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

September 30, 2014

Vice President, Operations
Entergy Nuclear Operations, Inc.
Indian Point Energy Center
450 Broadway, GSB
P.O. Box 249
Buchanan, NY 10511-0249

SUBJECT: INDIAN POINT NUCLEAR GENERATING UNIT NOS. 2 AND 3 - PLAN FOR THE ONSITE AUDIT REGARDING IMPLEMENTATION OF MITIGATING STRATEGIES AND RELIABLE SPENT FUEL INSTRUMENTATION RELATED TO ORDERS EA-12-049 AND EA-12-051 (TAC NOS. MF0744, MF0745, MF0737, AND MF0738)

Dear Sir or Madam:

On March 12, 2012, the U.S. Nuclear Regulatory Commission (NRC) issued Order EA-12-049, "Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond Design-Basis External Events" and Order EA-12-051, "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 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 28, 2013 (ADAMS Accession No. ML13079A348), Entergy Nuclear Operations, Inc. (Entergy, the licensee) submitted its OIP for Indian Point Nuclear Generating Unit Nos. 2 and 3 (Indian Point) in response to Order EA-12-049. By letters dated August 27, 2013, February 27, 2014, and August 27, 2014 (ADAMS Accession Nos. ML13247A032, ML14070A365, and ML14251A227, respectively), Entergy submitted its first three 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 Indian Point interim staff evaluation (ISE) and audit report (ADAMS Accession No. ML13337A594) and continues with in-office and onsite portions of this audit.

By letter dated February 27, 2013 (ADAMS Accession No. ML13072A082), the licensee submitted its OIP for Indian Point in response to Order EA-12-051. By letter dated June 25, 2013 (ADAMS Accession No. ML13169A127), the NRC staff sent a request for additional information (RAI) to the licensee. By letters dated August 20, 2013, August 27, 2013, February 27, 2014, and August 27, 2014 (ADAMS Accession Nos. ML13239A238, ML13247A031, ML14070A447, and ML14251A226, respectively), the licensee submitted its RAI responses and first three six-month updates to the OIP.

The NRC staff's review led to the issuance of the Indian Point ISE and RAI dated November 8, 2013 (ADAMS Accession No. ML13298A805). By letter dated March 26, 2014 (ADAMS Accession No. ML14083A620), the NRC notified all licensees and construction permit holders that the staff is conducting in-office and onsite audits of their responses to Order EA-12-051 in accordance with NRC NRR Office Instruction LIC-111, as discussed above.

The ongoing audit process, to include the in-office and onsite portions, allows the staff to assess whether it has enough information to make a safety evaluation of the Integrated Plans. The audit allows the staff to review open and confirmatory items from the mitigation strategies ISE, RAI responses from the spent fuel pool instrumentation ISE, the licensee's integrated plans, and other audit questions. Additionally, the 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. The audit's onsite portion will occur prior to declarations of compliance for the first unit at each site.

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 staff plans to conduct an onsite audit at Indian Point in accordance with the enclosed audit plan from October 27-30, 2014.

If you have any questions, please contact me at 301-415-2901 or by e-mail at john.boska@nrc.gov.

Sincerely,

John Boska, Senior Project Manager
Orders Management Branch
Japan Lessons-Learned Division
Office of Nuclear Reactor Regulation

Docket Nos.: 50-247 and 50-286

Enclosure:
Audit plan

cc w/encl: Distribution via Listserv

Audit Plan
Indian Point Nuclear Generating Unit Nos. 2 and 3

BACKGROUND AND AUDIT BASIS

On March 12, 2012, the U.S. Nuclear Regulatory Commission (NRC) issued Order EA-12-049, "Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond Design-Basis External Events" and Order EA-12-051, "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 holders of operating reactor licenses and construction permits issued under Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50 to submit for review their 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 28, 2013 (ADAMS Accession No. ML13079A348), Entergy Nuclear Operations, Inc. (Entergy, the licensee) submitted its OIP for Indian Point Nuclear Generating Unit Nos. 2 and 3 (Indian Point, or IP2 and IP3) in response to Order EA-12-049. By letters dated August 27, 2013, February 27, 2014, and August 27, 2014 (ADAMS Accession Nos. ML13247A032, ML14070A365, and ML14251A227, respectively), Entergy submitted its first three 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). The purpose of the staff's audit is to determine the extent to which the licensees are proceeding on a path towards successful implementation of the actions needed to achieve full compliance with the order. This audit process led to the issuance of the Indian Point interim staff evaluation (ISE) and audit report (ADAMS Accession No. ML13337A594) and continues with in-office and onsite portions of this audit.

By letter dated February 27, 2013 (ADAMS Accession No. ML13072A082), the licensee submitted its OIP for Indian Point in response to Order EA-12-051. By letter dated June 25, 2013 (ADAMS Accession No. ML13169A127), the NRC staff sent a request for additional information (RAI) to the licensee. By letters dated August 20, 2013, August 27, 2013, February 27, 2014, and August 27, 2014 (ADAMS Accession Nos. ML13239A238, ML13247A031, ML14070A447, and ML14251A226, respectively), the licensee submitted its RAI responses and first three six-month updates to the OIP.

The NRC staff's review led to the issuance of the Indian Point ISE and RAI dated November 8, 2013 (ADAMS Accession No. ML13298A805). By letter dated March 26, 2014 (ADAMS Accession No. ML14083A620), the NRC notified all licensees and construction permit holders

that the staff is conducting in-office and onsite audits of their responses to Order EA-12-051 in accordance with NRC NRR Office Instruction LIC-111, as discussed above.

The ongoing audit process, to include the in-office and onsite portions, allows the staff to assess whether it has enough information to make a safety evaluation of the Integrated Plans. The audit allows the staff to review open and confirmatory items from the mitigation strategies ISE, RAI responses from the spent fuel pool instrumentation (SFPI) ISE, the licensee's integrated plans, and other audit questions. Additionally, the 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. The audit's onsite portion will occur prior to declarations of compliance for the first unit at each site.

