

## INSPECTION OF THE IMPLEMENTATION OF MITIGATION STRATEGIES ORDER REGARDING THE USE OF NATIONAL SAFER RESPONSE CENTERS

PROGRAM APPLICABILITY: 2507

### 43006-01 INSPECTION OBJECTIVE

To verify that vendors storing, handling, and supplying portable equipment to be used by licensees comply with NRC Order EA-12-049 (Agency-wide Documents Access and Management System (ADAMS) Accession No. ML12056A045), which added requirements for mitigation strategies for beyond-design-basis external events.

### 43006-02 INSPECTION REQUIREMENTS

02.01 The inspector reviews the program, instructions, procedures, plans, and policies and verifies, by observing vendor activities, document reviews, and interviewing vendor staff, that the selected vendor has implemented effective programmatic controls for FLEX-related activities. The vendor's chosen program to ensure licensees are in compliance with the NRC order should be based on the appropriate criteria contained in the contractual agreement between the vendor and the licensees. The vendor's program should be based on the criteria contained in the NRC-approved revision of NEI 12-06, "Diverse and Flexible Coping Strategies (FLEX) Implementation Guide," (ADAMS Accession No. ML12242A378) and which was evaluated by the NRC staff assessment of the National SAFER Response Centers (ML14265A107).

02.02 The lead inspector will prepare an inspection plan in accordance with established guidelines. The inspection plan should provide the scope and basis for the inspection; describe the proposed evaluation of the vendor's activities, including the chosen program procedures and its implementation; and identify the work assignments for each inspector. The inspection plan shall consider inspection of the critical and quality attributes identified in the Phase 3 site response plans. Guidance on inspection plans is contained in IMC 2507, "Vendor Inspections."

### 43006-03 INSPECTION GUIDANCE:

The vendor's program should contain procedures, policies, and instructions that meet the minimum capabilities of off-site resources. NEI 12-06, section 12.2, describes the scope and provisions envisioned for the proper management for off-site FLEX-related activities. The

inspector will take into consideration the 10 areas described in Section 12.2 while conducting the inspection to ensure the vendor has implemented adequate controls for these inspection areas: procurement of materials, equipment and services, conduct of tests, maintenance of equipment, storage and staging of equipment, and corrective actions.

Specific Guidance. The lead inspector will focus the inspection effort based on the program elements specified in the NEI 12-06 and the SAFER program documents to meet the requirements of NRC Order EA-12-049. This inspection procedure is a modified version of IP 43002 because the vendor is not required to implement an Appendix B, 10 CFR Part 50 program due to the equipment being used for beyond-design-basis events. In addition, to help prepare for the inspection, the inspector should become familiar with interim staff guidance (ISG) JLD-ISG-2012-01, Revision 0, "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) and with Nuclear Energy Institute (NEI) 12-06, "Diverse and Flexible Coping Strategies (FLEX) Implementation Guide," Revision 0 (ADAMS Accession No. ML12242A378). In addition the inspector should be aware that NRC has endorsed the Electric Power Research Institute (EPRI) Report 3002000623 titled "Nuclear Maintenance Applications Center: Preventive Maintenance Basis for FLEX Equipment," (ADAMS Accession No. ML13276A573) via letter dated October 7, 2013 (ADAMS Accession No. ML13276A224). These documents describe the NRC's expectations for off-site support including what Phase 3 equipment is necessary and how it should be maintained. The licensees' proposed plans for off-site support were endorsed via letter dated September 26, 2014 (ADAMS Accession No. ML14265A107). This endorsement was the result of the NRC's audit of the National SAFER Response Centers (NSRC). The NRC sought reasonable assurance that the NSRCs would be capable of delivering the FLEX equipment to support licensee's compliance with the Commission's Order. The audit scope focused on the programmatic elements delineated in Section 12 of NEI 12-06. It is intended that NRC's inspection of the NSRC facilities will rely on the results of these audits in determining the focus of the inspection.

After the inspector becomes familiar with the vendor's program and implementing procedures, the inspector will select a sample of activities/equipment for review. For the selected activities, the inspector will request that the vendor provide (or make available for review) a complete package of the pertinent records. The review should include procurement documents, equipment specifications, maintenance records, calibration records of test equipment, and associated documentation pertinent to the area of review. The verification is accomplished by reviewing the vendor's program/procedures, controlling processes and activities, and evaluating the actual implementation of these controls. In addition the inspector could use the most recent NUPIC audit to verify licensee's assessment of their vendor and to verify that any deficiencies identified are being properly addressed in the corrective action program.

