



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

September 7, 2022

Mr. David P. Rhoades
Senior Vice President
Constellation Energy Generation, LLC
President and Chief Nuclear Officer
Constellation Nuclear
4300 Winfield Road
Warrenville, IL 60555

SUBJECT: QUAD CITIES NUCLEAR POWER STATION, UNITS 1 AND 2 - REGULATORY
AUDIT REPORT REGARDING LICENSE AMENDMENT REQUEST TO
TRANSITION TO GNF3 FUEL (EPID L-2021-LLA-0159)

Dear Mr. Rhoades:

By letter dated September 14, 2021 (Agencywide Documents Access Management System (ADAMS) Accession No. ML21257A420), as supplemented by letter dated November 3, 2021 (ML21307A444), Exelon Generation Company, LLC (the licensee) submitted a request for review and approval a license amendment request (LAR) for Quad Cities Nuclear Power Station, Units 1 and 2 (Quad Cities), focused on the transition to Global Nuclear Fuel, GNF3 fuel. On February 1, 2022 (ML22032A333), Exelon Generation Company, LLC was renamed Constellation Energy Generation, LLC on February 1, 2022.

The U.S. Nuclear Regulatory Commission's (NRC's) Office of Nuclear Reactor Regulation staff conducted an audit of the information related to better understand the atmospheric dispersion factors used in the analyses supporting the amendment request. The audit plan is available in ADAMS at Accession No. ML22165A275.

The audit was conducted virtually using an online portal. The purpose of the audit was to gain understanding, to verify information, and to identify information that will require docketing to support the proposed licensing action. The enclosure to this letter provides a report of the NRC staff's audit.

D. Rhodes

- 2 -

If you have any questions, please contact me by telephone at (301) 415-3733 or by e-mail at Robert.Kuntz@nrc.gov.

Sincerely,

/RA/

Robert Kuntz, Senior Project Manager
Plant Licensing Branch III
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-254 and 50-265

Enclosure:
Audit Report

cc: Listserv



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

REGULATORY AUDIT REPORT
TO SUPPORT REVIEW OF DISPERSION FACTORS
REGARDING TRANSITION TO GNF3 FUEL
QUAD CITIES NUCLEAR POWER STATION, UNITS 1 AND 2
DOCKET NO. 50-254 AND 50-265

1.0 BACKGROUND

By letter dated September 14, 2021 (Agencywide Documents Access Management System (ADAMS) Accession No. ML21257A420), as supplemented by letter dated November 3, 2021 (ML21307A444), Exelon Generation Company, LLC (the licensee) submitted a license amendment request (LAR) for Quad Cities Nuclear Power Station, Units 1 and 2 (Quad Cities), focused on the transition to Global Nuclear Fuel-Americas, LLC, (GNF3) fuel. On February 1, 2022 (ML22032A333), Exelon Generation Company, LLC was renamed Constellation Energy Generation, LLC. Part of the LAR included information related atmospheric dispersion factors for accident release. The U.S. Nuclear Regulatory Commission (NRC) staff conducted a regulatory audit in accordance with the Office of Nuclear Reactor Regulation (NRR) Office Instruction LIC-111, "Regulatory Audits" (ML082900195), to support its review of the atmospheric dispersion factors used in this LAR. LIC-111 states that a regulatory audit is a planned, licensed or regulation-related activity, that includes the examination of primarily non-docketed information with the intent to gain understanding, to verify information, or to identify information that will require docketing to support the basis of the licensing or regulatory decision.

2.0 SCOPE AND PURPOSE

The audit was held from June 17 to July 8, 2022. The purpose of the audit was to help the NRC staff better understand the atmospheric dispersion factors used in the analyses supporting the LAR.

3.0 AUDIT TEAM

The following NRC staff members participated in the audit:

- Robert Kuntz, Project Manager
- Kevin Quinlan, Technical Reviewer

4.0 AUDIT SUMMARY

The NRC staff audited the information related to the atmospheric dispersion to better understand how the licensee evaluated the potential offsite release effects of the proposed transition to GNF3 fuel. During the audit, the staff verified key assumptions and reviewed the licensee's technical analyses used to support the basis for the LAR.

5.0 DOCUMENT REVIEWED

The NRC staff reviewed Calculation No. QDC-0000-M-1408, Revision 2, "Atmospheric Dispersion Factors (X/Qs) for Accident Release."

6.0 AUDIT CONCLUSION

There were no regulatory decisions made during the audit. There were no open items needing further clarification and no deviation from the audit plan.

Date: September 7, 2022

SUBJECT: QUAD CITIES NUCLEAR POWER STATION, UNITS 1 AND 2 - REGULATORY
AUDIT REPORT REGARDING LICENSE AMENDMENT REQUEST TO
TRANSITION TO GNF3 FUEL (EPID L-2021-LLA-0159)
DATED SEPTEMBER 7, 2022

DISTRIBUTION:

PUBLIC
PM File Copy
RidsACRS_MailCTR Resource
RidsNrrDorlLpl3 Resource
RidsNrrLASRohrer Resource
RidsNrrPMQuadCities Resource
RidsRgn3MailCenter Resource
RidsNrrDexEenb Resource
KQuinlan, NRR

ADAMS Accession No. ML22229A030

OFFICE	NRR/DORL/LPL3/PM	NRR/DORL/LPL3/LA	NRR/DEX/EHXB/BC(A)
NAME	RKuntz	SRohrer	LBauer
DATE	08/16/2022	08/17/2022	09/6/2022
OFFICE	NRR/DORL/LPL3/BC	NRR/DORL/LPL3/PM	
NAME	NSalgado	RKuntz	
DATE	09/7/2022	09/7/2022	

OFFICIAL RECORD COPY