This document outlines the onsite 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 OIPs 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 staff will make a safety determination regarding order compliance using the Nuclear Energy Institute (NEI) 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) as providing one acceptable means of meeting the order requirements. For Order EA-12-051, the staff will make a safety determination regarding order compliance using the NEI 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) as providing one acceptable means of meeting the order requirements. Should the licensee propose an alternative strategy or other method deviating from the guidance, additional staff review will be required to evaluate if the alternative strategy complies with 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 OIPs 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 Indian Point OIPs, as supplemented, open and confirmatory items from the mitigation strategies ISE, RAI

responses from the SFPI 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 and SFPI orders. 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, EA-12-051);
- 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 National SAFER Response Center (NSRC) provided equipment (Order EA-12-049); and
- Review dimensions and sizing of the SFP area, placement of the SFP level instrumentation, and applicable mounting methods and design criteria (Order EA-12-051).

NRC AUDIT TEAM

Title	Team Member
Team Lead and Project Manager	John Boska
Project Manager	Stephen Philpott
Technical Support	Matthew McConnell
Technical Support	Duc Nguyen
Technical Support	Bruce Heida
Technical Support	On Yee
Technical Support	Kevin Roche
Technical Support	Khoi Nguyen
Technical Support	Joshua Miller
Technical Support	Eric Bowman

NRC AUDIT TEAM – SUPPLEMENTAL MEMBERS

Title	Team Member
Branch Chief	Bo Pham

LOGISTICS

The audit will be conducted onsite at Indian Point on October 27-30, 2014. Entrance and exit briefings will be held with the licensee 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 the licensee within 45 days from the end of the audit.

INFORMATION NEEDS

- Materials/documentation provided in responses to open or confirmatory items and RAIs in the ISEs;

- OPD/FIP (current version), operator procedures, FLEX Support Guidelines (FSGs), operator training plans, NSRC (SAFER) Indian Point Response Plan; and

- Materials/documentation for staff audit questions and/or 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, if needed, walk-throughs of strategies and equipment laydown of select portions; 2) a review of material relating to open or confirmatory items and RAIs from the ISEs, staff audit questions, and 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 and SFP instrumentation 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 technical staff audit team members

2. Walk-through of portable (FLEX) diesel generator (DG) 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 (RCS) 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

7. Walk-through of SFP area, SFP instrumentation locations, and related equipment mounting areas

8. Walk-through of procedure FSG-4 for load shed, with an operator who would perform this procedure during an event demonstrating the steps needed to perform the load shed.

Part 2 – Specific Technical Review Items:

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

Audit Item Reference	Item Description
ISE OI 3.1.2.A	Review of the licensee's new flooding level evaluation results and its potential impact on the flooding hazard analyses previously provided in their Integrated Plan and during the audit process is identified as an Open Item. If the flooding levels are modified based on the results of this review, it may affect the evaluation of the deployment described in Section 3.1.2.2 of the ISE.
ISE OI 3.2.4.7.A	Water Sources - It is noted that NEI 12-06 guidance only credits water supplies that are robust with respect to seismic events, floods, and high winds, and the associated missiles. The licensee should determine if a water supply for the [steam generators] SGs and RCS would be available after a tornado event by analyzing the tornado characteristics for the site compared to the separation characteristics of the tanks. This is an alternate approach from the strategies identified in NEI 12-06.

Audit Item Reference	Item Description
ISE CI 3.1.1.2.C	Confirm provisions will be made to ensure that access to all required areas will be assured in the event of a power failure as described in Consideration 5 of NEI 12-06, Section 5.3.2. Need to verify access to the FLEX equipment storage building.
ISE CI 3.1.1.3.A	Confirm that the licensee's review of the potential impacts of large internal flooding sources that are not seismically robust and do not require [alternating current] ac power has been completed per consideration 2 of NEI 12-06, Section 5.3.3.
ISE CI 3.1.2.2.A	Deployment of FLEX Equipment – Confirm that evaluations address: whether procedures have been established for actions to be taken upon receipt of a hurricane warning; ensuring that fuel in oil storage tanks would not be inundated or damaged by flooding; and, whether the means (e.g., trucks) for moving FLEX equipment is reasonably protected from the event.
ISE CI 3.2.1.A	Confirm which analysis performed in WCAP-17601-P is being applied to Indian Point. Also confirm the licensee has adequately justified the use of that analysis by identifying and evaluating the important parameters and assumptions demonstrating that they are representative of Indian Point and appropriate for simulating the [extended loss of ac power] ELAP transient. Use the generic template provided by the NRC.
ISE CI 3.2.1.1.A	Computer Code Used for ELAP Analysis - Confirm that the licensee is using NOTRUMP and has taken into account its limitations. Reliance on the NOTRUMP code for the ELAP analysis of Westinghouse plants is limited to the flow conditions prior to reflux condensation initiation. This includes specifying an acceptable definition for reflux condensation cooling.
ISE CI 3.2.1.3.A	Confirm that the licensee has satisfactorily addressed the applicability of Assumption 4 on page 4-13 of WCAP-17601 which states that decay heat is per ANS 5.1-1979 + 2 sigma, or equivalent. If the ANS 5.1-1979 + 2 sigma model is used in the Indian Point ELAP analysis, address the adequacy of the use of the decay heat model in terms of the plant-specific values of the following key parameters: (1) initial power level, (2) fuel enrichment, (3) fuel burnup, (4) effective full power operating days per fuel cycle, (5) number of fuel cycles, if hybrid fuels are used in the core, and (6) fuel characteristics (addressing whether they are based on the beginning of the cycle, middle of the cycle, or end of the cycle). If a different decay heat model is used, describe the specific model and address the adequacy of the model and the analytical results.
ISE CI 3.2.1.6.A	Confirm that the licensee has finalized its strategy for controlling the RCS pressure to prevent nitrogen from escaping from the safety injection accumulators into the RCS until the isolation valves can be closed.
ISE CI 3.2.1.8.A	The [Pressurized-Water Reactor Owners Group] PWROG submitted to NRC a position paper, dated August 15, 2013, which provides test data regarding boric acid mixing under single-phase natural circulation conditions and outlined applicability conditions intended to ensure that boric acid addition and mixing would occur under conditions similar to those for which boric acid mixing data is available. During the audit process, the licensee informed the NRC staff of its intent to abide by the generic approach discussed above. The licensee should address the clarifications in the NRC endorsement letter dated January 8, 2014.

