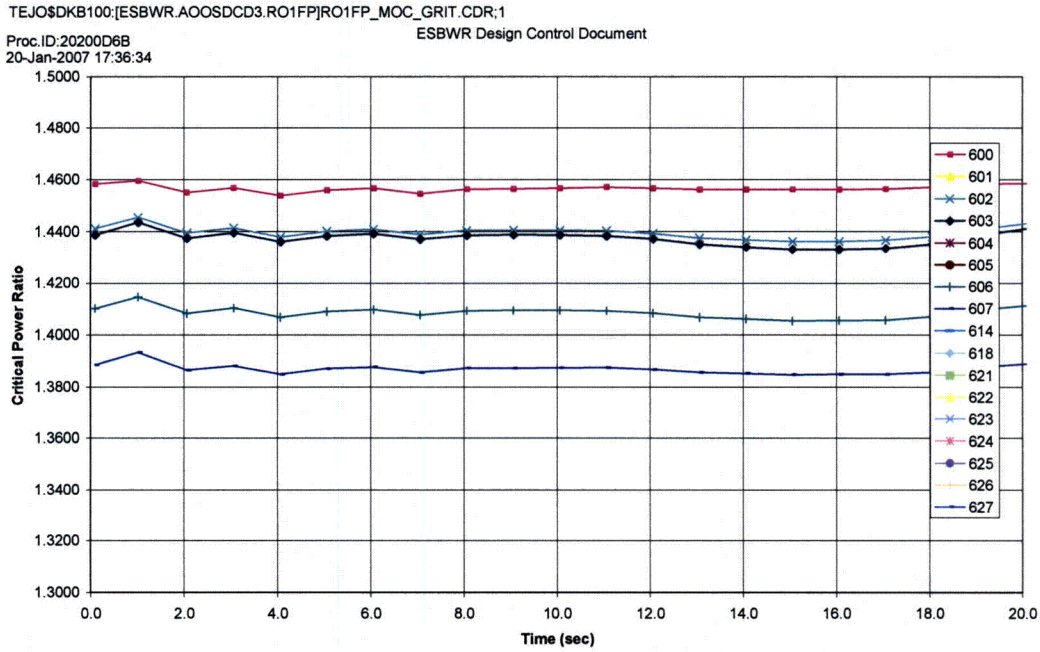


Figure 15.2-11g. Inadvertent Isolation Condenser Initiation



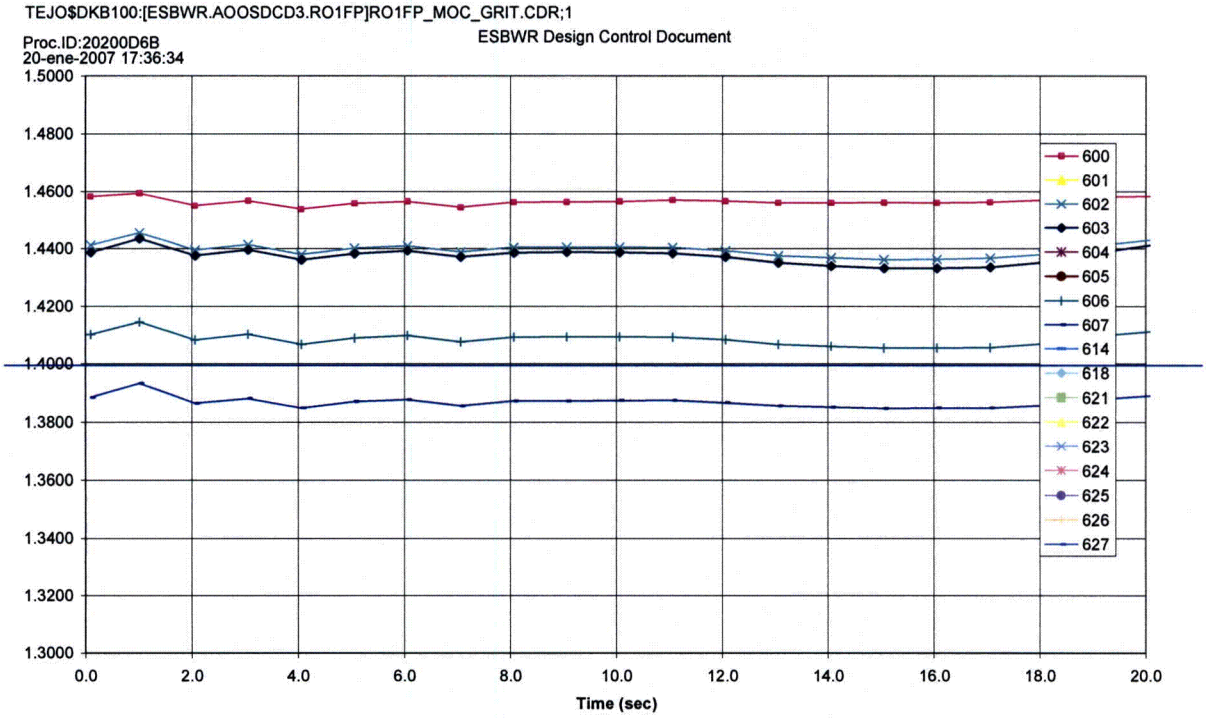
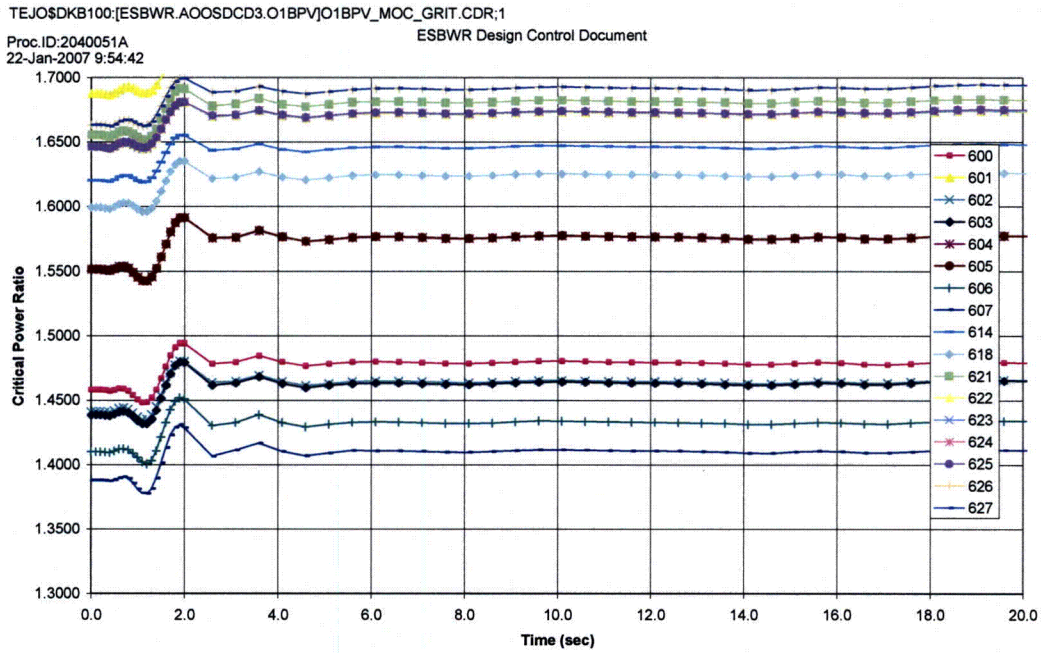


