



April 21, 2011

L-2011-150
10 CFR 50.90

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555

Re: St. Lucie Plant Unit 1
Docket No. 50-335
Renewed License No. DPR-67

License Amendment Request for Extended Power Uprate

Reference:

- (1) R.L. Anderson (FPL) to U.S. Nuclear Regulatory Commission (L-2011-259),
“License Amendment Request for Extended Power Uprate, November 22, 2010,
Accession No. ML103560419.

By letter L-2010-259 dated November 22, 2010 [Reference 1], Florida Power & Light Company (FPL) requested to amend Renewed Operating License DPR-67 pursuant to 10 CFR 50.90. As specified in L-2010-259, the proposed amendment will increase the licensed core power level of Unit 1 from 2700 MWt to 3020 MWt and revise the Renewed Operating License and the Technical Specifications to support operation at this increased core thermal power level.

Subsequent to the November 22, 2010 submittal, FPL was notified by a supporting vendor that an error was identified in the St. Lucie Unit 1 Extended Power Uprate (EPU) Increase in Steam Flow analysis. The error affects the analysis results provided in Licensing Report (LR) 2.8.5.1.1 of Attachment 5 of FPL letter L-2010-259. Attachment 1 to this letter provides the revised pages of LR 2.8.5.1.1 with the error corrected. The revised pages consist of replacement tables and figures associated with the Increase in Steam Flow analysis results and supersede the corresponding tables and figures provided in Attachment 5 of L-2010-259. The error also affects LR 2.8.5.0 of Attachment 5 of L-2010-259; however, the impact on LR 2.8.5.0 is a conforming change only and is limited to the Table 2.8.5.0-10 summary of analysis limits and results to reflect the revised maximum centerline temperature from the Increase in Steam Flow analysis results.

A001
MLR

In accordance with 10 CFR 50.91(b)(1), a copy of this letter is being forwarded to the designated State of Florida official.

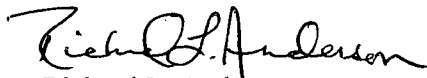
This submittal does not alter the significant hazards consideration or environmental assessment previously submitted by FPL letter L-2010-259. This submittal contains no new commitments and no revisions to existing commitments.

Should you have any questions regarding this submittal, please contact Mr. Christopher Wasik, St. Lucie Extended Power Uprate LAR Project Manager, at 772-429-7138.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge.

Executed on *April 21, 2011*

Very truly yours,

A handwritten signature in black ink that reads "Richard L. Anderson". The signature is written in a cursive style with a large initial "R".

Richard L. Anderson
Site Vice President
St. Lucie Plant

Attachment

cc: Mr. William Passetti, Florida Department of Health

**Table 2.8.5.1.1-1
Increase in Steam Flow
Sequence of Events**

| Case | Event | Time (sec.) |
|----------------|---|--------------------------------|
| Hot Zero Power | Turbine control valves fully opened | 0.0 |
| | AFW reaches full delivery rate | |
| | VHPT setpoint reached | 11.0 |
| | Peak power in transient | 11.1 |
| | Maximum clad surface heat flux | 11.2 |
| | Reactor scram on VHPT (including trip response delay) | 12.1 |
| | CEA insertion begins | 12.6 |
| | Maximum fuel centerline temperature | 14.8 |
| | CEAs fully inserted | 15.5 |
| | Main steam isolation setpoint reached | 21.4 |
| | HPSI setpoint reached | 26.1 |
| | | Main steam isolation completed |
| Hot Full Power | SBCS system opens to full capacity | 0.0 |
| | VHPT setpoint reached | 19.4 |
| | Reactor scram on VHPT (including trip response delay) | 20.3 |
| | CEA insertion begins | 20.8 |
| | Minimum (prior to scram) core inlet temperature reached | 20.8 |
| | Peak neutronic power | 20.8 |
| | Maximum clad surface heat flux | 20.9 |
| | MDNBR | 20.9 |

**Table 2.8.5.1.1-2
Increase in Steam Flow
Results**

| Criterion | HZP | HFP | Limit |
|-----------------------------|-------------------|------------|--------------|
| MDNBR | Bounded by HFP | 1.385 | 1.164 |
| Peak Centerline Temperature | 2,804°F | N/A | 4,623°F |
| Peak LHR | N/A | 18.7 kW/ft | 22.3 kW/ft |