The types of equipment that the NSRC (i.e. currently licensees have chosen PEI Co to manage the centers in partnership with AREVA under the name SAFER) will have include: portable backup generators, portable high pressure pumps, portable low pressure pumps, diesel fuel transfer pumps, diesel fuel tanks, diesel powered light towers, water treatment, booster pumps, electrical distribution cabinets, cables, and hoses. The current implementation of the NRC Order Phase 3 has two centers, established in Phoenix and Memphis, which will store four sets

of generic equipment that can be transported upon request to enable plant sites to maintain public health and safety in the face of an extreme event, no matter what causes it.

The inspector will evaluate the effectiveness of the vendor's implementation of their designated program using the guidance below.

03.01 SAFER Program. Verify the vendor's program implementation in accordance with NEI 12-06 by performing the following:

- a. Verify that the vendor program identifies the items and activities to which it applies, and that these activities are accomplished under suitably controlled conditions.
- b. Verify that the organizational description addresses the organizational structure, functional responsibilities, levels of authority, and interfaces.
- c. Verify qualifications, responsibilities, and duties of personnel performing activities affecting FLEX equipment. In order to verify that personnel have been adequately trained, the inspector may conduct interviews with the personnel to ensure they have an understanding of the activities they are performing commensurate with their responsibilities.
- d. Verify that vendor's emergency response process/systems, as described in the site response plans, operate as designed by reviewing documentation of established maintenance and testing program activities.
- e. Verify that vendor's employees know, in case of an emergency, who is responsible for receiving the activation call and what would be the staff's responsibilities for responding to the call.
- f. Verify that procedures are implemented to control changes that could affect the procurement, program procedures, testing, and maintenance of FLEX equipment and that changes do not impact any critical function (e.g., revision to Equipment Technical Requirements Document does not omit important parameters). When applicable, verify that changes were properly communicated between licensees and the vendor (i.e. review SAFER Equipment Committee meeting minutes and recent update to FLEX strategies).
- g. Verify that FLEX equipment handling, maintenance, calibration of test equipment, test and inspection procedures have been established and implemented, including any applicable to sub-vendor activities (i.e. contracted testing or calibration services). Also ensure they include quantitative and qualitative acceptance criteria for determining that activities have been satisfactorily accomplished.

03.02 Procurement Control. Select a sample of procurement documents and verify the implementation of procurement document controls by performing the following:

- a. Verify that procedures are established and implemented for the control and release of procurement documents and subsequent changes.

- b. Verify that technical requirements specified by the licensees' designated purchasing entity to the vendor (i.e., PEI Co), including any applicable administrative, regulatory, or reporting requirements are specified in procurement documents to the vendor's suppliers and complies with the FLEX equipment critical function.
- c. Verify that equipment procured and stored at the NSRCs is as specified per the purchase order and as required for their intended use per the applicable licensees (e.g., Use of appropriate standard mechanical and electrical connections). Receiving inspections is an example where the vendor can examine objective evidence of purchased items by verifying attributes specified in procurement documents to ensure FLEX equipment critical function are verified such as configuration, dimensions, and other pertinent physical characteristics including status of inspections or tests performed, as required by the purchase order.
- d. Verify that any necessary equipment to support the deployment of the FLEX equipment is available and properly maintained.
- e. Verify that contracts with road and air providers are in place, valid and updated to ensure assumptions (i.e. no single external event will preclude capability to supply needed resources to licensees) for deployment of FLEX equipment remain valid.
- f. Verify that the vendor has a documented method for the identification and control of nonconforming material and components to preclude inadvertent use.

03.03 Test, Maintenance and Measuring & Test Equipment (M&TE) Control. As discussed in NEI 12-06, Section 12.2, provisions should be established to ensure that the periodic maintenance, periodic maintenance schedule, testing, and calibration of off-site equipment are comparable/consistent with that of similar on-site FLEX equipment. As such, inspectors can assess test, maintenance, and M&TE controls through the following:

- a. Verify that procedures are established and implemented for the test and maintenance activities. Examples of tests and maintenance activities include receipt inspection, preventive and post-maintenance testing, post-modification, tests after operational/emergency use, and proper use of M&TE.
- b. Verify that test procedures include or reference test objectives, test requirements, applicable prerequisites, and acceptance criteria contained in the applicable technical documents.
- c. Verify that preventive maintenance tests are properly challenging the critical function (i.e. pump discharge pressure is verified) and when deficiencies are identified verify that the proper corrective actions are taken (i.e. FLEX strategies requires action within 90 days).
- d. Verify that test results are documented and evaluated by a qualified individual to ensure the test requirements have been satisfied. Test records should contain sufficient information to demonstrate the tests were performed successfully. Examples of such

information include: the item tested, date of test, tester or data recorder, type of observation, instruments used and the validity of their calibration, results and acceptability, action taken in connection with any deviations noted, and the individual evaluating test results.