Figure 15.2-13g. Runout of One Feedwater Pump



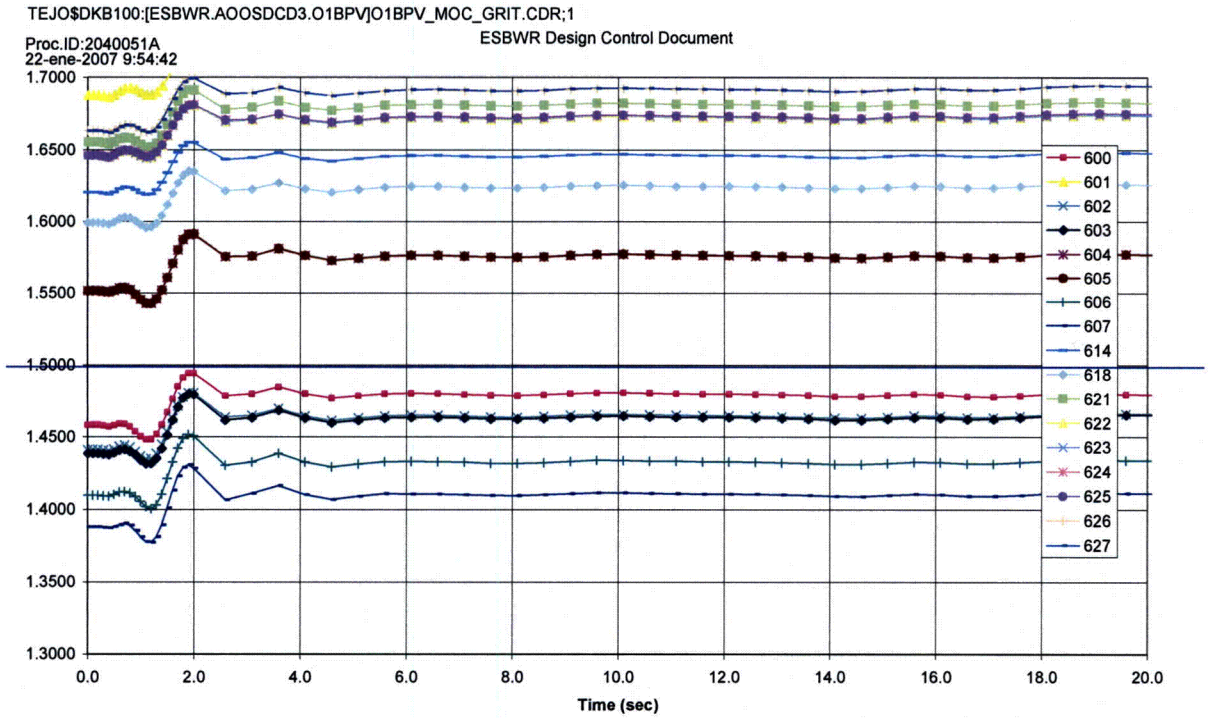
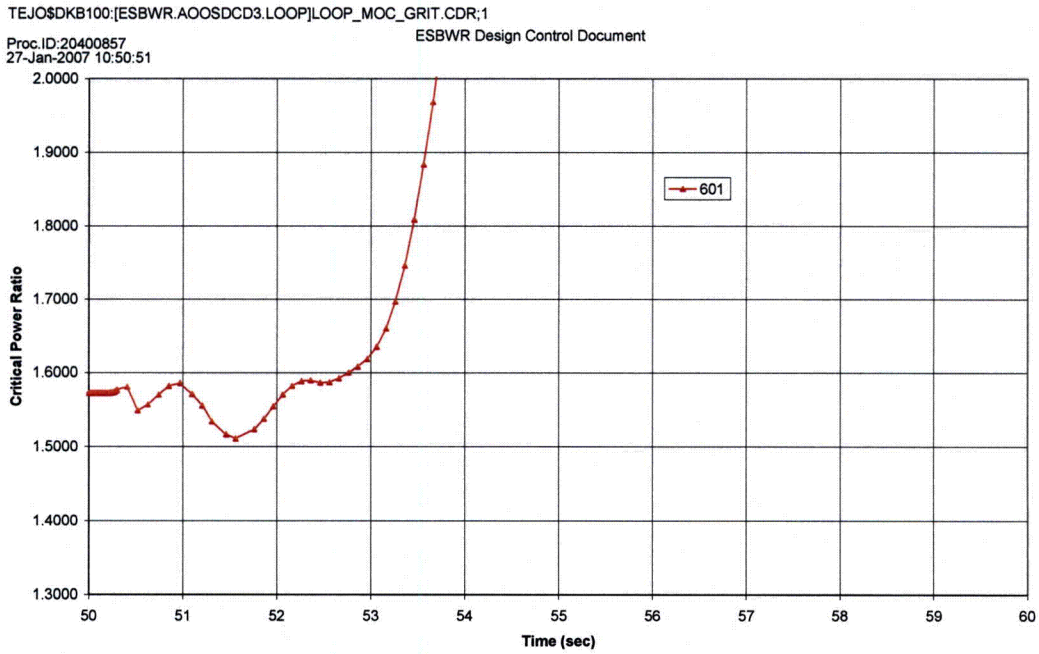


Figure 15.2-14g. Opening of One Turbine Control or Bypass Valve



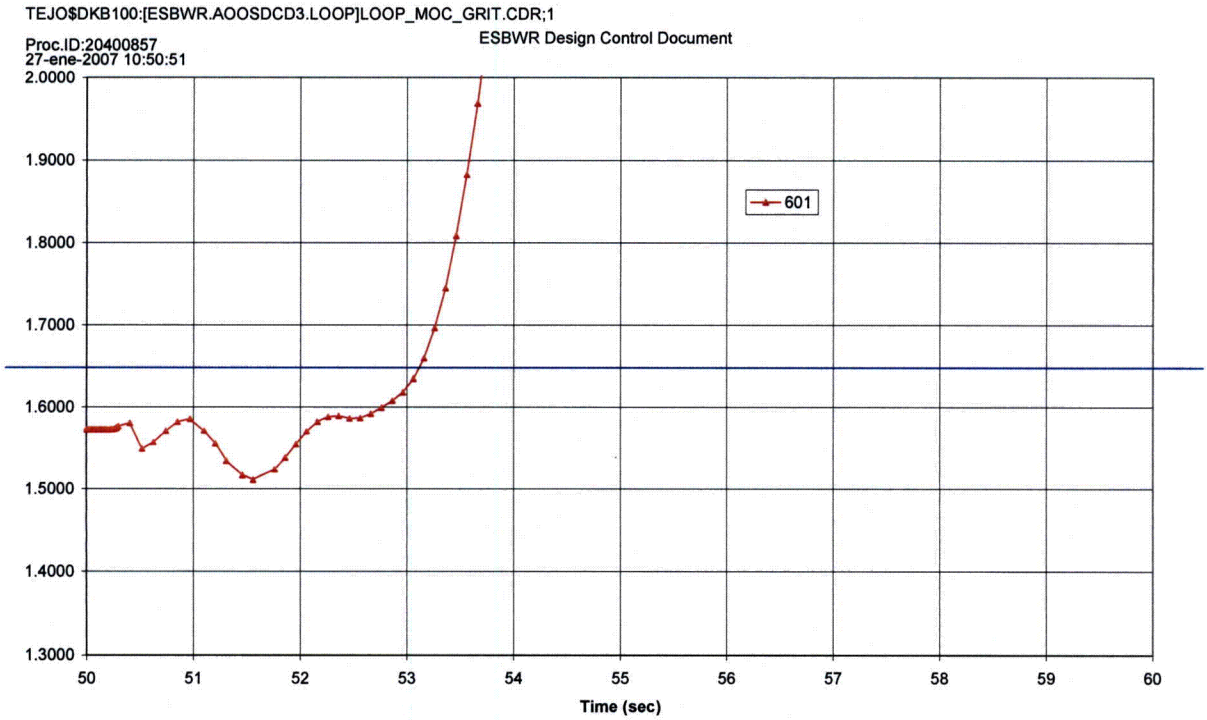
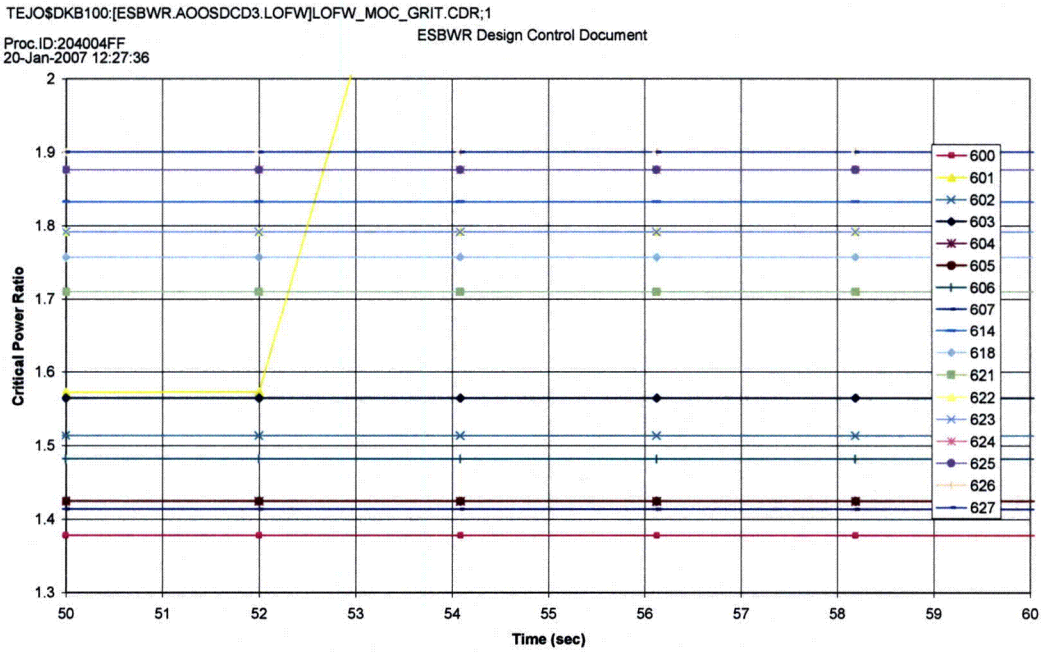


