

NRC INSPECTION MANUAL

FCSS

INSPECTION PROCEDURE 88050

EMERGENCY PREPAREDNESS

PROGRAM APPLICABILITY: 2600

88050-01 INSPECTION OBJECTIVES

The objectives of the Emergency Preparedness procedure are to ensure that:

- 01.01 The licensee's emergency preparedness program is maintained in a state of operational readiness.
- 01.02 The licensee has developed appropriate procedures to implement its emergency preparedness program.
- 01.03 Appropriate training is provided to plant personnel to implement the emergency procedures.
- 01.04 The licensee's emergency preparedness program is properly coordinated with offsite support agencies.
- 01.05 The licensee conducts drills and/or exercises to test the facility emergency plan.
- 01.06 The emergency equipment and facilities specified in the emergency preparedness program are operable and properly maintained.

88050-02 INSPECTION REQUIREMENTS

02.01 Program Changes

- a. Verify that any changes made to the licensee's emergency preparedness program since the last inspection meet commitments and NRC requirements.
- b. Verify that the licensee has made no changes that could decrease the overall effectiveness of the emergency preparedness program without prior NRC approval.

- c. Verify that any changes to the emergency preparedness program have been properly coordinated with the appropriate offsite support groups and agencies.

- d. Verify that the licensee has evaluated any significant facility additions and/or modifications for their impacts on the emergency preparedness program and has made appropriate revisions to the plan.
- e. Verify that the licensee's emergency call list is current.

02.02 Implementing Procedures

- a. Through a sample review, verify that the emergency procedures have been reviewed and approved as specified in the plan.
- b. Verify that the procedures are maintained current in the field locations where they would have to be used.
- c. Verify that the procedures provide for the detection and proper classification of accidents, mitigation of the consequences of accidents, assessment of releases, personnel accountability, notification and coordination, and authority for initiating evacuation alarms and safe shutdown, including guidance for restoring the facility to a safe condition after an accident involving either radioactive or other hazardous materials.
- d. Verify that the procedures specify re-entry requirements for responding to a post-criticality accident.

02.03 Training and Staffing

- a. Through a record review and discussions with onsite personnel, verify that the licensee has provided training that is consistent with the frequency and performance objectives outlined in the emergency plan.
- b. Through document reviews and discussions with onsite personnel, verify that training was provided that covered site-specific emergency procedures. Confirm that the training covered the responsibilities of on-site personnel in the event of those accident scenarios postulated as the most probable for the specific site, including the use of team training for such scenarios.
- c. Verify that the training covers the use of any special emergency equipment such as communication devices, respirators or self contained breathing air (SCBA) packs, chemical-resistant suits, monitoring devices for radioactive or other hazardous materials, etc. Determine whether personnel required to use such equipment have been properly qualified.
- d. Review the training that the licensee provides to offsite responders, including fire, police, medical, and other emergency personnel. That training should include any special instructions and orientation tours. Site-specific and special hazards should be covered, including the location and nature

of radioactive and/or hazardous materials and moderator exclusion areas where water is prohibited for fire fighting. Periodic refresher training should be offered.

- e. Review the prefire plan to assure that it is current and reflects any special considerations such as unique chemical hazards or areas where water must be excluded for fire fighting due to criticality concerns.
- f. Verify that the licensee has established and implemented provisions to ensure appropriate staffing levels of trained emergency personnel for all shifts.

02.04 Offsite Support Agencies

- a. Verify that written agreements have been made with each agency specified in the emergency plan and that those agreements have been updated and renewed at the required frequency.
- b. Verify by random selection that the agencies for which agreements are in effect are periodically contacted by the licensee for training and taking part in drills or otherwise reviewing the plans in the agreements so that the agencies are familiar with their respective roles in emergency responses.
- c. Contact, by random selection, certain offsite agencies such as the local hospital(s), fire department(s), and the State radiological health agency, to determine their understanding of their respective written agreements with the licensee. If it is found that the agencies do not fully understand what is expected of them, bring any deficiencies to the licensee's attention for action.
- d. Verify that the licensee has maintained its certification of compliance with the Emergency Planning and Community Right-To Know Act of 1986.