- e. Verify that M&TE used to test FLEX critical functions is calibrated, adjusted, and maintained at prescribed intervals prior to use. Verify that the method of calibration for each device is defined and that calibration is against certified equipment having known valid relationships to nationally recognized standards. When M&TE is found to be out of calibration, provisions in the procedures should require an evaluation to verify if previous inspection or test results are affected.

03.04 Handling, Storage, and Deployment. Assess handling, storage, and depolyment controls of FLEX equipment by performing the following:

- a. Verify that procedures have been established and implemented for the control of deployment activities when the response centers are activated, which include proper staging, loading of trucks, marking/labeling, storing of site-specific and generic licensee equipment, out of service status, shipment of items and components, and control of limited shelf life materials.
- b. Verify that personnel are familiar with the bill of ladings already prepared and stored for immediate use and ensure it matches the different storage areas as they pertain to the different licensees. Bill of ladings should specify all the FLEX equipment to be shipped in case of activation and the available means of transportation to meet the deployment requirements, including current agreements with shipping companies.
- c. Verify that operators responsible for ensuring the right equipment is shipped and properly stored post maintenance activities are experienced or trained.
- d. Verify that spare parts for the FLEX equipment are available and in good condition for use at the NSRC and potentially to support licensee needs.

03.05 Corrective Action. Select a sample of corrective action reports and related documents for review. Assess corrective action controls by performing the following:

- a. Verify that procedures have been established and implemented for correcting conditions affecting FLEX equipment as defined by the vendors program.
- b. Verify that corrective action reports provide for documentation and description of the condition, the cause and corrective action taken to prevent recurrence when applicable, review and approval by the responsible authority, status of corrective actions reviewed, and follow-up action taken to verify timely and effective implementation of corrective action.
- c. Verify that deficiencies identified or reported by vendor personnel, licensees or subsuppliers (e.g., receipt inspection rejections, equipment malfunction, maintenance test failures, etc.) are adequately assessed and entered into the corrective action program.

#### 43006-04      REPORTING REQUIREMENT

Inspectors will document any issues in accordance with IMC-0617, "Vendor and Quality Assurance Implementation Inspection Reports." Any issues identified will be processed in accordance with the more-than-minor criteria in the IMC. The highest enforcement action will be issuance of a nonconformance (NON) with the expectation that the vendor will address these issues in their corrective action program because these facilities are implementing beyond-design-basis requirements. Currently any findings identified will be associated with the requirements of the NRC order and the programmatic documents established by the Vendor. If numerous deficiencies are identified it is expected that licensees address how they are coordinating with the vendor on the resolution of these issues. In this case the inspector should capture in the cover letter the number of repetitive findings identified.

#### 43006-05      RESOURCE ESTIMATE

This inspection procedure is used for the triennial assessment of the off-site national response centers that support licensees in a beyond-design-basis event. The resource estimate for this inspection procedure is approximately 160 hours of direct inspection effort. The resource estimate is based on a 40-hour week inspection per NSRC site performed by two inspectors.

#### 43006-06      REFERENCES

Manual Chapter 2507, "Vendor Inspections" (ADAMS Accession No. ML13247A725)

NEI 12 06, Rev 0, "Diverse and Flexible Coping Strategies (FLEX) Implementation Guide" (ADAMS Accession No. ML12242A378)

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)

Staff Assessment of National SAFER Response Centers established in response to Order EA-11-049, dated September 26, 2014 (ADAMS Accession No. ML14265A107)

END

Attachment:  
Revision history

Attachment 1 – Revision History  
IP 43006

Commitment Tracking Number	Accession Number Issue Date Change Notice	Description of Change	Description of Training Required and Completion Date	Comment and Feedback Resolution Accession Number (Pre-Decisional, Non-Public)
N/A	ML16271A278 09/30/16 CN 16-025	This is the initial issuance of an Inspection Procedure which will be used to verify licensee's satisfactory implementation of NRC Order EA-12-049, as it pertains to the Phase 3 implementation plan for off-site support during a beyond-design-basis emergency.	N/A	ML16271A292