



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

May 31, 2013

Mr. Michael J. Pacilio
President and Chief Nuclear Officer
Exelon Nuclear
4300 Winfield Road
Warrenville, IL 60555

SUBJECT: OYSTER CREEK NUCLEAR GENERATING STATION - PLAN FOR THE
REGULATORY AUDIT REGARDING FLOODING WALKDOWNS TO SUPPORT
IMPLEMENTATION OF NEAR-TERM TASK FORCE RECOMMENDATION 2.3
RELATED TO THE FUKUSHIMA DAI-ICHI NUCLEAR POWER PLANT
ACCIDENT (TAC NO. MF0256)

Dear Mr. Pacilio:

On March 12, 2012, the U.S. Nuclear Regulatory Commission (NRC) staff issued a request for information letter per Title 10 of the *Code of Federal Regulations*, Subpart 50.54(f) (50.54(f) letter). The 50.54(f) letter was issued to power reactor licensees and holders of construction permits requesting addressees to provide further information to support the NRC staff's evaluation of regulatory actions to be taken in response to lessons learned from Japan's March 11, 2011, Great Tōhoku Earthquake and subsequent tsunami. The request addressed the methods and procedures for plants to conduct seismic and flooding hazard walkdowns to identify and address degraded, nonconforming, or unanalyzed conditions through the corrective action program, and to verify the adequacy of the monitoring and maintenance procedures.

By letter dated November 19, 2012, Exelon Generation Company, LLC (Exelon) submitted a Flooding Walkdown Report as requested per Enclosure 4, "Recommendation 2.3: Flooding," of the 50.54(f) letter for Oyster Creek Nuclear Generating Station (OCNGS). The NRC plans to conduct a regulatory audit to gain a better understanding of the methods and procedures used by Exelon to conduct the flooding walkdowns and facilitate NRC staff review of the walkdown report. The audit will be conducted at OCNGS from July 23-26, 2013, in accordance with the enclosed regulatory audit plan.

M. Pacilio

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If you have any questions, please contact me by telephone at 301-415-3100 or by e-mail at john.lamb@nrc.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "John G. Lamb". The signature is fluid and cursive, with the first name "John" being the most prominent part.

John G. Lamb, Senior Project Manager
Plant Licensing Branch I-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-219

Enclosure:
Audit Plan

cc w/encl: Distribution via Listserv



Audit Plan

Flooding Walkdown Review for the Oyster Creek Nuclear Generating Station

Audit Date: July 23-26, 2013

**Japan Lessons Learned Project Directorate
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission**

Enclosure

Audit Plan

Oyster Creek Nuclear Generating Station

1. Background

On March 12, 2012, the U.S. Nuclear Regulatory Commission (NRC) staff issued a request for information letter¹ per Title 10 of the *Code of Federal Regulations*, Subpart 50.54(f) (50.54(f) letter). The 50.54(f) letter was issued to power reactor licensees and holders of construction permits requesting addressees to provide further information to support the NRC staff's evaluation of regulatory actions to be taken in response to lessons learned from Japan's March 11, 2011, Great Tōhoku Earthquake and subsequent tsunami. The request addressed the methods and procedures for plants to conduct seismic and flooding hazard walkdowns to identify and address degraded, nonconforming, or unanalyzed conditions through the corrective action program, and to verify the adequacy of the monitoring and maintenance procedures.

By letter dated November 19, 2012,² Exelon Generation Company, LLC (Exelon) submitted a Flooding Walkdown Report as requested per Enclosure 4, "Recommendation 2.3: Flooding," of the 50.54(f) letter for Oyster Creek Nuclear Generating Station (OCNGS).

2. Regulatory Audit Bases

The NRC staff intends to conduct a regulatory audit to gain a better understanding of the methods and associated procedures used by Exelon to conduct the flooding walkdowns at OCNGS and facilitate NRC staff review of the walkdown report.