Figure 15.2-15g. Loss of Non-Emergency AC Power to Station Auxiliaries



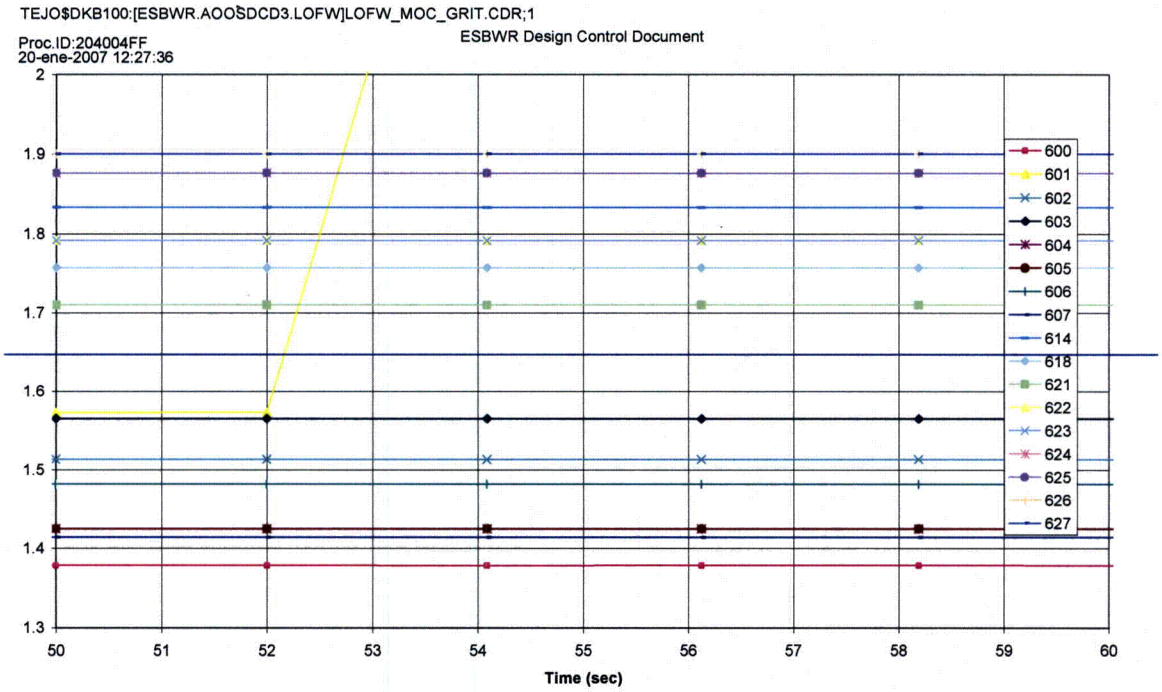
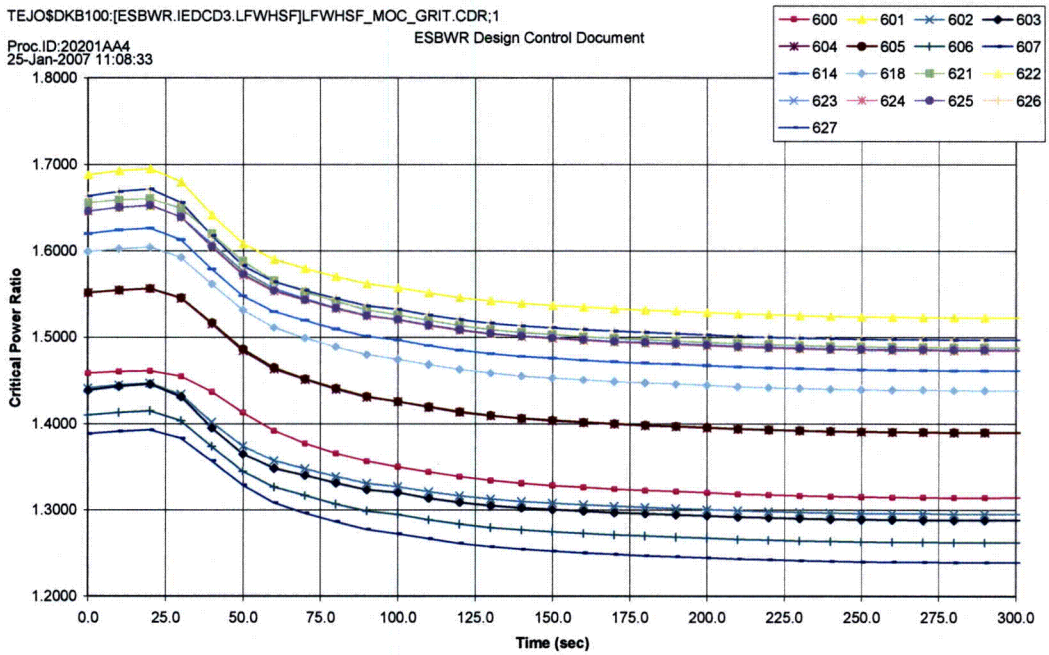


