

OCT 25 2001

LRN-01-0358



United States Nuclear Regulatory Commission  
Document Control Desk  
Washington, DC 20555

Gentlemen:

**HOPE CREEK POWER UPRATE STARTUP REPORT  
HOPE CREEK GENERATING STATION  
FACILITY OPERATING LICENSE NPF-57  
DOCKET NO. 50-354**

PSEG Nuclear LLC hereby submits a summary startup report of power escalation testing for Hope Creek in accordance with Technical Specification 6.9.1.1. The report is required since Amendment 131 to the Hope Creek Technical Specifications increased the licensed power level. The summary of testing is included in Attachment 1.

Should you have any questions regarding this submittal, please contact Brian Thomas at (856) 339-2022.

Sincerely,

A handwritten signature in black ink, appearing to read "G. Salamon", written over a horizontal line.

G. Salamon  
Manager – Nuclear Safety and  
Licensing

Attachment

IE26

**OCT 25 2001**

C     Mr. Richard J. Conte, Chief  
Operator Licensing and Human Performance Branch  
Division of Reactor Safety  
U. S. Nuclear Regulatory Commission  
475 Allendale Road  
King of Prussia, PA 19406

Mr. R. Ennis, Licensing Project Manager – Hope Creek  
U. S. Nuclear Regulatory Commission  
One White Flint North  
11555 Rockville Pike  
Mail Stop O8B1  
Rockville, MD 20852

USNRC Senior Resident Inspector – Hope Creek (X24)

Mr. K. Tosch, Manager, IV  
Bureau of Nuclear Engineering  
P.O. Box 415  
Trenton, NJ 08625

**Hope Creek Generating Station**

**Increase in Licensed Power Level!  
Startup Test Report**

**October 2001**

## **1.0 Introduction**

The NRC approved Amendment 131 to the Hope Creek Technical Specifications on July 30, 2001, which increased the licensed power level of Hope Creek by 1.4%. Hope Creek Technical Specification 6.9.1.1 requires a submittal of a startup report following amendment to the license involving a planned increase in power level. This startup report addresses each of the initial startup tests identified in the Hope Creek Updated Final Safety Analysis Report that were impacted by the increase in licensed power level. The following sections provide a description of the results of the testing for those initial startup tests that were affected by the increase in licensed power level.

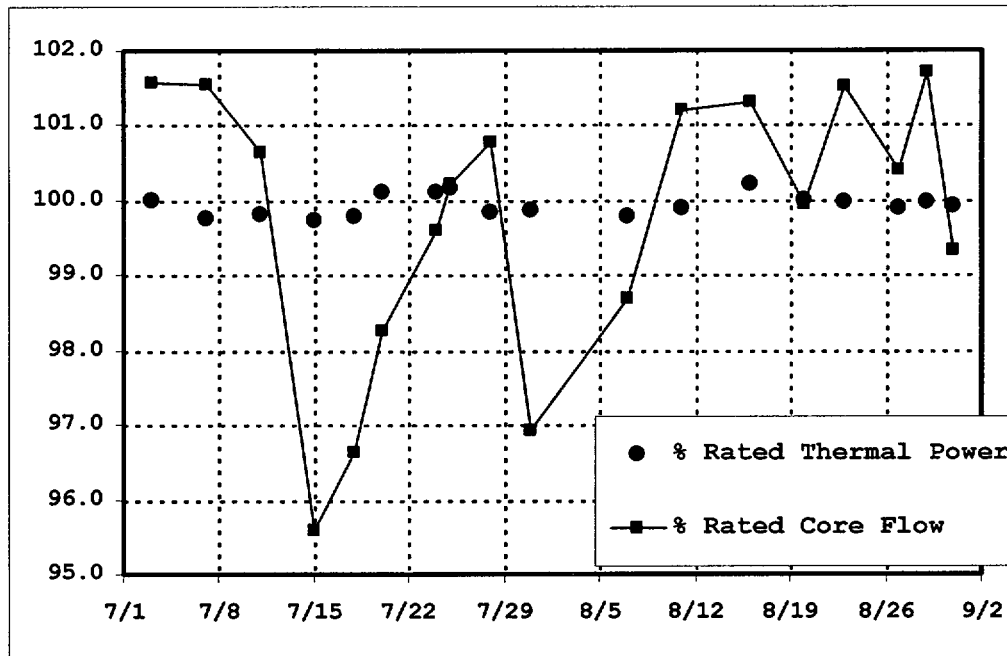
## **2.0 Core Performance**

The description of the initial startup testing for Core Performance is provided in Hope Creek UFSAR section 14.2.12.3.16. The core performance may be impacted by the increase in licensed power level.