Audit Item Reference	Item Description
ISE CI 3.2.1.9.A	Use of Portable Pumps – Confirm that the licensee has specified the required time for the operator to realign each of the above discussed pumps and confirm that the required times are consistent with the results of the ELAP analysis. Confirm that the licensee discussed the analyses that are used to determine the required flow rate and corresponding total developed head for each of the portable pumps and also to justify that that the required capacities of each of the above-discussed portable pumps are adequate to maintain core cooling and sub-criticality during phases 2 and 3 of ELAP. Confirm that the licensee has included a discussion and justification of computer codes/methods and assumptions used in the analyses above.
ISE CI 3.2.1.9.B	Use of Portable Pumps – Confirm that the licensee has provided an evaluation that demonstrates flow through a 2-inch connection will be sufficient to provide adequate flow to maintain the SG level using the alternate SG FLEX pump.
ISE CI 3.2.2.A	Spent Fuel Pool Cooling Strategies - Confirm that the licensee has satisfactorily explained the strategy to provide a secondary connection for SFP makeup if the building is inaccessible, and explain where these valves are and if access to these valves will be available during an ELAP event.
ISE CI 3.2.3.A	Confirm that a containment evaluation has been completed and, based on the results of this evaluation; required actions to ensure maintenance of containment integrity and required instrument function will be developed.
ISE CI 3.2.4.2.A	Confirm that the assessment of the predicted maximum temperatures in rooms with equipment that is required for FLEX strategies during the ELAP demonstrates that the equipment will continue to function as needed.
ISE CI 3.2.4.2.B	Confirm that hydrogen concentration in the battery rooms during battery recharging would be maintained at an acceptable level.
ISE CI 3.2.4.3.A	Confirm that the need for heat tracing has been evaluated for the BAST and all other equipment necessary to ensure that all FLEX strategies can be implemented successfully.
ISE CI 3.2.4.6.A	Personnel Habitability – Elevated Temperature – Confirm that habitability limits will be maintained and/or operator protective measures will be employed in all Phases of an ELAP to ensure operators will be capable of FLEX strategy execution under adverse temperature conditions. Examples of areas of concern are the control room, [turbine-driven auxiliary boiler feedwater] TDABFW pump room, SFP area, and charging pump room.
ISE CI 3.2.4.9.A	Portable Equipment Fuel – Confirm that method for supplying fuel oil has been finalized. Also confirm that the fuel required for each FLEX piece of equipment has been established and that the total fuel usage has been calculated to demonstrate that sufficient fuel with margin exists on site.

Audit Item Reference	Item Description
ISE CI 3.2.4.10.A	Load Reduction to Conserve dc Power - Confirm that analysis of the following aspects of the [direct current] dc power requirements have been identified and evaluated: a. The dc load profile with the required loads for the mitigating strategies to maintain core cooling, containment, and spent fuel pool cooling; b. The loads that will be shed from the dc bus, the equipment location (or location where the required action needs to be taken), and the required operator actions and the time to complete each action c. The basis for the minimum dc bus voltage that is required to ensure proper operation of all required electrical equipment.
ISE CI 3.4.A	Confirm that the 480V portable/FLEX generators are adequately sized to supply loads assumed for implementing Phase 2 strategies.
AQ 3	Seismic Procedural Interface Considerations. NEI 12-06, rev. 0, as endorsed by JLD-ISG-2012-01, rev. 0, in Section 5.3.3 states, in part: Seismic studies have shown that even seismically qualified electrical equipment can be affected by beyond-design-basis seismic events. In order to address these considerations, each plant should compile a reference source for the plant operators that provide approaches to obtaining necessary instrument readings to support the implementation of the coping strategy. This reference source should include control room and non-control room readouts and should also provide guidance on how and where to measure key instrument readings at containment penetrations, where applicable, using a portable instrument (e.g., a Fluke meter). Such a resource could be provided as an attachment to the plant procedures/guidance. Guidance should include critical actions to perform until alternate indications can be connected and on how to control critical equipment without associated control power. The licensee's plan did not contain any information in regards to the use of portable instruments to obtain necessary instrument readings. Specifically, the plan did not address: a. Reference source for the operators for obtaining necessary instrument readings to support implementation of the coping strategy for both control room and non-control room readouts and how and where to measure key readings at containment penetrations (where applicable) using a portable instrument; b. Critical actions to perform until alternate indications can be connected (measure); and c. Instructions on how to control critical equipment without control power. The licensee is requested to provide additional information on their plans to: a. develop a reference source for operators to obtain necessary instrument readings to support implementation of the coping strategy for both control room and no-control room readouts and how and where to measure key reading at containment penetrations (where applicable) using a portable instrument; b. identify critical actions that may be necessary to perform until alternate indications can be connected (measured); and c. provide instructions on how to control critical equipment without control power.