Figure 15.2-16g. Loss of All Feedwater Flow



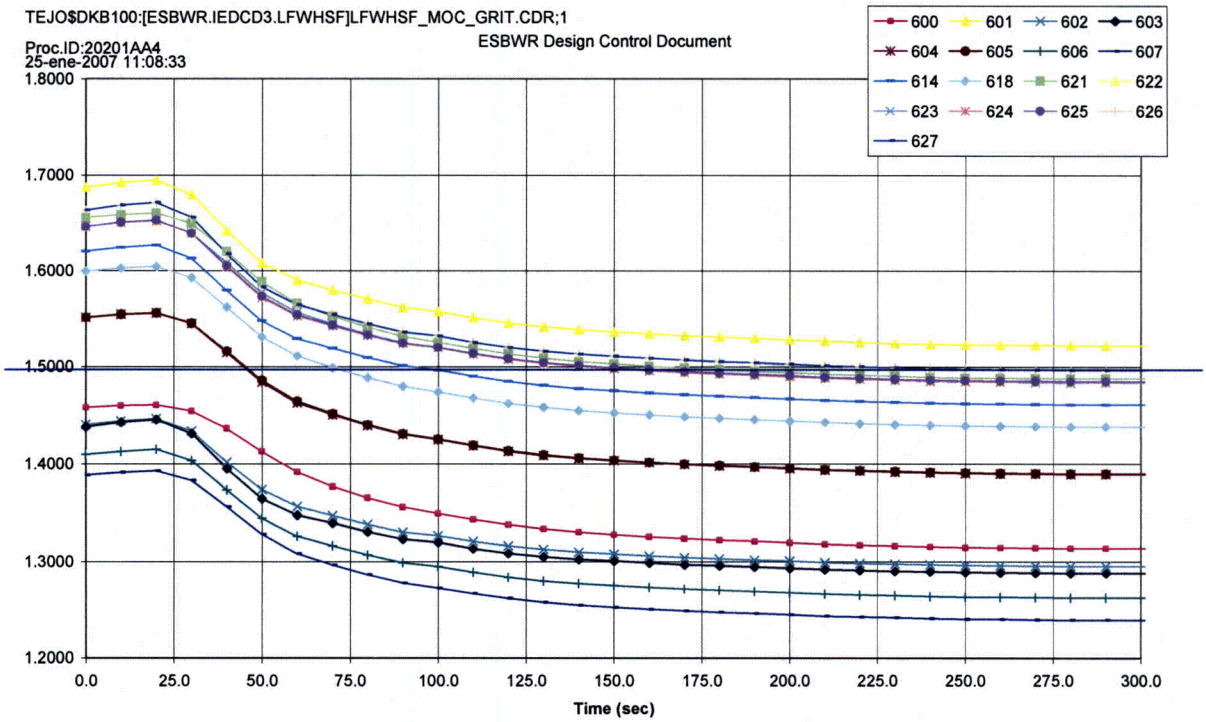
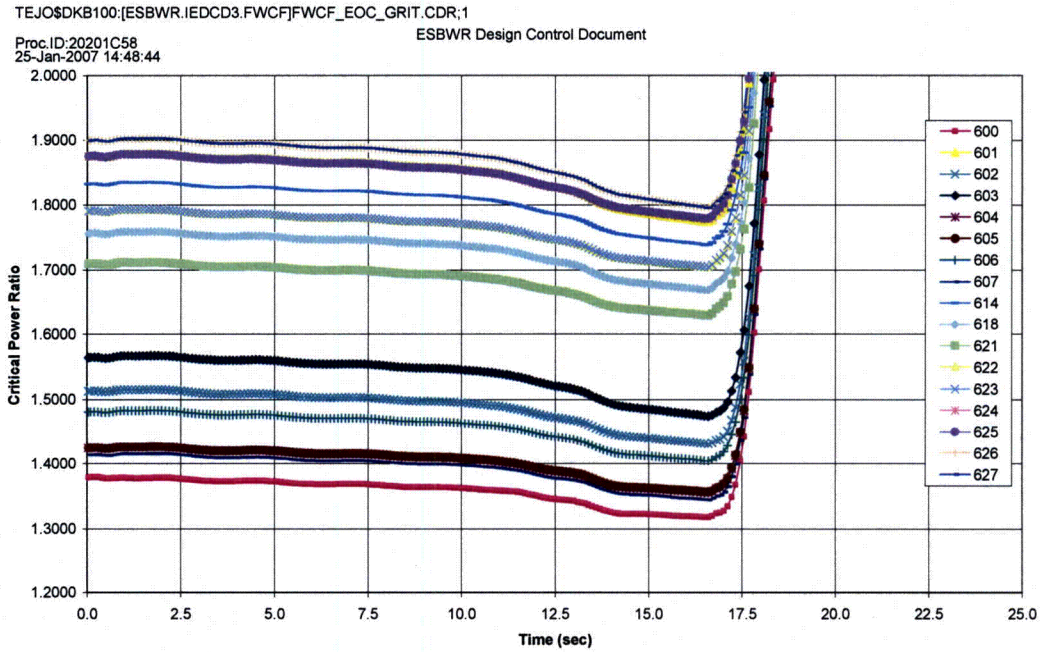


Figure 15.3-1g. Loss of Feedwater Heating with SCRRI/SRI Failure



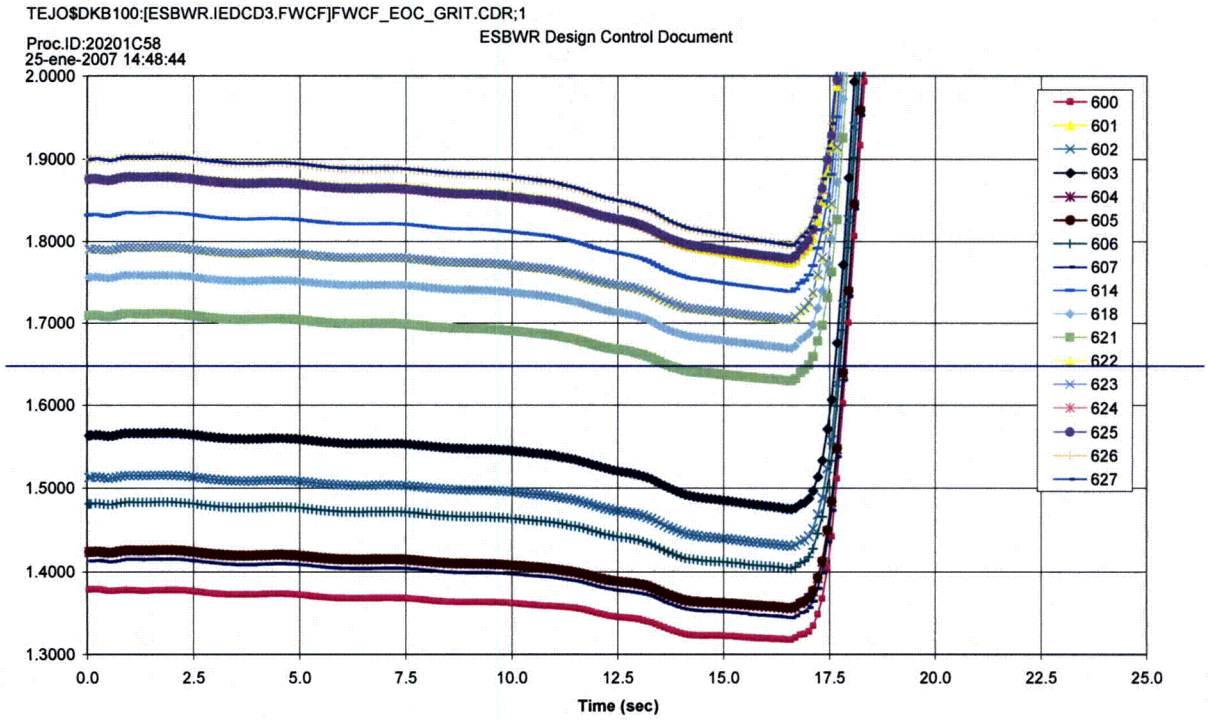
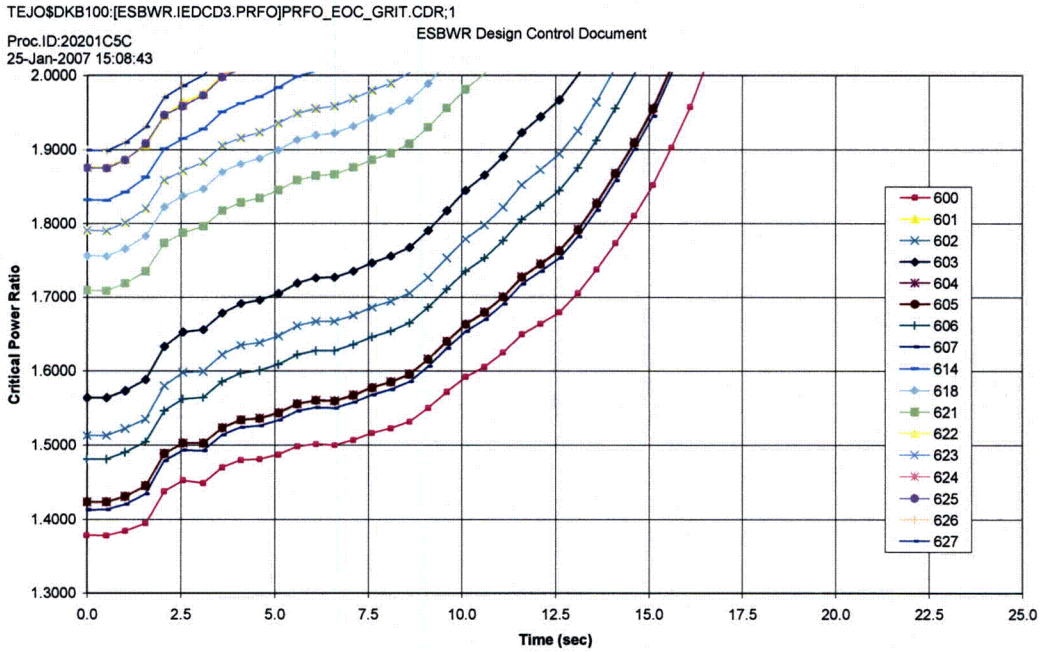