### **2.1 Core Flow Rate, Core Thermal Power Level, MLHGR, MCPR and MAPLHGR**

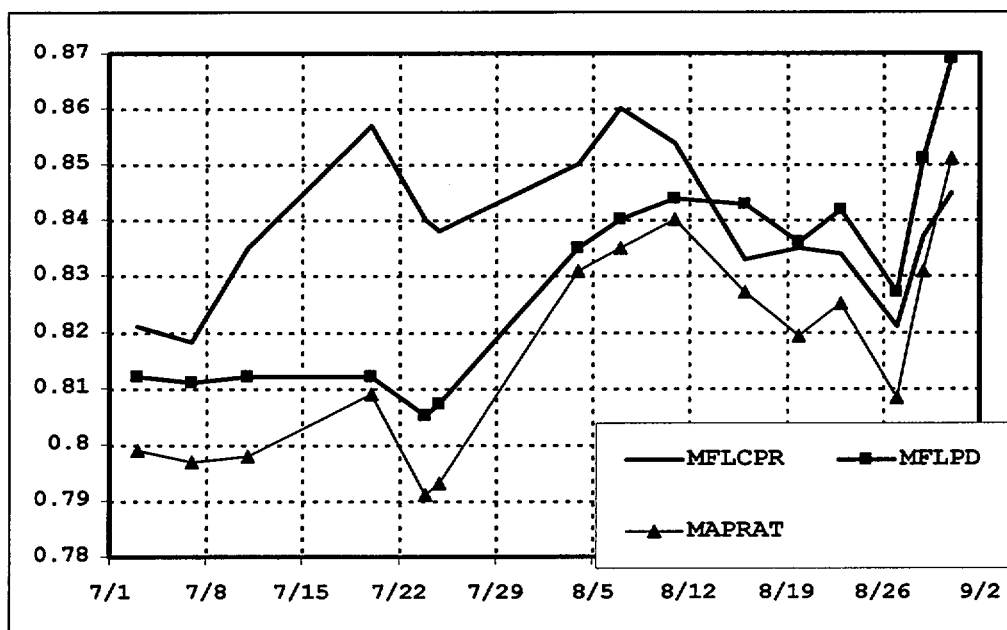
All the acceptance criteria parameters were maintained within the limits specified by the plant technical specifications. The following figures describe the plant response to the 1.4% power uprate for the acceptance criteria parameters. The figures are based on actual data from the plant core monitoring system at selected steady state operating points. The data points are included to show general trend and not to illustrate continuous performance during the time period (i.e., the shift average core thermal power was maintained at or below the licensed thermal power). The figures illustrate the acceptance criteria parameters for the time period of July and August 2001. The 1.4% uprate was implemented on August 01, 2001. Therefore, the figures show that the parameters were within their technical specification limits with no unexpected perturbations or discontinuities in the trend of the data.

### Core Thermal Power Level and Core Flow Rate



The core thermal power was generally maintained at 100% during the months of July and August. Core flow changes followed the rod pattern adjustments that were made during the time period to maintain rated thermal power as expected. The shift average core thermal power was maintained at or below the licensed thermal power and the core flow was maintained in the allowable 87% to 105% core flow window for steady state rated power operation.

### MCPR, MLHGR and MAPLHGR



The above figure shows the following: The MFLCPR is the ratio of the actual MCPR to the technical specification limit, the MFLPD is the ratio of the actual MLHGR to the technical specification limit and the MAPRAT is the ratio of the actual MAPLHGR to the technical specification limit. If the ratio is one (1.0) or less then the technical specification limits are being met. As the figure illustrates, all limits are being met. In addition, the trends responded in a manner that was expected when accounting for the effects of the core depletion and for the control rod pattern changes implemented during the period.

The core performance met acceptance criteria and was as expected after the implementation of the 1.4% power uprate.

### **3.0 Feedwater Control System**

The description of the initial startup testing for the feedwater control system is provided in Hope Creek UFSAR section 14.2.12.3.19. The operation of the feedwater control system is impacted by the increase in license power level.

#### **3.1 Feedwater Control**

The design of the feedwater control system has not changed as a result of the 1.4% increase in licensed power level. The maximum feedwater flow referenced in the UFSAR heat balance has been adjusted and the revised value has been incorporated into the UFSAR. The actual feedwater flow has been verified to not exceed the flow assumed in the UFSAR.

### **4.0 References**

- 4.1 Hope Creek Generating Station UFSAR, Section 14.2.12.3.
- 4.2 Engineering Evaluation H-1-ZZ-MEE-1400, Revision 0, "Hope Creek Generating Station 1.5% Power Up-rate Engineering Evaluation."
- 4.3 Engineering Evaluation H-1-SE-CEE-1395, Revision 1, "Hope Creek Power Up-rate Impact of LPRM, APRM, RBM, RPS, RRCS and RPT Functions."
- 4.4 Engineering Evaluation H-1-ZZ-MEE-1386, Revision 0, "Determine Impact of 1.5% Power Uprate on Radiological Design Bases."
- 4.5 NUREG-0016, "Calculation of Release of Radioactive Materials in Gaseous and Liquid Effluents for Boiling Water Reactors (BWR-GALE Code)," Revision 1, January 1970.
- 4.6 NUREG-1048, "Safety Evaluation Report Related to the Operation of Hope Creek Generating Station."
- 4.7 DCP 80010289, "1.4% Core Thermal Power Uprate of the Hope Creek Generating Station."