



SEP 16 2010

LR-N10-0353

10 CFR 50.46

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-0001

HOPE CREEK GENERATING STATION
FACILITY OPERATING LICENSE NO. NPF-57
DOCKET NO. 50-354

Subject: 10CFR50.46 REPORT

Pursuant to the requirements of 10 CFR 50.46, PSEG Nuclear LLC (PSEG) hereby reports changes in the application of the Emergency Core Cooling System (ECCS) evaluation models for the Hope Creek Generating Station. 10 CFR 50.46(a)(3)(ii) requires licensees to report at least annually each change to or error discovered in evaluation models used for calculating ECCS performance and the estimated effect on the limiting ECCS analysis. For significant changes or errors, licensees are required to submit a 30 day report and include a proposed schedule for providing a reanalysis or taking other action necessary to show compliance with 10 CFR 50.46 requirements. This letter and its attachments satisfy the annual reporting requirement.

For the current operating cycle, the Hope Creek core consists entirely of GE 14 fuel.

There are no regulatory commitments contained in this correspondence.

If you have any questions regarding this submittal, please contact Mr. Philip J. Duca at (856) 339-1640.

Sincerely,

A handwritten signature in black ink, appearing to read "L. M. Wagner".

Lawrence M. Wagner
Plant Manager – Hope Creek

Attachment 1 – 10 CFR 50.46 Report (2 pages)

Attachment 2 – 10 CFR 50.46 Report Assessment Notes (2 pages)

A002
NRR

LR-N10-0353
Document Control Desk

C Mr. W. Dean, Administrator - Region I
U. S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, PA 19406

Mr. R. Ennis, Project Manager - Hope Creek
U. S. Nuclear Regulatory Commission
Mail Stop 08 B1A
Washington, DC 20555-0001

USNRC Senior Resident Inspector - Hope Creek (X24)

Mr. P. Mulligan, Manager IV
Bureau of Nuclear Engineering
PO Box 415
Trenton, New Jersey 08625

Hope Creek Commitment Coordinator (H02)

Corporate Commitment Coordinator (N21)

LR-N10-0353
Document Control Desk

Attachment 1
10 CFR 50.46 Report
Page 1 of 2

Hope Creek Generating Station 10 CFR 50.46 Report
 Peak Cladding Temperature Rack-up Sheet

PLANT NAME: Hope Creek Generating Station
 ECCS EVALUATION MODEL: SAFER/GESTR-LOCA
 REPORT REVISION DATE: 9/13/2010
 CURRENT OPERATING CYCLE: 16

ANALYSIS OF RECORD

Evaluation Model: The GESTR-LOCA and SAFER Models for the Evaluation of the Loss-of-Coolant Accident, Volume III, SAFER/GESTR Application Methodology, NEDE-23785-1-PA, General Electric Company, Revision 1, October 1984.

Calculations: "SAFER/GESTR-LOCA Loss-of-Coolant Accident Analysis for Hope Creek Generating Station at Power Uprate," NEDC-33172P, GE Energy, Nuclear, March 2005.

Fuel: GE 14
 Limiting Fuel Type – Licensing Basis PCT: GE 14
 Limiting Single Failure: Battery
 Limiting Break Size and Location: Double-Ended Guillotine in a Recirculation Suction Pipe

| | |
|----------------------|----------------|
| Fuel Type: | GE 14 |
| Reference PCT | 1380 °F |

MARGIN ALLOCATION

A. PRIOR LOCA MODEL ASSESSMENTS

| | |
|--|--------------------------------|
| Impact of Top Peaked Power Shape on Small Break LOCA Analysis (see note 1) | $\Delta PCT = 0^{\circ}F$ |
| Total PCT change from prior assessments | $\sum \Delta PCT = 0^{\circ}F$ |
| Cumulative PCT change from prior assessments | $\sum \Delta PCT = 0^{\circ}F$ |
| Net PCT | 1380 °F |

B. CURRENT LOCA MODEL ASSESSMENTS

| | |
|-------------------|---------------------------|
| None (see note 2) | $\Delta PCT = 0^{\circ}F$ |
| Net PCT | 1380 °F |

LR-N10-0353
Document Control Desk

Attachment 2
10 CFR 50.46 Report Assessment Notes
Page 1 of 2

Attachment 2
(Page 2 of 2)
Hope Creek Generating Station 10 CFR 50.46 Report
Assessment Notes

1. Prior LOCA Model Assessments

Letter, LR-N08-0221, reported the impact of the top peak axial power shape on the small break LOCA. The impact of the top peak axial power shape on the licensing basis PCT was zero degrees for GE 14 fuel for Hope Creek.

2. Current LOCA Model Assessments

No new assessments since the last 10 CFR 50.46 Report transmitted in Letter, LR-N09-0221.