



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

October 21, 2015

Mr. C. R. Pierce  
Regulatory Affairs Director  
Southern Nuclear Operating Co., Inc.  
Post Office Box 1295, Bin 038  
Birmingham, AL 35201-1295

SUBJECT: JOSEPH M. FARLEY NUCLEAR PLANT, UNITS 1 AND 2 - PLAN FOR THE  
ONSITE AUDIT REGARDING IMPLEMENTATION OF MITIGATING  
STRATEGIES RELATED TO ORDER EA-12-049 (TAC NOS. MF0716 AND  
MF0717)

Dear Mr. Pierce:

On March 12, 2012, the U.S. Nuclear Regulatory Commission (NRC) issued Order EA-12-049, "Issuance of Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events" and Order EA-12-051, "Issuance of Order to Modify Licenses With Regard To Reliable Spent Fuel Pool Instrumentation," (Agencywide Documents Access and Management System (ADAMS) Accession Nos. ML12054A736 and ML12054A679, respectively). The orders require, in part, that all holders of operating reactor licenses and construction permits issued under Title 10 of the *Code of Federal Regulations* Part 50 to submit for review Overall Integrated Plans (OIPs), including descriptions of how compliance with the requirements of Attachment 2 of each order will be achieved.

By letter dated February 27, 2013 (ADAMS Accession No. ML13059A387), Southern Nuclear Operating Company, Inc. (SNC, the licensee) submitted its OIP for the Joseph M. Farley Nuclear Plant, Units 1 and 2 (Farley) in response to Order EA-12-049. By letters dated August 27, 2013, February 26, 2014, August 26, 2014, February 26, 2015, and August 27, 2015 (ADAMS Accession Nos. ML13240A240, ML14058B028, ML14239A291, ML15057A245, and ML15239B294, respectively), SNC submitted its first five six-month updates to the OIP. By letter dated August 28, 2013 (ADAMS Accession No. ML13234A503), the NRC notified all licensees and construction permit holders that the staff is conducting audits of their responses to Order EA-12-049 in accordance with NRC Office of Nuclear Reactor Regulation (NRR) Office Instruction LIC-111, "Regulatory Audits" (ADAMS Accession No. ML082900195). This audit process led to the issuance of the Farley interim staff evaluation (ISE) on January 17, 2014 (ADAMS Accession No. ML13337A584), and continues with in-office and onsite portions of this audit.

By letter dated February 27, 2013 (ADAMS Accession No. ML13059A388), SNC submitted its OIP for Farley in response to Order EA-12-051. The NRC staff issued a request for additional information (RAI) on August 1, 2013 (ADAMS Accession No. ML13203A210). By letters dated August 20, 2013, August 27, 2013, February 26, 2014, August 26, 2014, and February 26, 2015 (ADAMS Accession Nos. ML13233A111, ML13240A219, ML14057A779, ML14239A328, and ML15057A302, respectively), SNC submitted its RAI response and first four six-month updates to the OIP. The NRC staff issued the Farley ISE and RAI on October 30, 2013 (ADAMS Accession No. ML13294A496). Since the licensee informed the NRC staff on June 26, 2015

(ADAMS Accession No. ML15182A175) and January 14, 2015 (ADAMS Accession No. ML15014A422) that it had achieved full compliance with the requirements of NRC Order EA-12-051 for Farley, Units 1 and 2, respectively, the NRC staff will not perform an audit of the spent fuel pool instrumentation.

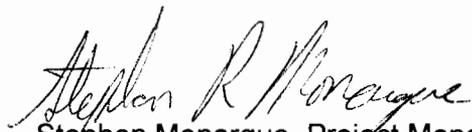
The ongoing audit process, to include the in-office and onsite portions, allows the NRC staff to assess whether it has enough information to make a safety evaluation of the OIP. The audit allows the NRC staff to review open and confirmatory items from the mitigation strategies ISE, the licensee's integrated plan, and other audit questions. Additionally, the NRC staff gains a better understanding of submitted information, identifies additional information necessary for the licensee to supplement its plan, and identifies any staff potential concerns.

This document outlines the on-site audit process that occurs after ISE issuance, as licensees provide new or updated information via periodic updates, update audit information on e-portals, provide preliminary Overall Program Documents/Final Integrated Plans, and continue in-office audit communications with staff while proceeding towards compliance with the orders.

The NRC staff plans to conduct an onsite audit at Farley in accordance with the enclosed audit plan from December 7-10, 2015.

If you have any questions, please contact me at 301-415-1544 or by e-mail at [stephen.monarque@nrc.gov](mailto:stephen.monarque@nrc.gov).