Figure 15.3-2g. Feedwater Controller Failure – Maximum Demand



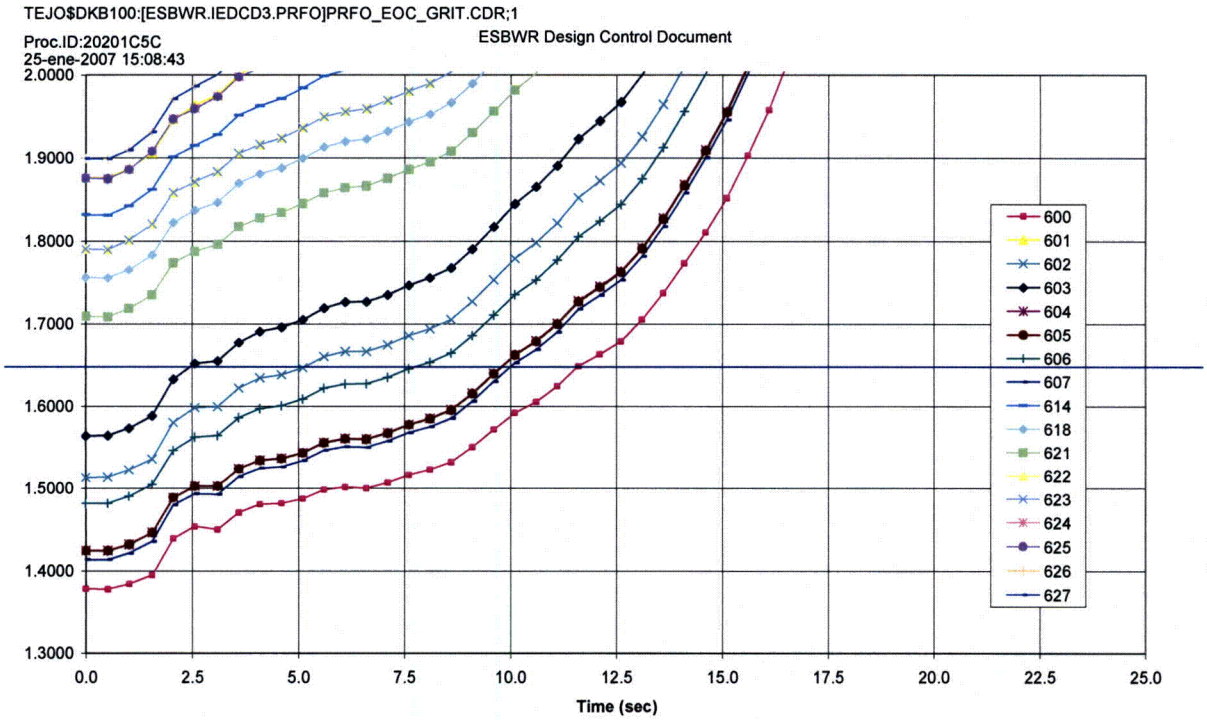
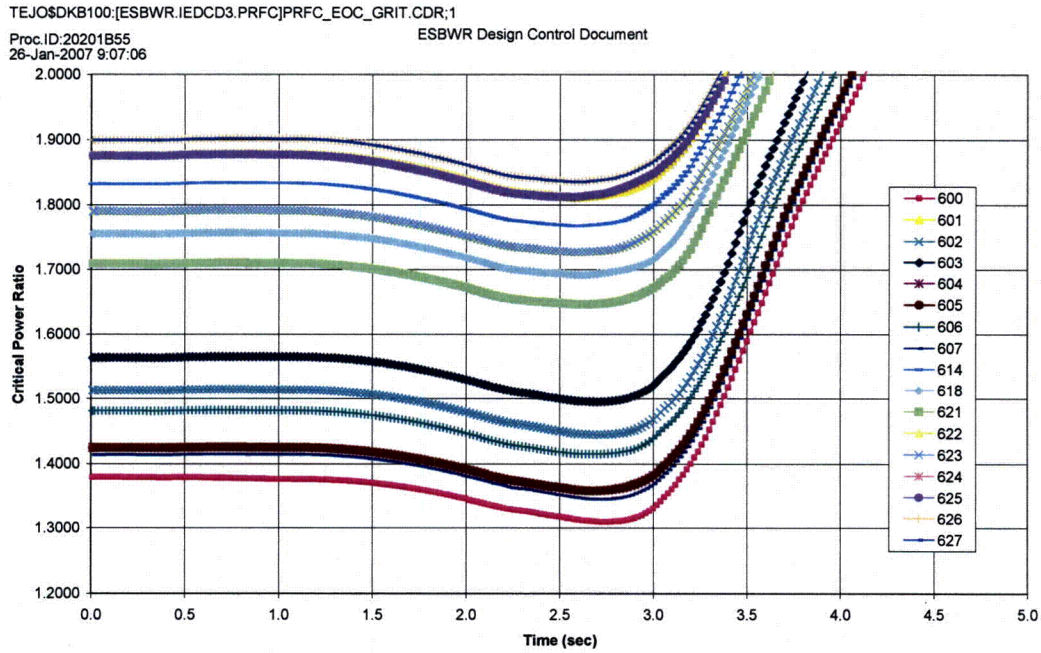


Figure 15.3-3g. Pressure Regulator Failure – Opening of All Turbine Control and Bypass Valves