Audit Item Reference	Item Description
AQ 8	Deployment of Portable Equipment (High Winds). NEI 12-06, Section 7.3.2, Deployment of FLEX Equipment, describes considerations for the deployment of FLEX equipment in high winds that include optimizing FLEX deployment by connecting portable pumps and equipment prior to the arrival of the hurricane and by providing a means to move FLEX equipment that is also reasonably protected from the high winds. The licensee's plan for deployment of the portable equipment considering high wind hazards, did not provide reasonable assurance that the plan conforms to the guidance of NEI 12-06, Section 7.3.2 because: 1) it is not clear that procedures and programs will include taking proactive actions such as testing, connecting, and readying portable equipment prior to the arrival of the hurricane to reduce the potential for wind impacts; 2) there is insufficient information regarding protection of the means to move the portable equipment. The licensee is requested to provide additional details to demonstrate conformance to the guidance of NEI 12-06, Section 7.3.2.
AQ 9	Protection of FLEX equipment from ice. NEI 12-06, rev. 0, as endorsed by JLD-ISG-2012-01, rev. 0, Section 8.3.1 states in part below figure 8-1: Portable equipment necessary for the mitigating strategies should be stored in one or more of following three configurations for sites subject to significant snowfall and ice storms: 1. In a structure that meets the plant's design basis for the snow, ice and cold conditions (e.g., existing safety-related structure). 2. In a structure designed to or evaluated equivalent to ASCE 7-10, Minimum Design Loads for Buildings and Other Structures for the snow, ice, and cold conditions from the site's design basis. 3. Provided the N sets of equipment are located as described in 1 or 2 above, the spare (N+1) set of equipment may be stored in an evaluated storage location capable of withstanding historical extreme weather conditions such that the equipment is deployable. On pages 17, 27, 39 and 47 of 155, the licensee stated that portable equipment required to implement the Flex strategies will be maintained in storage locations that are climate controlled. However, the licensee's plan for the storage and protection of portable equipment from snow, ice and extreme cold did not provide reasonable assurance that the plan conforms to the guidance of NEI 12-06, Section 8.3.1, because the lack of specific detail as to where each piece of FLEX equipment would be stored. The licensee is requested to provide additional details to demonstrate conformance to the guidance of NEI 12-06, Section 7.3.2.

Audit Item Reference	Item Description
AQ 10	Deployment of Portable Equipment (Ice Hazard). NEI 12-06, Section 8.3.1, Deployment of FLEX Equipment, consideration 2 states, in part: The following three considerations should be addressed for the deployment of portable equipment for sites subject to snow, ice, and extreme cold: 1. The equipment should be procured to function in the extreme conditions applicable to the site. Normal safety-related design limits for outside conditions may be used, but consideration should also be made for any manual operations required by plant personnel in such conditions. 2. Provisions should be made for snow/ice removal, as needed to obtain and transport equipment from storage to its location for deployment. 3. For some sites, the ultimate heat sink (UHS) and flow path may be affected by extreme low temperatures due to ice blockage or formation of frazil ice. Consequently, the evaluation should address the effects of such a loss of the UHS on the deployment of equipment. For example, if UHS water is to be used as a makeup source, some additional measures may need to be taken to assure that the equipment can utilize the water. On page 56 of 155, in the chart identifying Phase 3 Response Equipment and Commodities the licensee lists a four wheel drive tow vehicle and debris clearing equipment, but does not specify whether this equipment would be capable of removing snow and ice. The licensee's plan for implementation of the strategies to deploy portable equipment in the context of ice, and extreme cold does not provide reasonable assurance that the plan conforms to the guidance of NEI 12-06, Section 8.3.2, because there is insufficient information to conclude that the administrative program elements to ensure the pathways are clear will include snow and ice removal. The licensee is requested to provide additional details to demonstrate conformance to NEI 12-06.
AQ 11	Procedural Interfaces (High Temperature). NEI 12-06, Section 9.3.3, Procedural Interfaces, states: "The only procedural enhancements that would be expected to apply involve addressing the effects of high temperatures on the FLEX equipment." The licensee's plan for procedural interfaces in the context of high temperatures did not provide reasonable assurance that the plan conforms to the guidance of NEI 12-06, Section 9.3.3, due to the lack of specific information on the effects of high temperatures on the portable equipment in the locations they are intended to operate. The licensee is requested to provide additional details to demonstrate conformance to the guidance of NEI 12-06, Section 9.3.3 in regards to the effects of high temperature on the FLEX equipment.

Audit Item Reference	Item Description
AQ 22	Accessibility. NEI 12-06, Section 3.2.2, Paragraph (8) provides that: Plant procedures/guidance should identify the portable lighting (e.g., flashlights or headlamps) and communications systems necessary for ingress and egress to plant areas required for deployment of FLEX strategies. Areas requiring access for instrumentation monitoring or equipment operation may require portable lighting as necessary to perform essential functions. Normal communications may be lost or hampered during an ELAP. Consequently, in some cases, portable communication devices may be required to support interaction between personnel in the plant and those providing overall command and control. The licensee's plan for use of portable lighting to support FLEX strategy implementation did not contain sufficient information on the identification in plant procedures and guidance of portable lighting such as flashlights or headlamps necessary for ingress and egress to plant areas required for deployment of the strategies. The licensee is requested to provide information on the use of portable lighting for FLEX strategy implementation (storage location, sufficient quantities, and procedural guidelines). The licensee's plan for use of communication equipment to support FLEX strategy implementation did not provide reasonable assurance that the plan conforms to the guidance of NEI 12-06, Section 3.2.2, Paragraph (8), because the licensee has presented no information on the identification in plant procedures and guidance of portable communication equipment necessary for use in areas required for deployment of FLEX strategies. The licensee is requested to provide information on the use of portable communication equipment as it relates to FLEX strategy implementation.
AQ 23	Accessibility to Locked Areas. NEI 12-06, Section 3.2.2, Paragraph (9) provides that: Plant procedures/guidance should consider the effects of ac power loss on area access, as well as the need to gain entry to the Protected Area and internal locked areas where remote equipment operation is necessary. At some plants, the security system may be adversely affected by the loss of the preferred or Class 1E power supplies in an ELAP. In such cases, manual actions specified in ELAP response procedures/guidance may require additional actions to obtain access. The licensee's plans for the development of guidance and strategies with regard to the access to the Protected Area and internal locked areas lacked any discussion on this topic. The licensee is requested to provide information on its plan to access the protected area and internal locked areas as it relates to FLEX strategy implementation.

