ATTACHMENT 82002.03

REVIEW OF EXERCISE OBJECTIVES AND EXERCISE SCENARIO FOR POWER REACTORS

82002.03-01 INSPECTION OBJECTIVE

To verify, during plant construction (and prior to fuel load of the plant), the adequacy of the licensee's Emergency Preparedness (EP) exercise objectives and scenario for power reactors; and to ensure the licensee's ability to transition to monitoring under the reactor oversight process.

82002.03-02 INSPECTION REQUIREMENTS

02.01 Evaluate if the licensee provided the Nuclear Regulatory Commission (NRC) and the Federal Emergency Management Agency (FEMA) with its proposed exercise scenario and objectives, with sufficient time before the exercise, to permit an appropriate NRC review.

02.02 Determine whether the licensee's proposed exercise scenario will enable exercise play to address the previously submitted exercise objectives.

02.03 Determine whether the licensee's emergency preparedness exercise objectives and scenario provide an adequate framework for the type and scope of exercise proposed. Determine whether the scenario is realistic, including hostile action scenario content.

02.04 Determine whether the licensee's proposed objectives for the exercise meet emergency preparedness requirements and provide reasonable acceptance criteria. (The requirements may include providing a scenario that drives offsite exercise play for evaluation of offsite response organizations, which will be conducted by the Federal Emergency Management Agency (FEMA).)

82002.03-03 INSPECTION GUIDANCE

General Guidance

Technical evaluations of the scenario shall be performed by the NRC inspectors. However, responsibility for exercise control is to be maintained by the licensee.

Evaluations conducted in accordance with this procedure are limited to the onsite staff, activities, records, and facilities of the licensee. Where necessary to verify licensee performance concerning interactions with organizations and persons involved in offsite emergency preparedness, inspection activities are to be limited to reviews of pertinent records available through the licensee. If additional information is needed about offsite emergency preparedness, it can be obtained from FEMA.

This attachment should be used in conjunction with the performance of Inspection Procedure 82002, "Part 52, Emergency Preparedness Program, Attachment 82002.04, "Emergency Preparedness Exercises," and Inspection Procedure 65001, "Inspections of Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC) Related Work, "Attachment 65001.18, "Inspection of Emergency Preparedness ITAAC," section, 02.14, "Exercises and Drills."

The scenario is to be evaluated primarily on relative credibility and timing of events. The inspector shall review and verify the technical details including, but not limited to, engineering operational parameters, engineering logic, source term, radiological instrumentation data, and units of data provided by the licensee's controllers. The inspector shall utilize insights from accident sequences evaluated as part of the site-specific probabilistic risk analysis (PRA) to develop a realistic scenario that may include likely equipment failures, human errors, recovery actions, and accident sequence progression. Scenario-related problems and poorly controlled exercises shall be evaluated during the exercise. The NRC inspection of the scenario is to be against the requirements of 50.47(b)(14) and Section IV.F. of Appendix E to 10 CFR 50. Results of these NRC inspections are to be documented in the inspection reports for those inspections completed under Attachment 82002-04, "Emergency Preparedness Exercises" and Attachment 65001.18, "Inspection of Emergency Preparedness ITAAC," section, 02.14, "Exercises and Drills."

Specific Guidance

03.01 Exhibit 1 provides the schedule recommended for the development, submission, and review of the licensee exercise scenario. This schedule is in accordance with the guidance in Interim Radiological Emergency Preparedness (REP) Program Manual, dated August 2002 (see Table 3, "Milestones for REP Exercise Process").

03.02 Major onsite elements of licensee exercises are to be included in the objectives. These elements normally include aspects of the Emergency Plan to be exercised and may include other areas, such as the use of a new set of procedures that licensees wish to evaluate for their own information.

a. Elements to be considered in exercises are listed in NUREG-0654, Part II.

b. The inspector is to review the licensee's Emergency Plan and related documentation to confirm adherence with the guidance of NUREG-0654. Licensees may be credited for exercising individual elements during any drill or exercise. Regulatory Guide 1.101, Revision 4, allows the licensee to develop methods and solutions different from those described in NUREG-0654. In the event that the licensee has not formally committed to NUREG-0654, they will need to show an alternate approach, which will need to be approved by the NRC.

c. The level of specificity of the objectives shall provide measurable and/or observable criteria for evaluators. The objectives will also include a description of adequate or acceptable levels of response.

d. Onsite objectives are to provide for a demonstration of the correction of previously identified drill or exercise weaknesses.

e. For the qualifying/prior to fuel loading exercise, the NRC team leader will contact FEMA to confirm that offsite objectives are consistent with exercise frequency requirements, testing communication interfaces between onsite and offsite facilities, and testing of the public notification systems.

