



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

July 10, 2013

MEMORANDUM TO: Jeremy S. Bowen, Chief
Plant Licensing Branch III-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

FROM: *Joel S. Wiebe*
Joel S. Wiebe, Senior Project Manager
Plant Licensing Branch III-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

SUBJECT: AUDIT PLAN FOR BRAIDWOOD AND BYRON LICENSEE ACTION
TAKEN TO RESOLVE TURBINE BUILDING HIGH ENERGY LINE
BREAK NON-CONFORMANCE

By letter dated December 6, 2012, to Exelon Generation Company, LLC, the NRC staff issued a request for additional information and suspended the review of the measurement uncertainty recapture power uprate amendment for the subject plants. The letter identified that a confirmatory audit may be needed to validate the resolution scope, including extent of condition, modifications, and analyses bound plant operation at the uprated power level. By letter dated July 5, 2013, the licensee confirmed that they are ready for the audit.

The audit plan for the audit is enclosed. Consistent with NRR Office Instruction LIC-111, "Regulatory Audits" the audit plan will be shared with the licensee to assist in their preparations for the audit.

Enclosure:
Audit Plan



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BRAIDWOOD STATION, UNITS 1 AND 2

AND BYRON STATION, UNIT NOS. 1 AND 2,

DOCKET NOS. STN 50-456, STN 50-457,

STN 50-454, AND STN 50-455

Audit Plan for Braidwood and Byron Turbine Building High Energy Line Break Resolution

Background

By letter dated December 6, 2012, (Agency Document and Management System (ADAMS) Accession No. ML12271A308) to Exelon Generation Company, LLC, the NRC staff issued a request for additional information and suspended the review of the measurement uncertainty recapture (MUR) power uprate amendment for the subject plants. The letter identified that a confirmatory audit may be needed to validate the resolution scope, including extent of condition, modifications, and analyses bound plant operation at the uprated power level. By letter dated July 5, 2013, (ADAMS Accession No. ML13186A178) the licensee confirmed that they are ready for the audit.

Regulatory Audit Bases

The guidance in NRC Regulatory Issue Summary (RIS) 2002-03, "Guidance on the Content of Measurement Uncertainty Recapture Power Uprate Applications," states that in areas for which the existing analyses of record do not bound the plant operation at the proposed uprated power level, the NRC staff will conduct a detailed review. In Attachment 1, Section III, of RIS 2002-03, analyses that are required by licensees to support licensing of the plant should be included in the scope of review. By the December 6, 2012, letter, the NRC documented its determination that the existing analyses of record that evaluates the performance of systems, structures, and components that mitigate a turbine building (TB) high-energy line break (HELB) did not bound plant operation at the proposed uprated power level.

The purpose of the audit is to confirm that the TB HELB non-conformance has been sufficiently resolved to continue the review of the MUR uprate amendment.

Regulatory Audit Scope

The audit will review the licensee efforts to resolve the TB HELB non-conformance including the extent of condition, modifications, and analyses. Gothic Code analyses will be discussed and reviewed at the Exelon corporate offices, but Gothic Code files and input parameters will be obtained during the audit and taken back to the NRC offices to conduct independent confirmatory checks. Other analyses supporting the non-conformance resolution will be reviewed at the Exelon corporate offices. Modification packages will be reviewed at the Exelon

corporate offices or the plant sites, as appropriate. Physical walkdowns of selected modifications will be performed at the plant sites.

Information and Other Material Necessary for the Regulatory Audit

- Plant configuration drawings to support Gothic Code analysis input and configuration parameters (piping and instrumentation diagrams and layout drawings that show break locations)
- Calculation packages that provide input parameters to the Gothic Code analysis
- Extent of condition review documentation related to the non-conformance resolution
- Modification packages supporting the non-conformance resolution
- Related analyses supporting the non-conformance resolution
- Gothic Code analyses files and input/configuration parameters in a form that the auditors can take back to the NRC offices to conduct independent checks of the analyses.

Team Assignments

Joel Wiebe

- Extent of condition review
- Modification package review
- Analyses review, except Gothic related analyses
- Modification walkdowns

Ahsan Sallman

- Modification package and plant configuration information as necessary to support Gothic Code analysis review
- Gothic Code analyses review
- Independent checks of Gothic Code analyses, as appropriate
- Confirmation that the Gothic Code is being used appropriately for this application, considering the Braidwood/Byron licensing basis and is consistent with NRC acceptance for other applications

Logistics

July 17, 2013 – Joel and Ahsan at Exelon Corporate offices

July 18, 2013 – Joel at Byron Nuclear Station

July 19, 2013 – Joel at Braidwood Nuclear Station

Deliverables

Audit Report – September 6, 2013

References

NRC letter dated December 6, 2012 (ADAMS Accession No. ML12271A308)
Exelon letter dated July 5, 2013 (ADAMS Accession No. ML13186A178)

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Audit Plan

DISTRIBUTION:
NON-PUBLIC
LPL3-2 Reading
RidsNrrDorLpl3-2 Resource
RidsNrrPMByron Resource
RidsNrrPMBraidwood Resource
RidsNrrLASRohrer Resource

ADAMS Accession No.: ML13182A048

OFFICE	NRR/LPL3-2/PM	NRR/LPL3-2/LA	NRR/SCVB/BC	NRR/LPL3-2/BC	NRR/LPL3-2/PM
NAME	JWiebe	SFigueroa /f/ SRohrer	RDennig	JBowen	JWiebe
DATE	7/8/13	7/1/13	7/8/13	7/10/13	7/10/13

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