Sincerely,

  
Stephen Monarque, Project Manager  
Orders Management Branch  
Japan Lessons-Learned Division  
Office of Nuclear Reactor Regulation

Docket Nos.: 50-348 and 50-364

Enclosure:  
Audit plan

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**Audit Plan**  
**Joseph M. Farley Nuclear Plant, Units 1 and 2**

**BACKGROUND AND AUDIT BASIS**

On March 12, 2012, the U.S. Nuclear Regulatory Commission (NRC) issued Order EA-12-049, "Issuance of Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events" and Order EA-12-051, "Issuance of Order to Modify Licenses With Regard To Reliable Spent Fuel Pool Instrumentation," (Agencywide Documents Access and Management System (ADAMS) Accession Nos. ML12054A736 and ML12054A679, respectively). Order EA-12-049 directs licensees to develop, implement, and maintain guidance and strategies to maintain or restore core cooling, containment, and spent fuel pool (SFP) cooling capabilities in the event of a beyond-design-basis external event (BDBEE). Order EA-12-051 requires, in part, that all operating reactor sites have a reliable means of remotely monitoring wide-range SFP levels to support effective prioritization of event mitigation and recovery actions in the event of a BDBEE. The orders require, in part, that all holders of operating reactor licenses and construction permits issued under Title 10 of the *Code of Federal Regulations* Part 50 to submit for review, Overall Integrated Plans (OIPs), including descriptions of how compliance with the requirements of Attachment 2 of each order will be achieved.

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Enclosure

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This document outlines the on-site audit process that occurs after ISE issuance as licensees provide new or updated information via periodic updates, update audit information on e-portals, provide preliminary Overall Program Documents (OPDs)/Final Integrated Plans (FIPs), and continue in-office audit communications with staff while proceeding towards compliance with the orders.

Following the licensee's declarations of order compliance, the NRC staff will evaluate the Integrated Plan, as supplemented, the resulting site-specific OPDs/FIPs, and, as appropriate, other licensee submittals based on the requirements in the orders. For Order EA-12-049, the NRC staff will make a safety determination regarding order compliance using the Nuclear Energy Institute (NEI) developed guidance document NEI 12-06, "Diverse and Flexible Coping Strategies (FLEX) Implementation Guide" issued in August, 2012 (ADAMS Accession No. ML12242A378), as endorsed, by NRC Japan Lessons-Learned Project Directorate (JLD) interim staff guidance (ISG) JLD-ISG-2012-01 "Compliance with Order EA-12-049, 'Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events'" (ADAMS Accession No. ML12229A174). For Order EA-12-051, the NRC staff will make a safety determination regarding order compliance using the NEI developed guidance document NEI 12-02, "Industry Guidance for Compliance with NRC Order EA-12-051, 'To Modify Licenses with Regard to Reliable Spent Fuel Pool Instrumentation'" (ADAMS Accession No. ML12240A307), as endorsed, with exceptions and clarifications, by NRC ISG JLD-ISG-2012-03 "Compliance with Order EA-12-051, 'Reliable Spent Fuel Pool Instrumentation'" (ADAMS Accession No. ML12221A339). Should the licensee propose an alternative strategy or other method deviating from the guidance, additional staff review will be required to evaluate the alternative strategy in reference to the applicable order.

### AUDIT SCOPE

As discussed, onsite audits will be performed per NRR Office Instruction LIC-111, "Regulatory Audits," to support the development of safety evaluations. Site-specific Integrated Plan and OPDs/FIPs rely on equipment and procedures that apply to all units at a site, therefore, audits will be planned to support the "first unit at each site." On-site audits for subsequent units at a site will be on an as-needed basis.

The purpose of the audits is to obtain and review information responsive to the Farley Integrated Plan, as supplemented, open and confirmatory items from the mitigation strategies ISE, and to observe and gain a better understanding of the basis for the site's overall programs to ensure the licensee is on the correct path for compliance with the Mitigation Strategies order. These may include, but are not limited to:

- Onsite review and discussion for the basis and approach for detailed analysis and calculations (Orders EA-12-049);
- Walk-throughs of strategies and laydown of equipment to assess feasibility, timing, and effectiveness of a given mitigating strategy or integration of several strategies (Order EA-12-049);
- Storage, protection, access, and deployment feasibility and practicality for onsite portable equipment (Order EA-12-049);
- Evaluation of staging, access, and deployment of offsite resources to include Response Center provided equipment (Order EA-12-049); and

#### NRC AUDIT TEAM

<b>Title</b>	<b>Team Member</b>
Lead Project Manager	Stephen Monarque
Technical Support	Michael Levine
Technical Support	Joshua Miller
Technical Support	Matthew McConnell

#### LOGISTICS

The audit will be conducted onsite at Farley on December 7- 10, 2015. Entrance and exit briefings will be held with the SNC at the beginning and end of the audit, respectively, as well as daily briefings of team activities. Additional details will be addressed over the phone. A more detailed schedule is provided below.

A private conference room is requested for NRC audit team use with access to audit documentation upon arrival and as needed.

#### DELIVERABLES

An audit report/summary will be issued to SNC within 90 days from the end of the audit.

