

RS-17-169

GL 83-11 Supplement 1

December 12, 2017

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

Braidwood Station, Units 1 and 2  
Renewed Facility Operating License Nos. NPF-72 and NPF-77  
NRC Docket Nos. STN 50-456 and STN 50-457

Byron Station, Units 1 and 2  
Renewed Facility Operating License Nos. NPF-37 and NPF-66  
NRC Docket Nos. STN 50-454 and STN 50-455

Subject: Notification of Intent to Perform Analysis Using Vendor Methodology in Accordance with Generic Letter 83-11, Supplement 1

Reference: Generic Letter 83-11 Supplement 1, "Licensee Qualification for Performing Safety Analysis," dated June 24, 1999

As requested in Generic Letter (GL) 83-11, Supplement 1, "Licensee Qualification for Performing Safety Analyses," Exelon Generation Company, LLC (EGC) is notifying the NRC of our intent to perform safety analyses using computer codes and methodology supplied by Westinghouse which have been previously approved by the NRC. Specifically, the EGC Nuclear Fuels group will perform reload physics analyses for Byron and Braidwood Stations that were previously performed by Westinghouse Electric Company, LLC. EGC has implemented the program outlined in GL 83-11, Supplement 1 as discussed in Attachment 1.

As noted in Section 2.0, "Guidelines," of the GL, "...the licensee should send the NRC a notification of its having followed the guidelines at least 3 months before the date of its intended first licensing application." The first application of the Westinghouse methods will occur in support of the startup of Braidwood Station, Unit 1 Cycle 21, currently scheduled to begin in April 2018.

December 12, 2017  
U. S. Nuclear Regulatory Commission  
Page 2

If you have any questions or require additional information, please contact Joseph A. Bauer at (630) 657-2804.

Respectfully,

A handwritten signature in black ink, appearing to read 'D. M. Gullott', with a long horizontal line extending to the right.

David M. Gullott  
Manager – Licensing  
Exelon Generation Company, LLC

Attachment 1: Braidwood Station and Byron Station, Summary of Program Controlling Use of Vendor Methodology

cc: NRC Regional Administrator, Region III  
NRC Senior Resident Inspector, Braidwood Station  
NRC Senior Resident Inspector, Byron Station

## ATTACHMENT 1

### **Braidwood Station and Byron Station Summary of Program Controlling Use of Vendor Methodology**

#### Eligibility

The NRC has approved the Westinghouse Methodology detailed in WCAP 9272-P-A (Reference 1). Exelon Generation Company, LLC (EGC) intends to use the Westinghouse Methodology to perform core reload physics design work.

#### Application Procedures

Procedures were developed on a task-specific basis utilizing Westinghouse training as well as the Westinghouse Methodology Manual (Reference 2). All applicable procedures were reviewed, approved and implemented. The Westinghouse Methodology Manual will be consulted during the performance of each analysis task.

#### Training and Qualification of Licensee Personnel

A training program has been implemented and EGC personnel have been qualified to perform the reload physics analyses for a core reload. Certification guides have been generated to align with task-specific procedures. The qualification of personnel is obtained on a task-specific basis through completion of the certification guide requirements.

#### Comparison Calculations

Calculated results utilizing the Westinghouse Methodology (References 1 and 2) were compared to the actual startup physics test results, measured flux detector data and plant boron data. The scope of these comparisons encompassed only the parameters that EGC will be authoring upon completion of this notification.

The results of these comparison calculations have met the applicable acceptance criteria and have been documented in a benchmark report (Reference 3). This report will be maintained in the EGC Records System for the life of Byron and Braidwood Stations.

#### Quality Assurance and Change Control

Westinghouse provides quality assurance, change control documents and updates for their Reload Methodology. An Issues Report is issued monthly by Westinghouse and placed on a shared web portal for use by the Utility. The EGC core designer reviews the Issues Report and changes to the Westinghouse Methodology Manual (Reference 2) when completing documentation of the reload products. Calculations and analyses performed by EGC using the Westinghouse Methodology will be performed in accordance with the EGC Quality Assurance Program.

The EGC Software Quality Assurance Program requires that any identified errors that affect the use or operation of software products be documented in the EGC corrective action program. Any issues found that involve vendor software will be immediately communicated to the vendor.

## **ATTACHMENT 1**

### **Braidwood Station and Byron Station Summary of Program Controlling Use of Vendor Methodology**

#### **References**

1. WCAP-9272-P-A, "Westinghouse Reload Safety Evaluations Methodology," July 1985
2. Westinghouse METCOM (Current Release)
3. NF173310, "Core Design Benchmark to Support Generic Letter 83-11 Supplement 1 Requirements," September 29, 2017