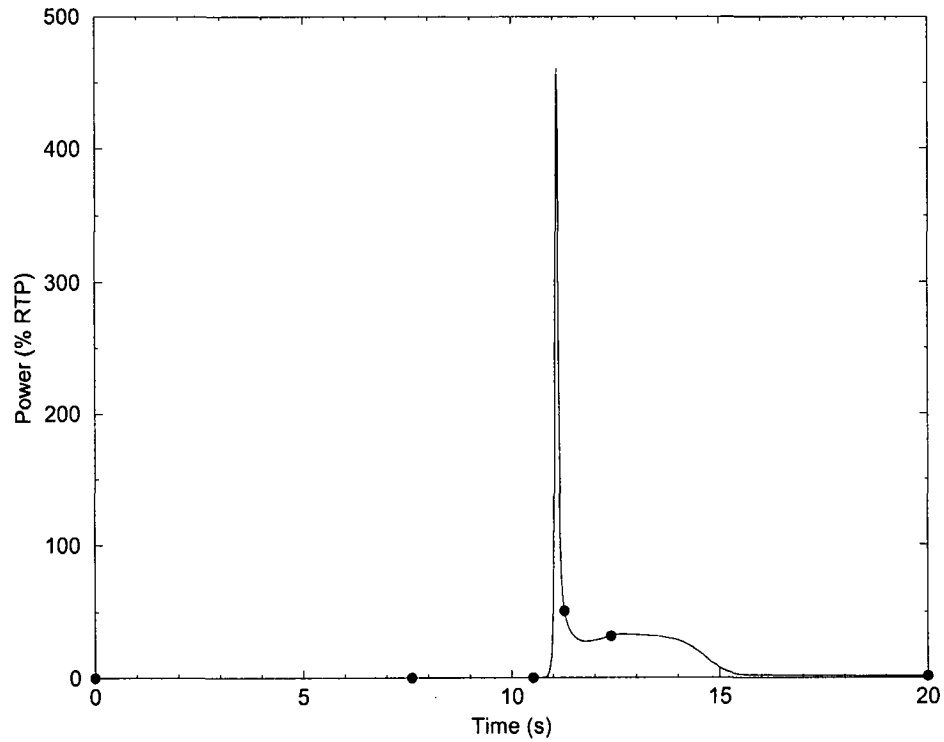


Figure 2.8.5.1.1-1
Increase in Steam Flow (HZP)
Reactor Power

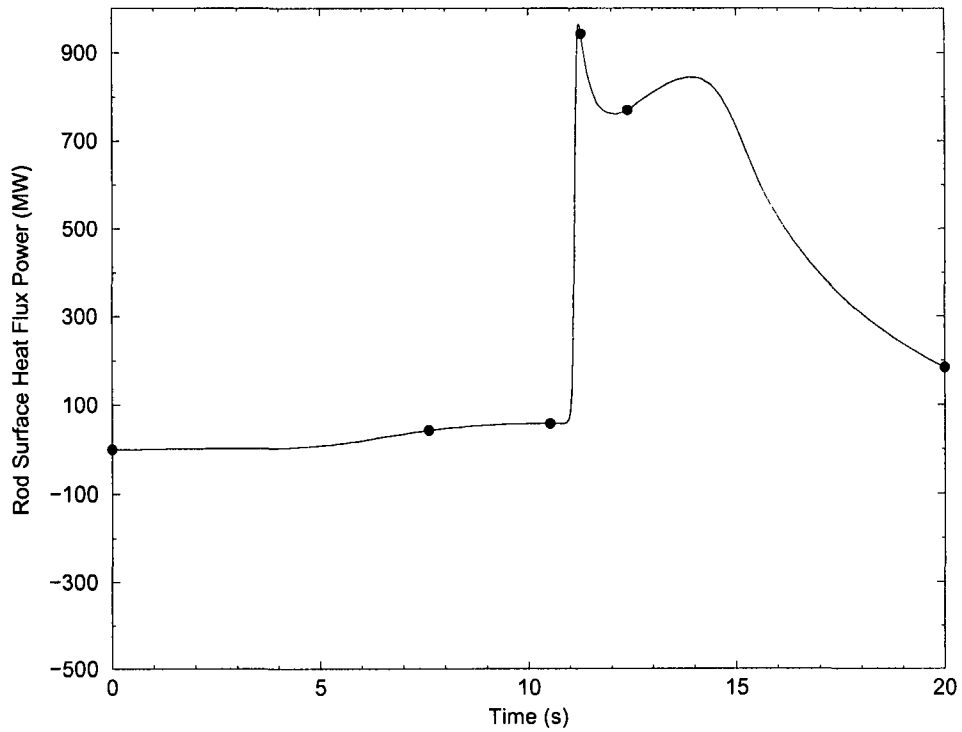
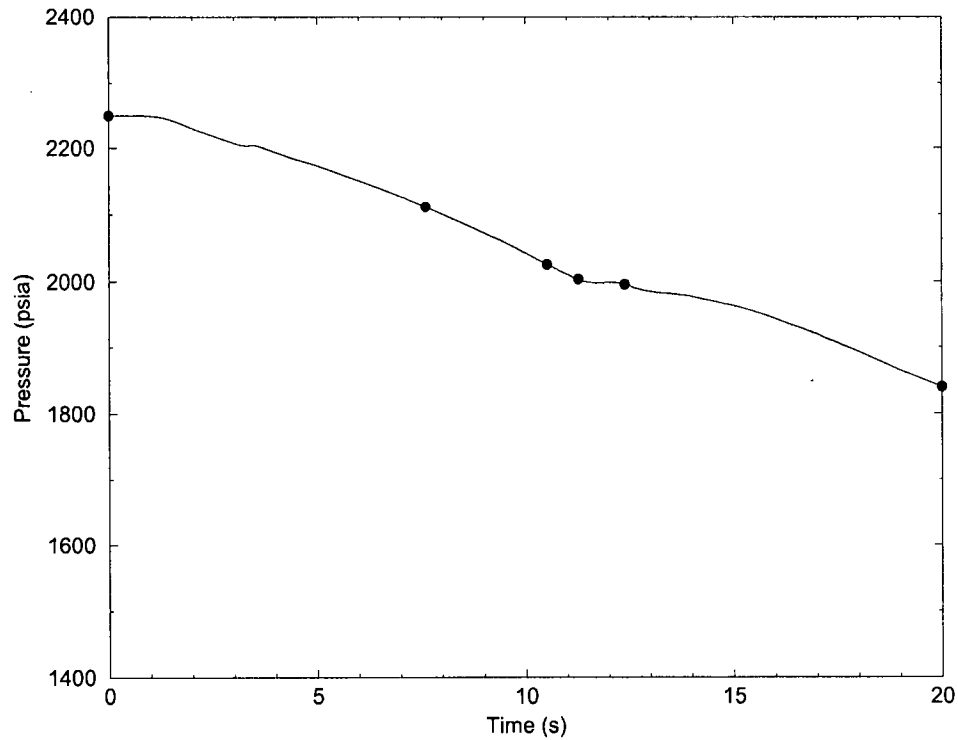