Audit Item Reference	Item Description
AQ-27	Maintenance and Testing. NEI 12-06, Section 11.5 provides requirements for maintenance and testing. The licensee's plan for equipment maintenance and testing which endorses the Electric Power Research Institute (EPRI) industry program for maintenance which is currently under development does not provide reasonable assurance that guidance and strategies developed and implemented under them will conform to the guidance of NEI 12-06, Section 11.5 with respect to maintenance and testing. The licensee is requested to provide details of the EPRI industry program for maintenance and testing of FLEX electrical equipment such as batteries, cables, and diesel generators.
AQ-28	Offsite Resources. The requirements for offsite resources are described in NEI 12-06, Section 12.2, Minimum Capability of Off-Site Resources. Each site will establish a means to ensure the necessary resources will be available from off-site. Review of the licensee's use of off-site resources contained insufficient information to provide reasonable assurance that guidance will be established to conform to considerations (2) through (10) above. The licensee is requested to provide additional discussion to show how considerations (2) through (10) of NEI 12-06, Section 12.2 are met.
AQ-29	Provide a summary of the sizing calculation for the 4160v FLEX generators to show that they can supply the loads assumed in phase 3.
AQ-32	Describe how electrical isolation will be maintained such that (a) Class 1E equipment is protected from faults in portable/FLEX equipment and (b) multiple sources do not attempt to power electrical buses.
AQ-33	dc Load Shed. The licensee is requested to describe any plant components that will change state if vital ac or dc power is lost or de-energized during the load shed. The NRC staff is particularly interested in whether a safety hazard is introduced, such as de-energizing the dc-powered seal oil pump for the main generator and allowing hydrogen to escape, which could contribute to risk of fire or explosion in the vicinity from the uncooled main turbine bearings. The licensee is requested to identify the equipment they intend to load shed and potential impact upon the station and any remedial measures to mitigate these hazards.
AQ-42	For Unit 2 and Unit 3, the refueling water storage tanks (RWSTs) are located outdoors. The licensee is requested to discuss the potential for the RWST suction freezing during ELAP and extreme cold weather. If RWST suction line freezing is possible, discuss measures to maintain RWST availability.
AQ-43	For Unit 2 and Unit 3, the condensate storage tanks (CSTs) are located outdoors. The licensee is requested to discuss the potential for the CST suction freezing during ELAP and extreme cold weather.
AQ-45	Provide a detailed summary of the analysis and/or technical evaluation performed to demonstrate the adequacy of the ventilation provided in the TDAFW pump room to maintain room temperature and support equipment operation throughout all phases of an ELAP.
AQ-46	Provide information on the adequacy of the ventilation provided in the battery room to protect the batteries from the effects of extreme high and low temperatures.

Audit Item Reference	Item Description
AQ-48	Provide Single Line Diagrams showing the proposed connections of Phase 2 and 3 electrical equipment on the e-Portal.
AQ-49	Provide the value of the maximum leak-off for each RCP seal in gpm assumed in the ELAP analysis, and other RCP seal information. To prevent thermal shock, verify that seal cooling will not be restored during ELAP following loss of cooling. Confirm that adequate high-temperature qualified o-rings will be used where required (e.g., 7228-C or equivalent or better).
AQ-51	The licensee is requested to list the non-safety related (plant installed) systems or equipment that are credited in the ELAP analysis for consequences mitigation, and discuss the associated design safety functions and justify the listed systems or equipment are available and reliable to provide the design functions on demand during the ELAP.
SFPI RAI 1	Please provide information regarding the specific requirements in the procedures controlling irradiated equipment or materials stored in the SFP, including details of any analysis performed to determine the projected dose rate impact and the appropriate Level 2 value as a result of other hardware stored in the SPF.
SFPI RAI 2	Please provide a description of the protection provided for the cabling routed along the exterior of the fuel building for Channel B of IP2 and IP3. Also, please provide a sketch to illustrate the remaining cable routing from the fuel building wall penetrations to the processor units for Channel A and Channel B for IP2 and IP3.
SFPI RAI 3	Please provide the analyses verifying that the seismic testing of the sensor/probe assemblies and the electronics units, and the analysis of the combined maximum seismic and hydrodynamic forces on the cantilevered portion of the assembly exposed to the potential sloshing effects, show that the SFP instrument design configuration will be maintained during and following the maximum seismic ground motion considered in the design of the SFP structure.
SFPI RAI 4	For each of the mounting attachments required to attach SFP Level equipment to plant structures, please describe the design inputs, and the methodology that was used to qualify the structural integrity of the affected structures/equipment.
SFPI RAI 5	Please address how other hardware stored in the SFP will not create adverse interaction with the fixed instrument location(s).

Audit Item Reference	Item Description
SFPI RAI 6	Please provide the following: a) Information indicating a) the temperature ratings for all system electronics (including sensor electronics, system electronics, transmitter, receiver and display) and whether the ratings are continuous duty ratings; and, b) what will be the maximum expected temperature in the room(s) in which the sensor electronics will be located under [beyond design-basis] BDB conditions in which there will be no ac power available to run Heating Ventilation and Air Conditioning (HVAC) systems. b) Information indicating the maximum expected relative humidity in the room in which the sensor electronics will be located under BDB conditions, in which there is no ac power available to run HVAC systems, and whether the sensor electronics is capable of continuously performing its required functions under this expected humidity condition. c) Documentation or analysis of the maximum expected radiological conditions (dose rate and total integrated dose) to which the equipment located within the fan house will be exposed.
SFPI RAI 7	Please provide information describing the anticipated environment for shock, shock test method, and test results regarding the processor. Also, please provide information on the anticipated environment for shock, a description of any analysis, and description of modeling related to the probe assembly.
SFPI RAI 8	Please provide information describing the anticipated environment for vibration, vibration test method, and test results regarding the processor. Also, please provide information on the anticipated environment for vibration, a description of any analysis, and description of vibration modeling related to the probe assembly.
SFPI RAI 9	Please provide analysis of the vendor analysis and seismic testing results and show that the instrument performance reliability, following exposure to simulated seismic conditions representative of the environment anticipated for the SFP structures at Indian Point Energy Center Units 2 and 3, has been adequately demonstrated.
SFPI RAI 10	Please provide the NRC staff with the final configuration of the power supply source for each channel so that the staff may conclude that the two channels are independent from a power supply assignment perspective.
SFPI RAI 11	Please provide the results of the calculation depicting the battery backup duty cycle requirements demonstrating that its capacity is sufficient to maintain the level indication function until offsite resource availability is reasonably assured.
SFPI RAI 13	Please describe the evaluation used to validate that the display location can be accessed without unreasonable delay following a BDB event. Include the time available for personnel to access the display as credited in the evaluation, as well as the actual time (e.g., based on walk-throughs) that it will take for personnel to access the display. Additionally, please include a description of the radiological and environmental conditions on the paths personnel might take. Describe whether the display location remains habitable for radiological, heat and humidity, and other environmental conditions following a BDB event. Describe whether personnel are continuously stationed at the display or monitor the display periodically.