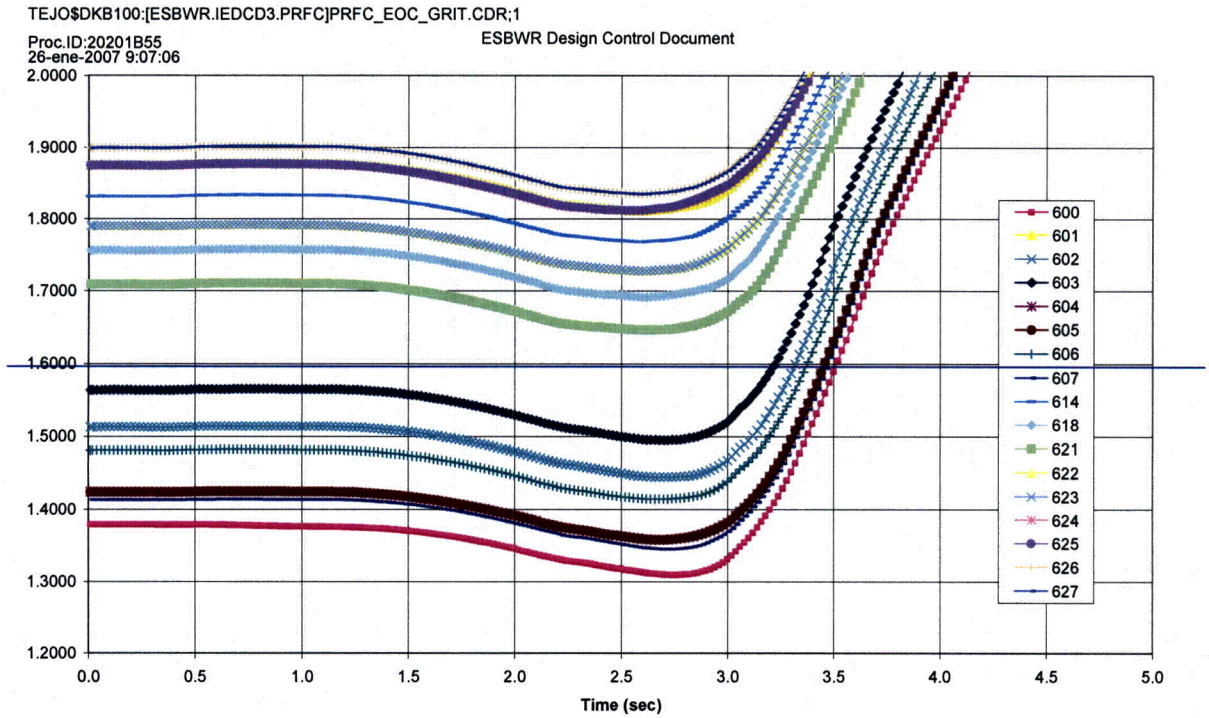
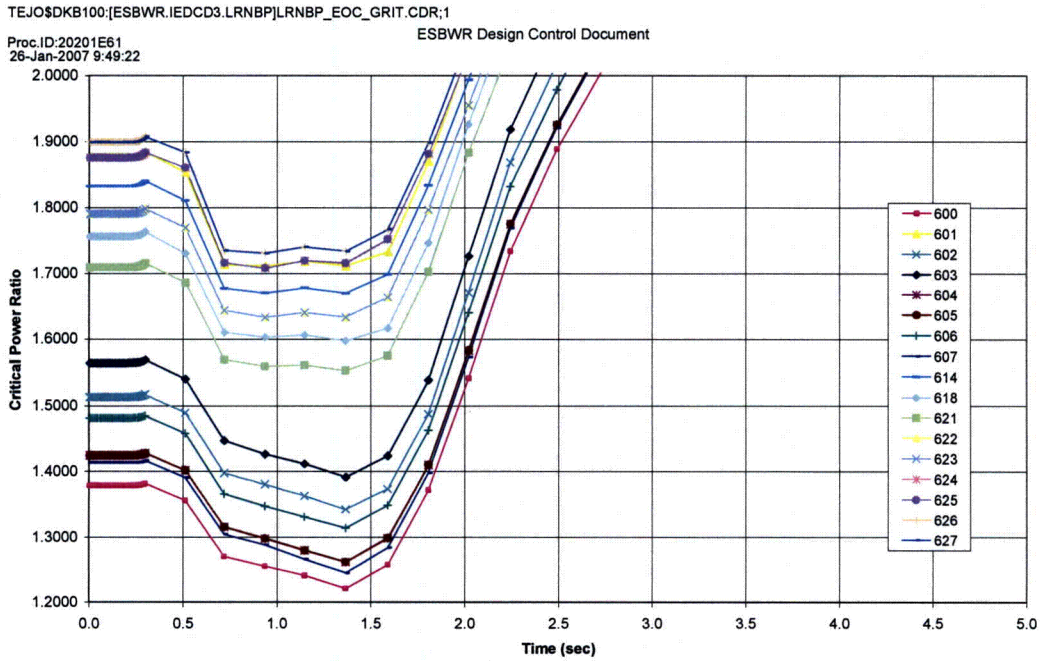


Figure 15.3-4g. Pressure Regulator Failure – Closure of All Turbine Control and Bypass Valves



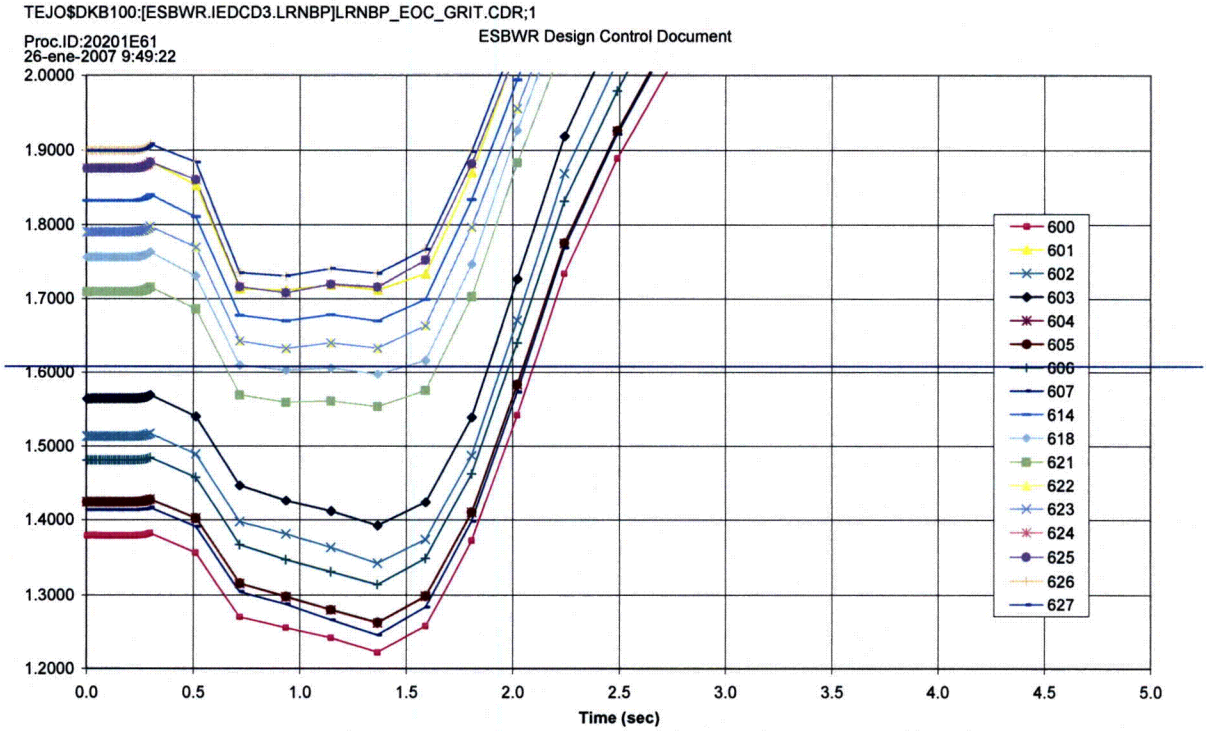
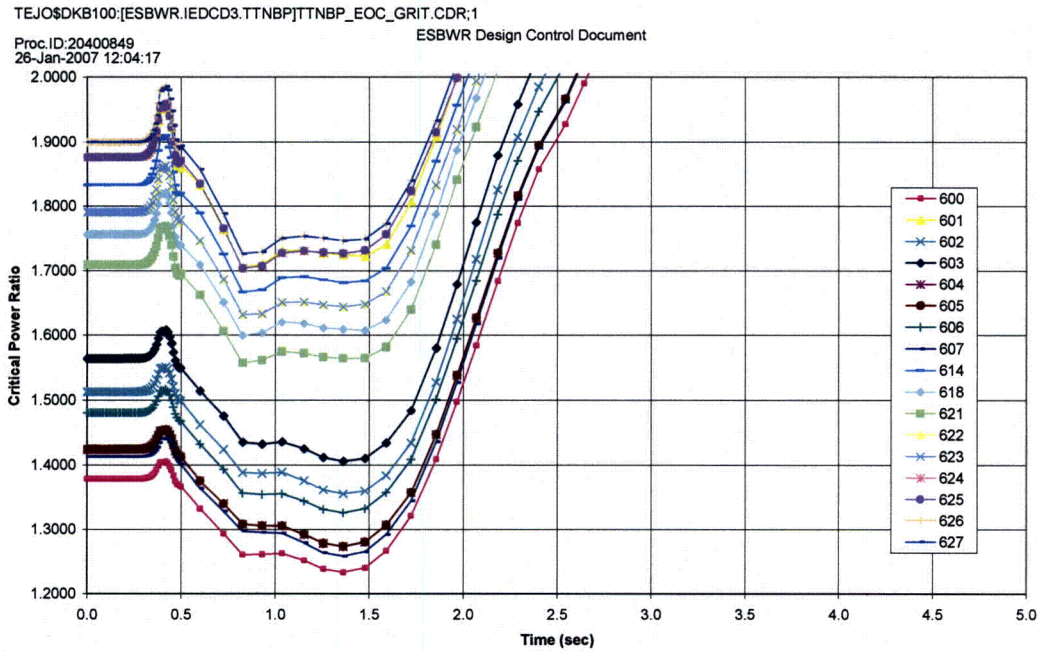