Figure 2.8.5.1.1-2
Increase in Steam Flow (HZP)
Total Core Heat Flux Power



**Figure 2.8.5.1.1-3
Increase in Steam Flow (HZP)
Pressurizer Pressure**

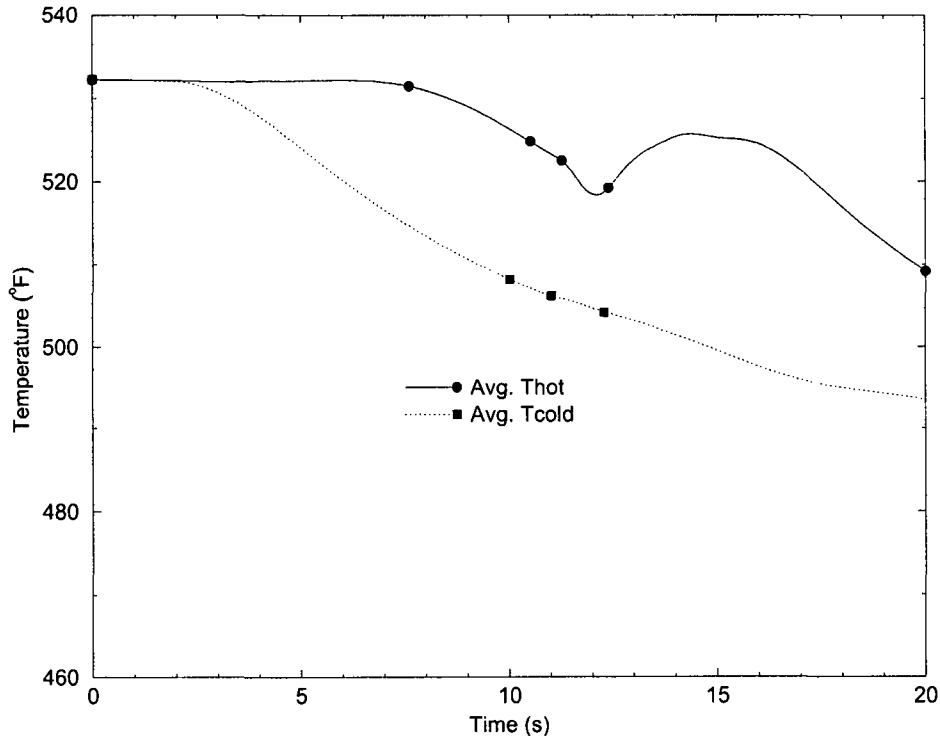
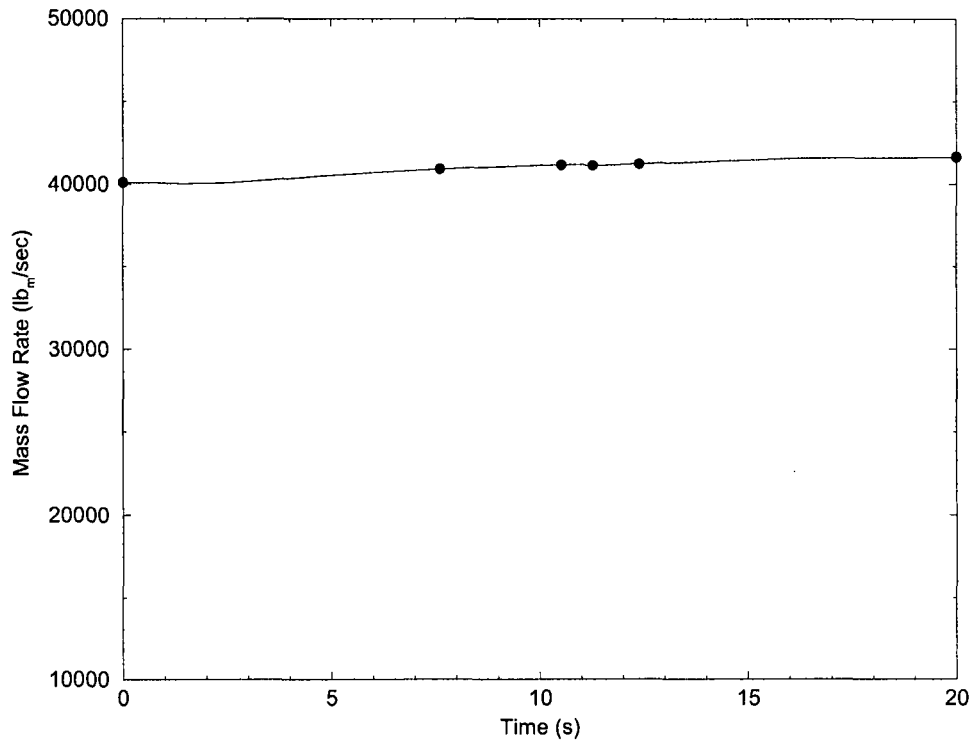
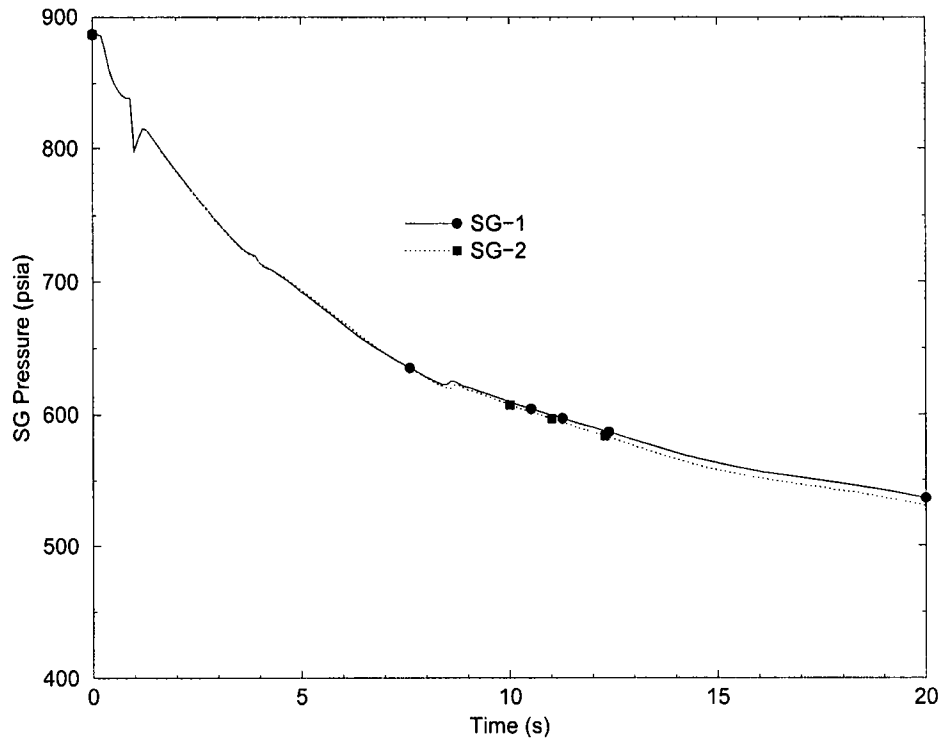