Guidance for performing the flooding walkdowns was developed by the Nuclear Energy Institute (NEI) with extensive review and input from NRC staff in numerous public meetings, webinars, and public conference calls during its development. NEI submitted NEI 12-07, "Guidelines for Performing Verification Walkdowns of Plant Flood Protection Features" (walkdown guidance)³ for endorsement, and the NRC staff subsequently endorsed the walkdown guidance by letter dated May 31, 2012.⁴ By letter dated January 23, 2012,⁵ Exelon indicated that they would utilize the NRC endorsed guidance in the performance of the walkdowns at OCNGS.

The 50.54(f) letter and the walkdown guidance are used as the basis documents upon which this regulatory audit is to be performed.

3. Regulatory Audit Scope

The scope of this regulatory audit for OCNGS is to examine relevant flooding walkdown documents, interview flooding walkdown participants, observe areas of the plant walked down, and examine other relevant materials used to conduct the flooding walkdowns. This will assist the NRC staff in identifying whether the flooding walkdowns were conducted in accordance with

¹ The 50.54(f) letter is available in the Agencywide Document Access and Management System (ADAMS) under Accession No. ML12053A340.

² The flooding walkdown report is available in ADAMS under Accession No. ML12331A203

³ NEI 12-07 is available in ADAMS under Accession No. ML12144A401.

⁴ The NRC endorsement of NEI 12-07 is available in ADAMS under Accession No. ML12144A142.

⁵ The licensee's letter is available in ADAMS under Accession No. ML13024A365.

the walkdown guidance and the 50.54(f) letter. The NRC staff will request additional information using the appropriate regulatory process.

The NRC staff reviewed the walkdown report for OCNGS and compared it with the requested information in the 50.54(f) letter and the walkdown guidance. The factors that the NRC staff considered in choosing sites to audit were:

- Lack of clarity as to how the walkdown was consistent with the guidance based on the review of the walkdown report.
- Plant-specific areas of interest identified during review of the walkdown report.
- Feedback and information gained during performance of regional inspections (e.g., Temporary Instruction 2515/187).

4. Information Needs

Exelon is requested to have the following documentation available on site for the audit team. The documentation could be provided electronically or by paper copies. If provided electronically, the licensee is requested to have at least three computers available for the audit team, with a printer attached.

- Walkdown record forms (as described in Appendix B of NEI 12-07) and other supplemental forms and worksheets used to document observations from performance of the walkdowns.
- Supplemental guidelines or procedures used, in addition to NEI 12-07, for the implementation of the flooding walkdowns, including industry, fleet, or site-specific guidelines or procedures (this includes, but is not limited to, "Walkdown Inspection Guidance" developed by Exelon to supplement NEI 12-07 and any site-specific acceptance criteria developed to support the walkdowns).
- Flood-specific procedures that are part of flood protection and mitigation strategy and hazardous weather response that were reviewed as part of the flooding walkdowns, including, but not limited to, ABN-31 – High Winds, Rev. 17 and ABN-32 – Abnormal Intake Level, Rev. 18.
- Listing of entries into the corrective action program resulting from the performance of the flooding walkdowns, including condition report number, title, and brief summary of the issue or observation and its disposition.
- All engineering analyses that were used in support of the flooding walkdowns, including, but not limited to, ENERCON Services, "Turbine Basement Water Intrusion Comprehensive Study for AmerGen Oyster Creek Nuclear Station," May 31st, 2002.

- Documentation of the basis that there is reasonable assurance that inaccessible features are available and will perform credited functions, including the following features:
 - Emergency Diesel Building sump drains; and
 - Sump 1-1 and Sump 1-5.

Additional information needs identified during the audit will be communicated to the designated point of contact.

The NRC staff also requests the licensee to make personnel who performed the walkdowns (including site staff and contractors) accessible upon request (either in person or by phone). The personnel should be able to answer questions about how the visual inspections and reasonable simulations were performed, how air particulate monitor values were determined, and discuss engineering analyses that were developed in support of the walkdown.