Figure 15.3-5g. Generator Load Rejection With Total Turbine Bypass Failure



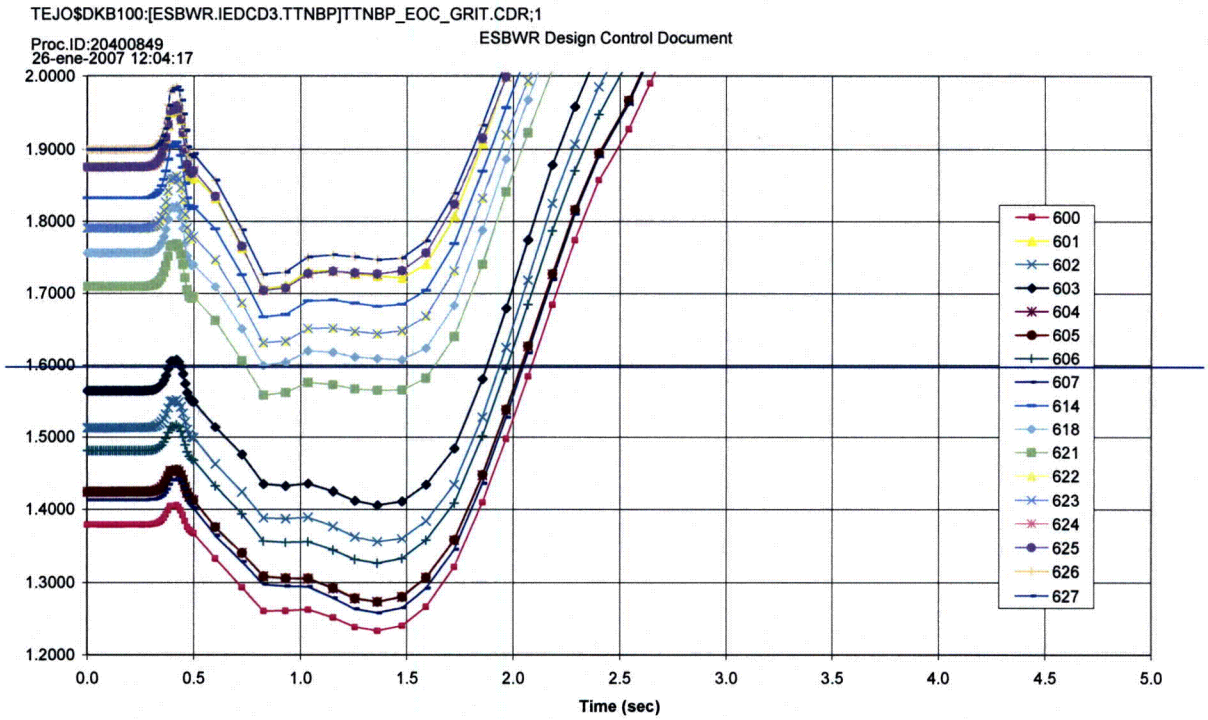
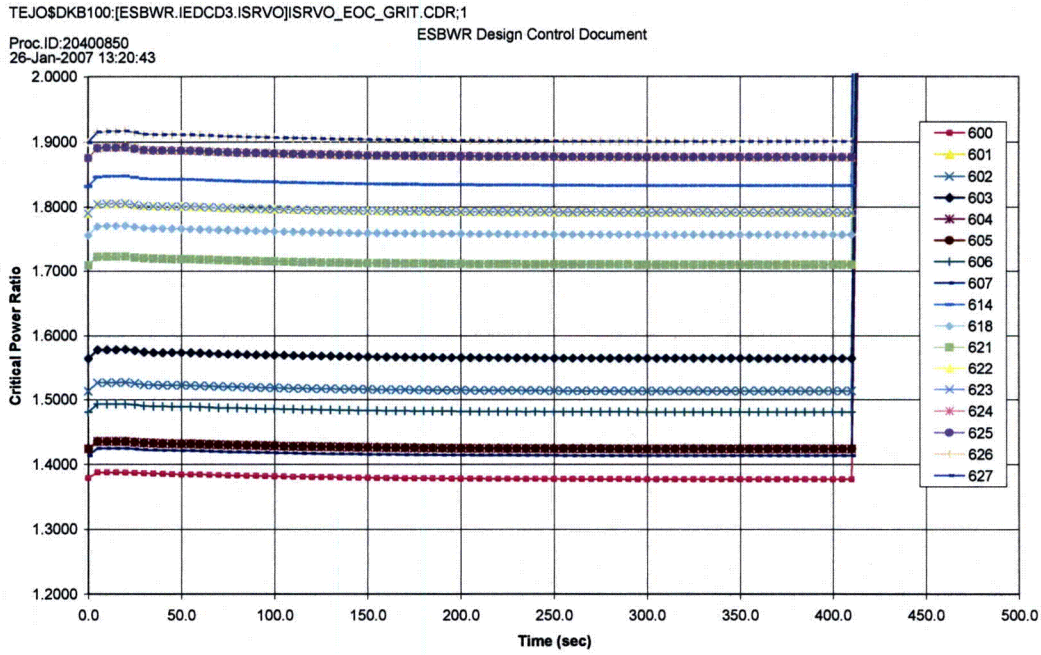