Audit Item Reference	Item Description
SFPI RAI 14	Please provide a list of the procedures addressing operation (both normal and abnormal response), calibration, test, maintenance, and inspection procedures that will be developed for use of the spent SFP instrumentation. The licensee is requested to include a brief description of the specific technical objectives to be achieved within each procedure.
SFPI RAI 15	Please provide the following: a) Further information describing the maintenance and testing program the licensee will establish and implement to ensure that regular testing and calibration is performed and verified by inspection and audit to demonstrate conformance with design and system readiness requirements. Include a description of your plans for ensuring that necessary channel checks, functional tests, periodic calibration, and maintenance will be conducted for the level measurement system and its supporting equipment. b) A description of the in-situ calibration process at the SFP location that will result in the channel calibration being maintained at its design accuracy.
SFPI RAI 16 (new)	Describe actions taken to verify electromagnetic compatibility with the vendor's limited test.
SFPI RAI 17 (new)	Please provide a final configurations of the IP2 and IP3 SFP area, clearly depicting the SFP monitoring Level 1, 2, and 3, the planned locations/placement of the primary and back-up SFP level sensor/probe, and the proposed routing of the cables that will extend from the sensors toward the location of the read-out/display device.

Audit Item Reference	Item Description
SE #1	1. (RCS Venting) The generic analysis in WCAP-17601-P strictly addressed ELAP coping time without consideration of the actions directed by a site's mitigating strategies. WCAP-17792-P extends these analytical results through explicit consideration of mitigating strategies involving RCS makeup and boration. In support of the RCS makeup and boration strategies proposed therein, a generic recommendation is made that PWRs vent the RCS while makeup is being provided. Please provide the following information in regard to this topic: a. Will the mitigating strategy include venting of the RCS? b. If so, please provide the following information: i. The vent path to be used and the means for its opening and closure. ii. The criteria for opening the vent path. iii. The criteria for closing the vent path. iv. Clarification as to whether the vent path could experience two-phase or single-phase liquid flow during an ELAP. If two-phase or liquid flow is a possibility, please clarify whether the vent path is designed to ensure isolation capability after relieving two-phase or liquid flow. v. If relief of two-phase or liquid flow is to be avoided, please discuss the availability of instrumentation or other means that would ensure that the vent path is isolated prior to departing from single-phase steam flow. vi. If a pressurizer power-operated relief valve (PORV) is to be used for RCS venting, please clarify whether the associated block valve would be available (or the timeline by which it could be repowered) in the case that the PORV were to stick open. If applicable, please further explain why opening the pressurizer PORV is justified under ELAP conditions if the associated block valve would not be available. vii. If a pressurizer PORV is to be used for RCS venting, please clarify whether FLEX RCS makeup pumps and FLEX steam generator makeup pumps will both be available prior to opening the PORV. If they will not both be available, please provide justification. c. If RCS venting will not be used, please provide the following information: i. The expected RCS temperature and pressure after the necessary quantity of borated makeup has been added to an unvented RCS. ii. Adequate justification that the potential impacts of unvented makeup will not adversely affect the proposed mitigating strategy (e.g., FLEX pump discharge pressures will not be challenged, plant will not reach water solid condition, adequate boric acid can be injected, increased RCS leakage will not adversely affect the integrated plan timeline, etc.).

Audit Item Reference	Item Description
SE #2	(Westinghouse Standard RCP Seals: NSAL-14-1) On February 10, 2014, Westinghouse issued Nuclear Safety Advisory Letter (NSAL)-14-1, which informed licensees of plants with standard Westinghouse RCP seals that 21 gpm may not be a conservative leakage rate for ELAP analysis. This value had been previously used in the ELAP analysis referenced by many Westinghouse PWRs, including the generic reference analysis in WCAP-17601-P. Therefore, please provide the following information: a. Clarify whether the assumption of 21 gpm of seal leakage per RCP (at 550 degrees F, 2250 psia) remains valid in light of the issues identified in NSAL-14-1. b. Identify the corresponding leakage rate from NSAL-14-1 or other associated documents (e.g., PWROG-14015-P, PWROG-14027-P) that is deemed applicable. c. Provide the plant-specific design parameters associated with the seal leakoff line and confirm whether they are bounded by each of the model input parameters in Table 2 of PWROG-14015-P for the appropriate analysis category. If any parameters in Table 2 are not bounded, please provide justification that the generically calculated leakage rate and maximum pressure are applicable. d. Confirm that the #1 seal faceplate material is silicon nitride for all RCPs. Alternately, if one or more RCPs use a different material, please identify the material used and provide justification for the leakage rate assumed to apply to these RCPs. e. Provide the set pressure and flow area associated with the relief valve on the #1 seal leakoff line common header piping. f. Provide an estimate of the piping diameter, length, and number and type of components for the seal leakoff line common header piping. g. If plant modifications will be undertaken to move the plant to a more favorable category relative to RCP seal leakage, please identify the applicable modifications and discuss the associated completion timeline.
SE #4	(Time line to reflux cooling) Please clarify whether the intended timeline for aligning the FLEX RCS makeup pump may be delayed based on procedural guidance that derives from the analysis in WCAP-17792-P, pages 3-10 through 3-16. Although the staff recognizes that plant operators require leeway to control pumps and equipment in response to plant indications and other symptoms, the staff considers it prudent that equipment alignments proceed as outlined in the integrated plan to the extent possible. Therefore, please provide justification if the operators would delay the alignment of the FLEX RCS makeup pump(s) beyond the time specified in the integrated plan based on initial indications that the reactor coolant pump seal leakage is lower than the value assumed in the ELAP analysis.
SE #5	Please provide adequate basis that calculations performed with the NOTRUMP code (e.g., those in WCAP-17601-P, WCAP-17792-P) are adequate to demonstrate that criteria associated with the analysis of an ELAP event (e.g., avoidance of reflux cooling, promotion of boric acid mixing) are satisfied. NRC staff confirmatory analysis suggests that the need for implementing certain mitigating strategies for providing core cooling and adequate shutdown margin may occur sooner than predicted in NOTRUMP simulations.

