Exelon Generation

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10 CFR 50.46

RA-14-047

May 20, 2014

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

Oyster Creek Nuclear Generating Station
Renewed Facility Operating License No. DPR-16
NRC Docket No. 50-219

Subject: 10 CFR 50.46 Annual Report

Reference: 1) Letter from David P. Helker (Exelon Generation Company, LLC) to U.S. Nuclear Regulatory Commission, "10 CFR 50.46 Annual Report," dated May 31, 2013

The purpose of this letter is to transmit the annual 10 CFR 50.46 reporting information for Oyster Creek Nuclear Generating Station (OCNGS). The previous annual 50.46 report for OCNGS (Reference 1) provided the cumulative Peak Cladding Temperature (PCT) errors for the most recent fuel designs.

Since the referenced annual report was issued, no vendor notifications of Emergency Core Cooling System (ECCS) model errors/changes that are applicable to OCNGS have been issued. Also, no ECCS-related changes or modifications have occurred at OCNGS that affect the assumptions of the ECCS analyses.

Two attachments are included with this letter that provide the current OCNGS 10 CFR 50.46 status. Attachment 1, "Peak Cladding Temperature Rack-Up Sheet," provides information regarding the PCT for the limiting large break LOCA analysis evaluations for OCNGS. Attachment 2, "Assessment Notes," contains a detailed description for each change or error reported.

There are no commitments contained in this letter. If you have any questions, please contact Tom Loomis at 610-765-5510.

Respectfully,

James Barstow
Director - Licensing & Regulatory Affairs
Exelon Generation Company, LLC

Attachments: 1) Peak Cladding Temperature Rack-Up Sheet
2) Assessment Notes

cc: USNRC Administrator, Region I
USNRC Senior Project Manager, OCNGS
USNRC Senior Resident Inspector, OCNGS

ATTACHMENT 1

10 CFR 50.46
"Acceptance criteria for emergency core cooling systems for light-water nuclear power reactors"

Report of the Emergency Core Cooling System Evaluation Model Changes and Errors

Assessments as of May 20, 2014

Peak Cladding Temperature Rack-Up Sheet

Oyster Creek Nuclear Generating Station

PLANT NAME: Oyster Creek
ECCS EVALUATION MODEL: SAFER/CORCL/GESTR-LOCA
REPORT REVISION DATE: 5/20/14
CURRENT OPERATING CYCLE: 24

ANALYSIS OF RECORD

Evaluation Model:

1. NEDC-23785-1-PA Rev. 1, "The GESTR-LOCA and SAFER Models for the Evaluation of the Loss-Of-Coolant Accident Volume II, SAFER - Long Term Inventory Model for BWR Loss-Of-Coolant Analysis," October 1984.

2. NEDC-30996P-A, "SAFER Model for Evaluation of Loss-of-Coolant Accidents for Jet Pump and Non-jet Pump Plants, Volume I, SAFER - Long Term Inventory Model for BWR Loss-of-Coolant Analysis," October 1987.

3. NEDC-30996P-A, "SAFER Model for Evaluation of Loss-of-Coolant Accidents for Jet Pump and Non-jet Pump Plants, Volume II, SAFER Application Methodology for Non-jet Pump Plants," October 1987 (Non-jet Pump Plant - SAFER/CORCL).

4. NEDC-32950P, "Compilation of Improvements to GENE's SAFER ECCS-LOCA Evaluation Model," January 2000.

Calculations:

1. GE-NE-0000-0001-7486-01P, "Oyster Creek Generating Station Loss-of-Coolant Accident Evaluation for GE11," GE Nuclear Energy, dated July 2002.

2. Report 0000-0098-3503-R2, "Oyster Creek Generating Station GNF2 ECCS-LOCA Evaluation," GEH Nuclear Energy, dated November 2010.

3. Report 0000-0138-9259-SRLR, "Supplemental Reload Licensing Report for Oyster Creek Reload 24 Cycle 24," dated October 2012.

Fuel: GE11/GNF2
Limiting Fuel Type: GE11/GNF2
Limiting Single Failure: ADS Valve
Limiting Break Size and Location: 4.66 ft^2 Double-Ended Guillotine (DEG) in a Recirculation Discharge Pipe
Reference Peak Cladding Temperature (PCT) PCT = 2150°F

MARGIN ALLOCATION

A. PRIOR LOCA MODEL ASSESSMENTS

10 CFR 50.46 Report dated May 31, 2013 (See Note 1)	ΔPCT = 0°F
NET PCT (GE11/GNF2)	**2150°F**

B. CURRENT LOCA MODEL ASSESSMENTS

None (See Note 2)	ΔPCT = 0°F
Total PCT Change from Current Assessments	$\sum\Delta$PCT = 0°F
Cumulative PCT Change from Current Assessments	$\sum \lvert \Delta PCT \rvert$ = 0°F
NET PCT (GE11/GNF2)	**2150°F**

ATTACHMENT 2

10 CFR 50.46
"Acceptance criteria for emergency core cooling systems for light-water nuclear power reactors"

Report of the Emergency Core Cooling System Evaluation Model Changes and Errors

Assessments as of May 20, 2014

Assessment Notes

Oyster Creek Nuclear Generating Station

1. Prior LOCA Assessment

Updated LOCA/MAPLHGR analyses were performed for both GE11 and GNF2 fuel in support of operating Cycle 24. These analyses maintained the calculated PCT at 2150°F and superseded all prior LOCA assessments. These analyses incorporated all ECCS/LOCA methodology errors and changes known/resolved at that time (as of October 2012).

[Reference: Letter from David P. Helker (Exelon Generation Company, LLC) to U.S. Nuclear Regulatory Commission, "10 CFR 50.46 Annual Report," dated May 31, 2013]

2. Current LOCA Model Assessment

No vendor notifications of Emergency Core Cooling System (ECCS) model errors/changes applicable to Oyster Creek have been issued since the last 10 CFR 50.46 report (see Note 1). No ECCS related changes or modifications have occurred at Oyster Creek that affect the assumptions in the Oyster Creek LOCA analysis of record.