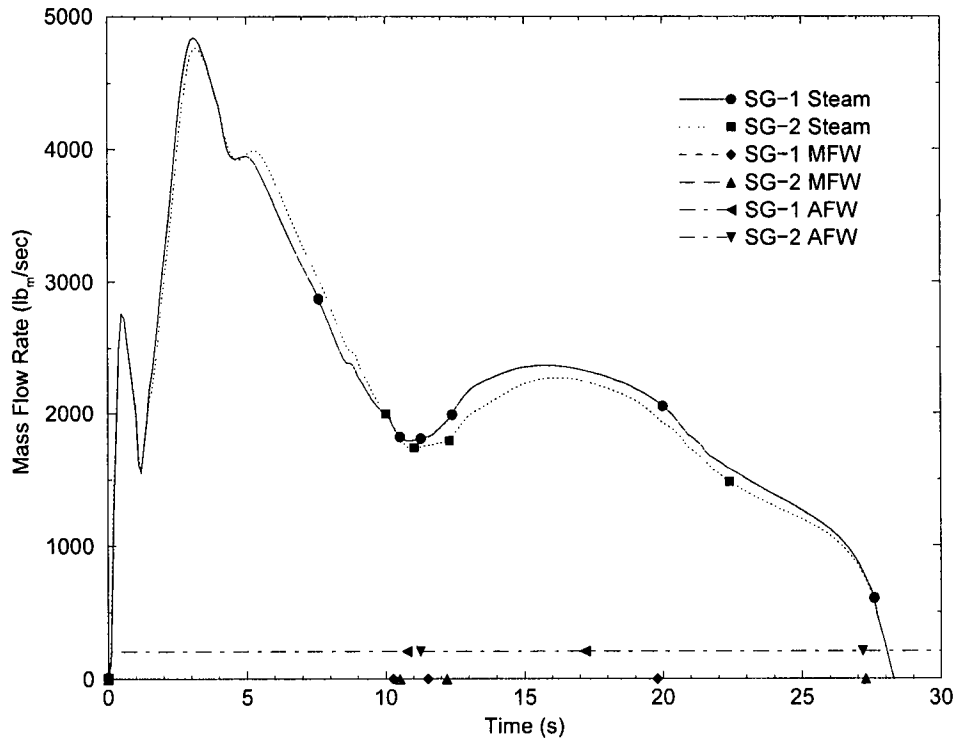
Figure 2.8.5.1.1-4
Increase in Steam Flow (HZZP)
RCS Loop Temperatures