03.03 Review exercise objectives and scenario.

a. Exercise Objectives. Attention to details in the review of exercise objectives is required because they provide the basis for the development of the exercise scenario and acceptance criteria for exercise evaluation. The licensee's objectives must be commensurate with the type and scope of exercise proposed. Timely NRC/FEMA evaluation of exercise objectives is necessary to provide enough time for the licensee to change or revise objectives in advance of the exercise, where necessary, without hardship.

b. Exercise Scenario. This scenario should determine whether the licensee's emergency response personnel are familiar with their emergency response duties (See 10 CFR 50, Appendix E, Part IV.F.) and to provide for (1) a test of the licensee's integrated capabilities for timely response to a radiological accident, (2) a test of the content of selected implementing procedures and methods, (3) a test of emergency equipment, and (4) a test of communications networks. The objectives and scenario are to provide meaningful training for the emergency response organization, including hostile action-based scenario content.

03.04 Review the scenario package for familiarization with the type of accident proposed, an indication of how the objectives will be met, and the organization and outline of the contents. All major sections are to be included in the package. Consider the credibility and logical sequencing of events. The sequence of events must provide sufficient opportunity for player response activities to satisfy exercise objectives and be coordinated to a timeline that delineates the continuity of events in a logical order (e.g., a release not starting before the failure of related equipment; the point of release being consistent with anticipated pathways; sufficient time allowed for the plume to traverse the emergency planning zone (EPZ) before the location, centerline, and magnitude are determined). Insights from the site-specific probabilistic risk analysis may be used to assist in this determination. Obtain these insights through discussion with the regional Senior Reactor Analyst, resident inspector staff, licensee PRA group, or by review of PRA documentation (if available in usable form).

82002.03-04 INSPECTION RESOURCES

The estimated time to complete this inspection procedure is 12 hours.

82002.03-05 REFERENCES

Inspection Manual Chapter 2515, Appendix C "Use of Insights Derived from Probabilistic Risk Assessment (PRA)".

Regulatory Guide 1.101, "Emergency Planning and Preparedness for Nuclear Power Reactors," Revision 4, July 2003.

NUREG-0654/FEMA-REP-1, Rev. 1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," November 1980 (Microfiche Address: 01997/314 - 01998/71).

Supplement 1 to NUREG-0654, "Criteria for Utility Offsite Planning and Preparedness - Final Report," September 1988 (Microfiche Address: 46972/313-348).

Supplement 1 to NUREG-0737, "Clarification of TMI Action Plan Requirements-Requirements for Emergency Response Capability," January 1983 (Microfiche Address: 17301/342-363).

Interim Radiological Emergency Preparedness (REP) Program Manual, dated August 2002 (see Table 3, “Milestones for REP Exercise Process).

END

Exhibits:

1. Recommended Schedule for Development, Submission, and Review of Exercise Scenario
2. Revision History for IP 82002.03

Exhibit 1
Recommended Schedule for Development,
Submission, and Review of Exercise Scenario

Goals (number of days before an exercise)	Activities
150 days	The NRC regional office informs the licensee of its intent, to participate, requests cooperation, and provides agency exercise evaluation criteria (objectives) to the licensee.
90 days	The licensee submits exercise evaluation areas (objectives) to NRC and FEMA.
80 days	NRC discusses evaluation of objectives with the licensee and negotiates the submittal of revised objectives if major revision is required and coordinates with FEMA if offsite responses are affected.
75 days	Complete NRC and FEMA review of evaluation areas (objectives). The NRC regional office transmits a letter of confirmation to the licensee documenting the discussion of the review of exercise objectives.
60 days	The licensee submits the exercise scenario and associated materials to the NRC and FEMA for review. Where applicable, NRC objectives are to be included.
60 to 45 days	NRC and FEMA review the scenario for consistency with objectives, credibility, and sequencing of events.
45 days	NRC and FEMA review of exercise scenario completed. The NRC regional office informs the licensee of the results of its scenario review, along with the results of the FEMA scenario review if offsite responses are affected.

END

Exhibit 2

Revision History for IP 82002.03

Commitment Tracking Number	Issue Date	Description of Change	Training Needed	Training Completion Date	Comment Resolution Accession Number
N/A	11/08/2011 CN 11-030 ML111040292	Initial issue to support inspections of construction programs described in IMC 2504, Construction Inspection Program: Inspection of Construction and Operational Programs. Completed 4 year search of historical CNs and found no commitments related to this Inspection Procedure.	None	N/A	N/A