Audit Item Reference	Item Description
SE #6	Confirm location of Atmospheric Dump Valve(s) (ADV) and the installed nitrogen supplies to ensure they survive a BDBEE and are available. If not, is there another means to depressurize the steam generators? If location is different for IP2 and IP3, please specify differences.
SE #7	IP3 UFSAR 9.6.2.5 states: As originally designed permanent backup nitrogen supply consisting of nitrogen bottles and piping was provided for the steam generator atmospheric dump valves in the auxiliary feedwater pump room. This supply is no longer credited to support operation of the atmospheric dump valves and has been isolated by manual valve 1A-1775 to ensure an adequate supply of nitrogen is available to operate AFW pump control valves located in the auxiliary feedwater pump room. (1) Is there sufficient nitrogen to control ADVs and AFW pump control valves? (2) Is there sufficient time for an operator to open manual valve 1A-1775 such that the nitrogen supply can be used for the ADVs? (3) What is the configuration for IP2 if it is different than IP3? (4) If manual action is necessary - Walkdown area where operator has to manipulate valve.
SE #8	Walkdown of Core Cooling, RCS Inventory Control and SFP Inventory Control strategies for Phase 1 and Phase 2 – Primary and Secondary connections points – FLEX equipment deployment and hose routing. Also to include areas where manual operator actions are credited as part of these strategies. Looking for habitability and feasibility of operator actions during an ELAP (e.g., environment, lighting, communication with control room).
SE #9	Feb 2014 update – Licensee stated that BASTs are no longer credited as borated water source for FLEX strategies and that the RWST is used instead, with the opposite unit's RWST serving as the backup source of borated water. (1) Coordinate with tornado/missile protection evaluation of tanks for IP2 and IP3 – will one RWST be sufficient for both units? (2) Why are the BASTS no longer credited for RCS inventory control and sub-criticality considering they were missile protected?

Audit Item Reference	Item Description
SE #10	E-portal documents indicate that FLEX equipment will be stored in the interim radwaste storage facility. IP3 UFSAR Section 11.1.1 states that "solid radioactive wastes in the form of dry activated waste (DAW) or solidified (or dewatered) resins may be stored in the Interim Radwaste Storage Facility prior to offsite shipment. The facility is a non-safety, non-seismic concrete structure located west of the access road leading to the Meteorological Tower." (1) Provide documentation that the interim radwaste storage facility is robust with respect to the applicable BDBEE for IPEC (seismic/high wind/flooding/extreme hot/extreme cold). Are the doors missile protected as well? (2) Is equipment strapped down to prevent seismic interaction? (3) Is time-critical or priority FLEX equipment staged in such a manner that allows unrestricted or easy access to equipment (i.e. not blocked by other large FLEX equipment) for deployment? (4) Can deployment doors be opened manually? (CI 3.1.1.2.C-A) (5) Are N and N+1 going to be stored in the IRWSF? Based on the plan view in IP-CALC-14-0003, Figure 1a – it is not clear what the storage arrangement of the FLEX equipment will be? (6) Haul paths from the IRWSF to equipment deployment location – Are they impacted by flooding? Are there contingencies or other haul paths? (7) Walkdown FESB during on-site audit.
SE #11	Feb 2014 update states "the IPEC FLEX strategy has been revised to allow use of a diesel driven air compressor. The compressor may be used to support continued remote operation of Turbine Driven Auxiliary Boiler Feed Pump (TDABFP) for SG level control and Automatic Dump Valves (ADVs)." (1) Is this "diesel driven air compressor" a Phase 2 portable FLEX air compressor or installed equipment? (2) Discuss whether this air compressor survives a BDBEE and is available for FLEX strategies.

Audit Item Reference	Item Description
SE #12	Aug 2014 update states "A climate controlled storage location for the portable equipment is no longer considered. The current plan is to have one FLEX storage building. There is no heating or air conditioning system for the selected storage facility. For an extreme cold event, the minimum indoor temperature within the first eight hours following the event is approximately -6°F which is within the plant's design basis low temperature. Equipment which cannot tolerate storage in the low temperature conditions has been provided with block heaters. The current plan is Diesel Fuel stored with the FLEX equipment will be exposed to the cold temperature of approximately -6°F (as determined in IP-CALC-14-00033) at the end of eight hours following a BDBEE. The plan is that gelling of the diesel fuel will not be a concern following the BDBEE because the fuel procured at Indian Point 2 will conform to a cloud point of 10°F below the regional temperatures provided in ASTM D975-06. The lowest regional temperature (January is considered for conservatism) for the New York area provided in Table X5.1 of ASTM D975 is approximately 3°F (-16 0C). Therefore, the fuel procured at IP2 would have a rated cloud point of approximately -7.0F. As the rated cloud point is below the temperatures it will see inside the storage building, gelling of the fuel is not a concern." (1) Has FLEX equipment been procured yet? What is the design temp (min and max) for the equipment that will be stored in the IRWSF? (2) When will block heaters be turned "on" – during cold weather to maintain FLEX equipment in a "ready" state or sometime after an ELAP event has been declared? (3) Documentation of fuel oil procurement (cloud point of 10 °F below the regional temperature)? (4) Is the 1 °F margin between cloud point temperature and expected extreme low temperature of IRWSF sufficient to ensure gelling doesn't occur? (5) Why did the 6-month update specify "the fuel procured at Indian Point 2, will conform to a cloud point of 10°F below the regional temperatures provided in ASTM D975-06." What about IP3 – do they have a different spec?
SE #13	Please provide adequate justification for the seal leakage rates calculated according to the Westinghouse seal leakage model that was revised following the issuance of NSAL-14-1. The justification should include a discussion of the following factors: a. benchmarking of the seal leakage model against relevant data from tests or operating events, b. discussion of the impact on the seal leakage rate due to fluid temperatures greater than 550°F resulting in increased deflection at the seal interface, c. clarification whether the second-stage reactor coolant pump seal would remain closed under ELAP conditions predicted by the revised seal leakage model and a technical basis to support the determination, and, d. justification that the interpolation scheme used to compute the integrated leakage from the reactor coolant pump seals from a limited number of computer simulations (e.g., three) is realistic or conservative.