**Figure 2.8.5.1.1-5
Increase in Steam Flow (HZP)
RCS Total Loop Flow Rate**



**Figure 2.8.5.1.1-6
Increase in Steam Flow (HZP)
Steam Generator Pressures**



**Figure 2.8.5.1.1-7
Increase in Steam Flow (HZP)
Steam and Feedwater Flow Rate**

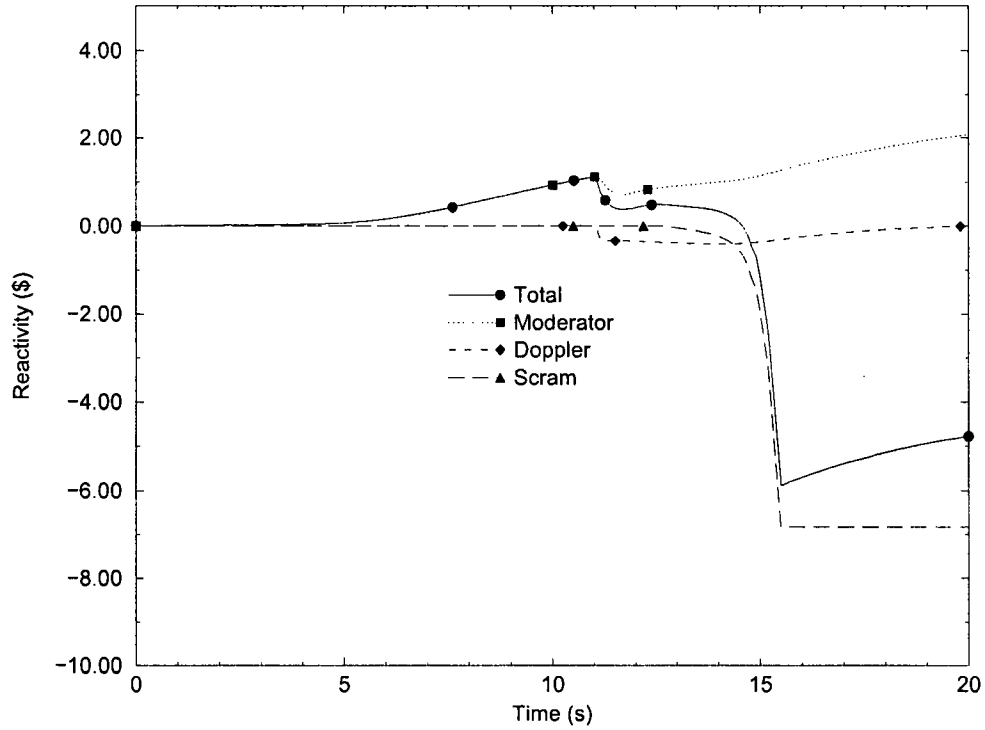


Figure 2.8.5.1.1-8
Increase in Steam Flow (HZP)
Reactivity Feedback

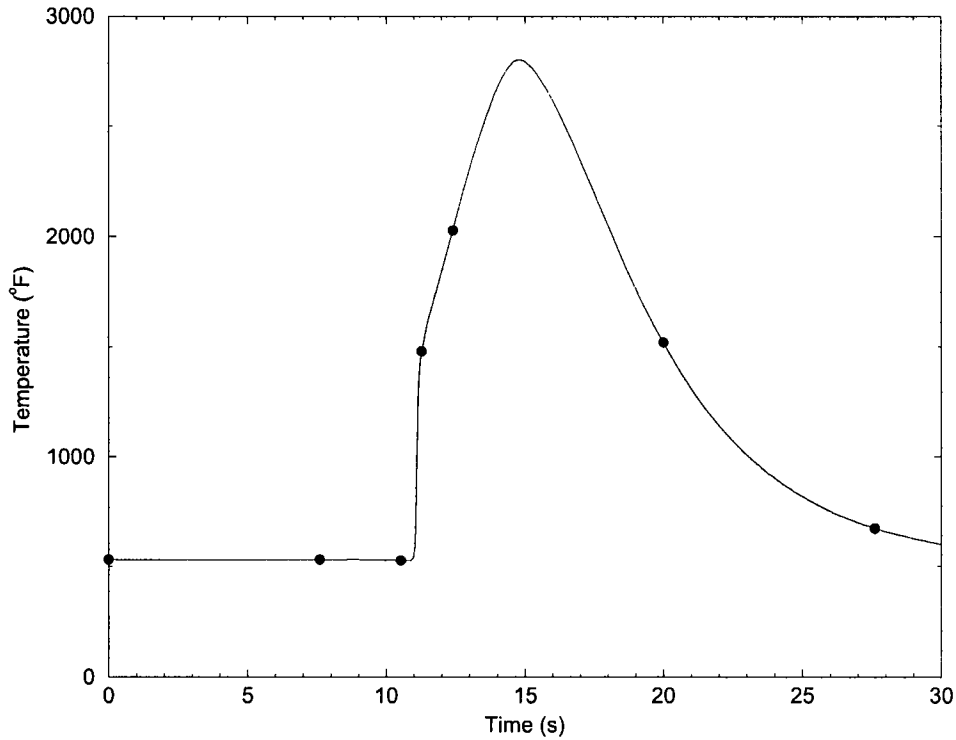


Figure 2.8.5.1.1-9
Increase in Steam Flow (HZP)
Peak Fuel Centerline Temperature