#### INFORMATION NEEDS

- Materials/documentation provided in responses to open or confirmatory items in the Farley ISEs;
- OPD/FIP (current version), operator procedures, operator training plans, Response Center (SAFER) playbook; and
- Materials/documentation for staff audit questions and/or the licensee OIP identified open items as listed in the Part 2 table below

To provide supplemental input to the ongoing audit of documents submitted to the NRC and made available via e-portal, the onsite audit will have three components: 1) a review of the overall mitigating strategies for the site, including, walk-throughs of strategies and equipment laydown of select portions; 2) a review of material relating to open or confirmatory items from the ISEs, staff audit questions, and the licensee open items; and 3) additional specific issues requested by NRC technical reviewers related to preparation of a safety evaluation.

Each part is described in more detail below:

Part 1 - Overall Mitigating Strategies and Program Review:

During the onsite audit, please be prepared to conduct a tabletop discussion of the site's integrated mitigating strategies compliance program. This discussion should address the individual components of the plans, as well as the integrated implementation of the strategies including a timeline. The licensee team presenting this should include necessary representatives from site management, engineering, training, and operations that were responsible for program development, and will be responsible for training and execution.

Following the tabletop discussion, please be prepared to conduct walk-throughs of procedures and demonstrations of equipment, as deemed necessary, by NRC audit team members. Include representatives from engineering and operations that will be responsible for training and execution. At this time we expect, at a minimum, to walk-through the items below. Based on the tabletop presentations and audit activities, this list may change.

WALK-THROUGH LIST:

1. Walk-through a sample of strategies that will be delineated by specific NRC staff audit team members
2. Walk-through of portable (FLEX) diesel generator procedures, to include power supply pathways, areas where manual actions are required, and electrical isolation
3. Walk-through of building access procedures, to include any unique access control devices
4. Strategy walk-through of transfer routes from staging and storage areas to deployment locations for both onsite and offsite equipment
5. Strategy walk-through for core cooling and reactor coolant system inventory, to include portable pumping equipment, flow paths, and water storage locations and the related reactor systems analysis and calculations
6. Walk-through of communications enhancements, described in the licensee's non-public submittal dated October 31, 2012, as supplemented, by letter dated February 22, 2013 (ADAMS Accession No. ML13056A138), and the NRC staff's non – public assessment for Farley, dated June 17, 2013.

Part 2 – Specific Technical Review Items:

During the visit, the following audit items will be addressed from the Farley ISEs (open items), and confirmatory items; audit question list; the licensee's OIP, as supplemented, open items; and draft staff evaluation additional questions. Please provide documents or demonstrations as needed to respond to each item.

Part 3 – Specific Topics for Discussion:

1. Draft of Farley OPD/FIP
2. Training
3. Portable (FLEX) equipment maintenance and testing
4. Response (SAFER) Plan for Farley

## **Proposed Schedule for Farley Nuclear Plant, Units 1 and 2 Audit**

### **Onsite Day 1, Monday December 7, 2015**

0800 Check in at site, Badging

0900 - 0915 Entrance meeting

0945 SNC Presentation of strategies

1230 Lunch

1330 NRC Audit Team Activities

- Technical area break-out discussions between NRC and SNC staff in the areas of reactor systems, electrical, balance of plant/structures, and others.
- Review documents relating to open or confirmatory items, codes, analyses, etc.

1400 Dosimetry

1430 Continue NRC Audit Team Activities

1630 NRC Audit Team meeting

1700 Team lead daily debrief/next day planning with SNC

### **Onsite Day 2, Tuesday, December 8, 2015**

0800 Continue NRC Audit Team Activities:

- Review documents relating to open or confirmatory items, codes, analyses, etc.
- Mitigating Strategies walk-throughs with SNC

1200 Lunch

1300 Continue NRC Audit Team Activities

1630 NRC Audit Team meeting

1700 Team lead daily debrief/next day planning with SNC

**Onsite Day 3, Wednesday, December 9, 2015**

0800 Continue NRC Audit Team Activities

1200 Lunch

1300 Continue NRC Audit Team Activities

1630 NRC Audit Team meeting

1700 Team lead daily debrief/next day planning with SNC

**Onsite Day 4, Thursday, December 10, 2015**

0800 Continue NRC Audit Team Activities

1200 Lunch

1300 Continue NRC Audit Team Activities

1430 NRC/SNC pre-exit meeting

1600 Audit closeout/departure

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Sincerely,

*/RA/*

Stephen Monarque, Project Manager  
Orders Management Branch  
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ADAMS Accession No. ML15289A065

\* via email

OFFICE	NRR/JLD/JOMB/PM	NRR/JLD/LA	NRR/DORL/LPL2-1/PM
NAME	SMonarque	SLent	SWilliams
DATE	10/20/2015	10/16/2015	10/21/2015
OFFICE	NRR/JLD/JOMB/BC(A)	NRR/JLD/JOMB/PM	
NAME	MHalter	SMonarque	
DATE	10/21/2015	10/21/2015	

OFFICIAL RECORD COPY

Letter to C. R. Pierce dated October 21, 2015

SUBJECT: JOSEPH M. FARLEY NUCLEAR PLANT, UNITS 1 AND 2 - PLAN FOR THE  
ONSITE AUDIT REGARDING IMPLEMENTATION OF MITIGATING STRATEGIES  
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