5. Team Assignments

Area of Review	Assigned Auditor
Team Lead	Stephen Campbell (NRC)
Flooding Walkdown Technical Lead	Nebiyu Tiruneh (NRC)
Flooding Technical Support	Jake Philip (NRC)
Flooding Technical Support	Kevin Quinlan (NRC)
Technical Support	Ed Miller (NRC)
Technical Support	Jeff Kulp (NRC)
Management Support	Nilesh Chokshi (NRC)
Flooding Technical Support	Lyle Hibler (PNNL)

6. Logistics

The audit will be conducted at OCNGS from July 23-26, 2013. Entrance and exit briefings will be held at the beginning and end of this audit, respectively. The licensee is requested to provide a room for the use of the audit team. A more detailed proposed audit schedule is attached.

7. Deliverables

An audit report/summary will be issued to the licensee within about 90 days from the end of the audit. Additionally, the results of the audit will be utilized to focus the scope of any requests for additional information issued in the course of this review.

**Proposed Oyster Creek Nuclear Generating Station
Flooding Walkdown Audit Schedule
July 23 – 26, 2013**

July 23, 2013

A.M.

- **8:30 a.m. Check-in at site** – receive badges, meet licensee contact(s), and setup for entrance meeting.
- **9:00 a.m. Entrance Meeting** - introductions, audit activities and goals, and audit logistics.
- **9:30 a.m. NRC Team Breakout** – staff review of procedures, basis documents and reports related to licensees conduct of flooding walkdown.

P.M.

- **1:00 p.m. Discussion with the licensee on flooding walkdown methodology**
- **3:30 p.m. Audit Team Caucus**
- **5:00 p.m. NRC/Licensee Interim Meeting**
- **6:00 p.m. Audit Team Daily Closeout**

July 24, 2013

A.M.

- **8:00 a.m. NRC Team Breakout** – staff review of procedures, basis documents and reports related to licensees conduct of flooding walkdown.
- **10:00 a.m. Plant walkdown** - (as reasonably accessible and in accordance with "As Low As Reasonably Achievable" (ALARA) exposure policies).

P.M.

- **1:30 p.m. Discussion(s) with OCNGS flooding walkdown team members and contractors**
- **4:00 p.m. Audit Team Caucus**
- **5:00 p.m. NRC/Licensee Interim Meeting**
- **6:00 p.m. Audit Team Daily Closeout**

July 25, 2013

A.M.

- **8:00 a.m. NRC Team Breakout** – staff review of procedures, basis documents and reports related to licensees conduct of flooding walkdown.
- **10:00 a.m. Plant walkdown** - (as reasonably accessible and in accordance with ALARA).

P.M.

- **1:30 p.m. Discussion(s) with OCNGS flooding walkdown team members and contractors**
- **4:00 p.m. Audit Team Caucus**
- **5:00 p.m. NRC/Licensee Interim Meeting**
- **6:00 p.m. Audit Team Daily Closeout**

July 26, 2013

A.M.

- **8:00 a.m. NRC/Licensee Exit Meeting**

M. Pacilio

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If you have any questions, please contact me by telephone at 301-415-3100 or by e-mail at john.lamb@nrc.gov.

Sincerely,

/ra/

John G. Lamb, Senior Project Manager
Plant Licensing Branch I-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-219

Enclosure:
Audit Plan

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ADAMS Accession No: ML13127A188

***via email**

OFFICE	DORL/LPL1-2/PM	JLD/PMB/PM	DORL/LPL1-2/LA*	DSEA/RHMB
NAME	JLamb	GEMiller	ABaxter	PChaput*
DATE	5/9/2013	5/21/2013	5/10/2013	5/9/2013
OFFICE	DSEA/RHMB/BC	DORL/LPL1-2/BC	DIRS/IRIB	DORL/LPL1-2/PM
DATE	CCook*	MKhanna	SCampbell*	JLamb
NAME	5/31/2013	5/17/2013	5/22/2013	5/31/2013

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