Audit Item Reference	Item Description
SE #14	The NRC staff understands that Westinghouse has recently recalculated seal leakoff line pressures under loss of seal cooling events based on a revised seal leakage model and additional design-specific information for certain plants. a. Please clarify whether the piping and all components (e.g., flow elements, flanges, valves, etc.) in your seal leakoff line are capable of withstanding the pressure predicted during an ELAP event according to the revised seal leakage model. b. Please clarify whether operator actions are credited with isolating low-pressure portions of the seal leakoff line, and if so, please explain how these actions will be executed under ELAP conditions. c. If overpressurization of piping or components could occur under ELAP conditions, please discuss any planned modifications to the seal leakoff piping and component design and the associated completion timeline. d. Alternately, please identify the seal leakoff piping or components that would be susceptible to overpressurization under ELAP conditions, clarify their locations, and provide justification that the seal leakage rate would remain in an acceptable range if the affected piping or components were to rupture.
SE #15	Verify that appropriate human factors are applied for the implementation of the FLEX strategies.

Part 3 – Specific Topics for Discussion:

1. Draft of Indian Point OPD/FIP
2. Reactor systems analyses to include a discussion of applicability to WCAP-17601-P, boron mixing, WCAP-17792-P, and Nuclear Safety Advisory Letter (NSAL) 14-1
3. Training
4. Portable (FLEX) equipment maintenance and testing
5. NSRC (SAFER) Response Plan
6. The licensee's plan for coordination with New York State authorities for delivery of Phase 3 FLEX equipment.
7. Check the status of upgrades to the site's communications systems as noted in NRC letter dated May 21, 2013 (ADAMS Accession No. ML13127A115)

Proposed Schedule

Onsite Day 1, Monday, October 27, 2014

0800 Part of NRC team arrives at site; Badging; Technical discussions in Generation Support Building (GSB)

1300 Remainder of team arrives at site; Badging; Dosimetry

1500 Entrance meeting

Onsite Day 2, Tuesday, October 28, 2014

0800 Licensee presentation of strategies

1000 NRC Audit Team Activities:

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

1200 Lunch

1300 NRC Audit Team Activities:

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

1600 NRC Audit Team meeting

1630 Team lead daily debrief/next day planning with licensee

Onsite Day 3, Wednesday, October 29, 2014

0800 Check in at site; meet with Senior Resident/Resident

0900 NRC Mitigating Strategies/SFPI walk-throughs with licensee:

1200 Lunch

1300 Continue NRC Audit Team Activities

1600 NRC Audit Team meeting

1630 Team lead daily debrief/next day planning with licensee

Onsite Day 4, Thursday, October 30, 2014

0800 Continue NRC Audit Team Activities

1200 Lunch

1300 Continue NRC Audit Team Activities

1330 NRC Audit Team meeting

1430 NRC/Licensee pre-exit meeting

1530 NRC/Licensee exit meeting

1600 Audit closeout/departure

The NRC staff's review led to the issuance of the Indian Point ISE and RAI dated November 8, 2013 (ADAMS Accession No. ML13298A805). By letter dated March 26, 2014 (ADAMS Accession No. ML14083A620), the NRC notified all licensees and construction permit holders that the staff is conducting in-office and onsite audits of their responses to Order EA-12-051 in accordance with NRC NRR Office Instruction LIC-111, as discussed above.

The ongoing audit process, to include the in-office and onsite portions, allows the staff to assess whether it has enough information to make a safety evaluation of the Integrated Plans. The audit allows the staff to review open and confirmatory items from the mitigation strategies ISE, RAI responses from the spent fuel pool instrumentation ISE, the licensee's integrated plans, and other audit questions. Additionally, the 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. The audit's onsite portion will occur prior to declarations of compliance for the first unit at each site.

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 staff plans to conduct an onsite audit at Indian Point in accordance with the enclosed audit plan from October 27-30, 2014.

If you have any questions, please contact me at 301-415-2901 or by e-mail at john.boska@nrc.gov.

Sincerely,
/RA/
John Boska, Senior Project Manager
Orders Management Branch
Japan Lessons-Learned Division
Office of Nuclear Reactor Regulation

Docket Nos.: 50-247 and 50-286
Enclosure:
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OFFICE	NRR/JLD/JOMB/PM	NRR/JLD/LA	NRR/JLD/JCBB/BC*	NRR/JLD/JERB/BC*
NAME	JBoska	SLent	SBailey	BPham
DATE	09/26/14	09/29/14	09/30/14	09/26/14
OFFICE	NRR/JLD/JOMB/BC(A)	NRR/DORL/LPL1-1/PM*	NRR/JLD/JOMB/PM	
NAME	MHalter	DPickett	JBoska	
DATE	09/30/14	09/30/14	09/30/14	

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