Figure 15.3-6g. Turbine Trip With Total Turbine Bypass Failure



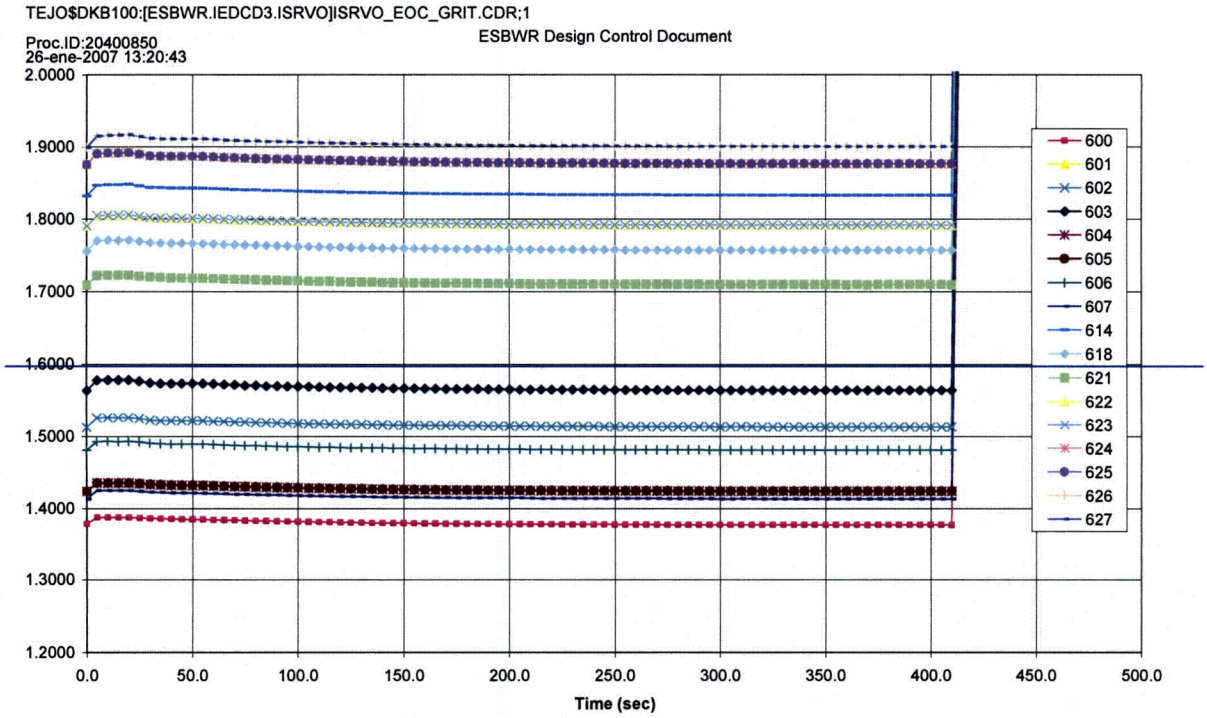
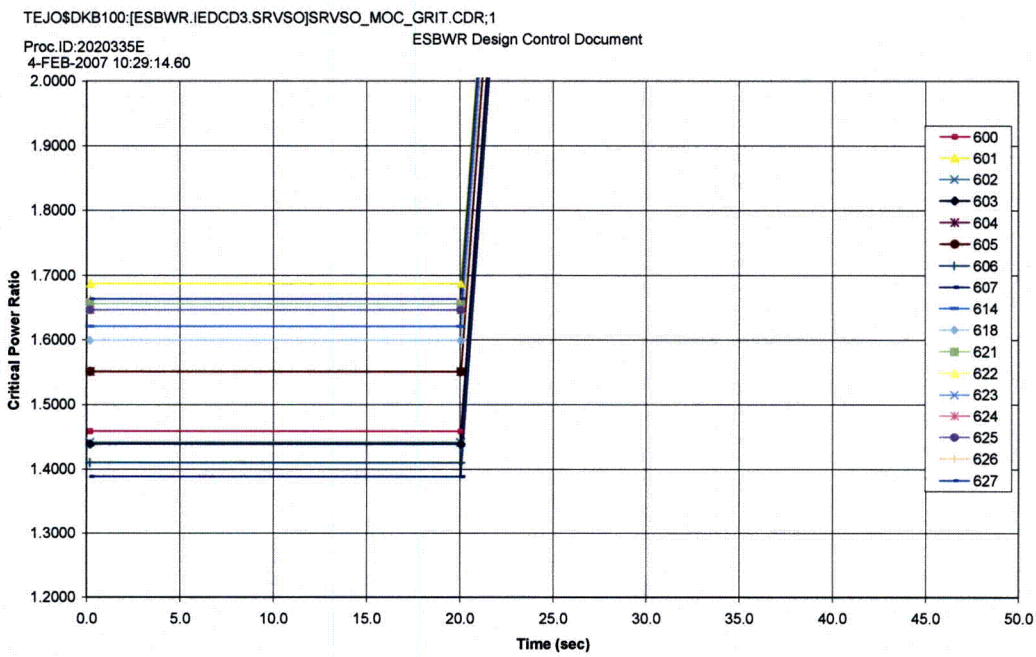


Figure 15.3-8g. Inadvertent SRV opening



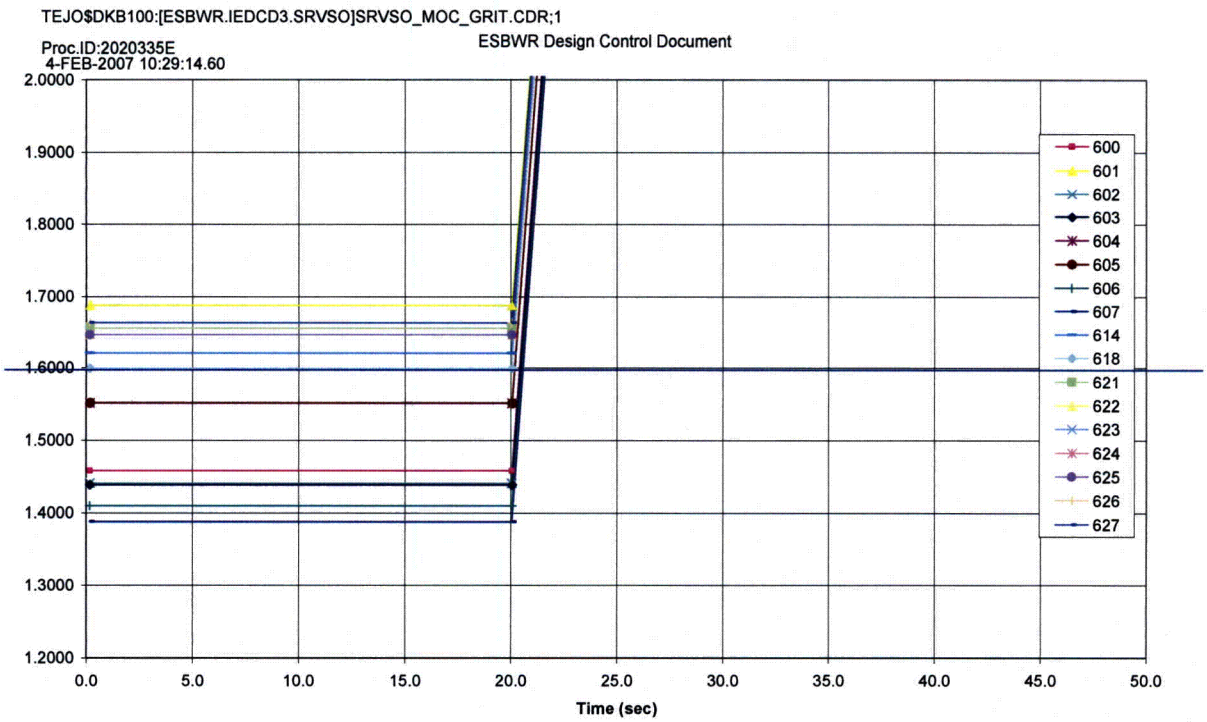


Figure 15.3-9g. Stuck Open Safety Relief Valve