02.05 Drills and Exercises

- a. Verify that the licensee conducts quarterly communications checks with offsite response organizations, to check and update all necessary telephone numbers.
- b. Verify that the licensee has invited the offsite response organizations to participate in the biennial exercises. Participation is recommended but not required.
- c. Verify that the biennial exercises use accident scenarios postulated as the most probable for the specific site and that the scenarios are not known by most of the participants. The scenarios should be varied such that all elements of the emergency plan are tested during a two year period.

- d. Verify that the licensee conducts a critique for each exercise using individuals not having direct implementation responsibility for the plan. The critique must evaluate the appropriateness of the plan, emergency procedures, facilities, equipment, training of personnel, and overall effectiveness of the response. Deficiencies found by the critique must be tracked and corrected.
- e. Verify that the licensee has provisions for updating the emergency plan based on the incorporation of management-approved recommendations from audits, drills, actual events and training.
- f. Determine whether there have been past operational events that required implementation of the site emergency plan. If so, determine whether there were any problems or deficiencies associated with the emergency plan and that the licensee has corrected those deficiencies.
- g. Whenever possible, observe a drill or exercise.

02.06 Emergency Equipment and Facilities

- a. Selectively examine the emergency equipment and kits specified in the emergency plan, including any onsite medical facilities. Verify that they are checked and serviced at the required frequencies. Confirm that proper inventory levels are maintained and periodically checked. Verify that the equipment is operable (i.e., survey meters are within calibration frequencies, air tanks on respiratory equipment are full, acid showers and eyewashes are functional, etc.) and maintained in good condition.
- b. Examine onsite and offsite rendezvous facilities or areas where personnel must go for a given severity-level accident (e.g., "Alert", "Site Area Emergency") and verify that the areas are readily accessible and contain operable and adequate communications and other gear as specified in the emergency plan.
- c. The emergency plan should describe the types of sampling or other actions to be taken during an emergency involving extensive effluent releases and accidental criticality. Offsite effluent sampling and retrieval of TLDs and film badges should also be specified. Physically examine a sample of the offsite equipment to verify that it meets the specifications in the emergency plan. Verify that the equipment is operable and maintained.

88050-03 INSPECTION GUIDANCE

General Guidance

10 CFR 70.22(i)(3) describes the basic elements of the licensee's emergency preparedness program. Regulatory Guide 3.67, "Standard Format and Content for Emergency Plans for Fuel Cycle and Materials Facility," provides guidance acceptable to the NRC staff on the information to be included in emergency plans. The specific requirements pertaining to how the licensee will address those elements are contained in the approved emergency plan, which is part of the license. Therefore, emergency plan commitments are enforceable license conditions.

Specific Guidance

03.01 Program Changes

The inspector must use professional judgment in determining whether changes could impact the effectiveness of the licensee's emergency plan. Changes that should be considered include those that involve the licensee's organizational structure, responsibilities, authorities, staffing levels, and key emergency personnel. Other items that could impact the effectiveness of the emergency plan include significant plant changes or modifications (such as the addition of a new process or technology, the addition of new hazardous materials, or changes in inventories of existing hazardous materials) and changes to the agreements with the offsite support agencies. The inspector should confirm that the licensee has established management controls to ensure that the emergency plan is maintained up to date and offsite support agencies are kept current with program revisions. Those controls should also establish guidance for identifying when prior NRC approval is required for proposed changes to the program.

03.02 Implementing Procedures

The implementing procedures should be reviewed in detail only once. After that, only procedure revisions need be reviewed, to ensure that the procedures remain usable to the onsite staff. The inspector should conduct discussions with several members of the emergency staff, including a shift supervisor, a shift fire fighter, and another emergency responder to determine whether they are familiar with the procedures and the procedures are user-friendly. The inspector should also verify that the licensee has established provisions for ensuring that the emergency procedures are kept up to date at all remote locations.

03.03 Training and Staffing

The inspector should conduct a walkthrough with a shift supervisor and other appropriate individuals to discuss the emergency training that they received. The notification, callout and evacuation procedures should also be discussed to ensure the effectiveness of that training. The purpose of the walkthrough is not to "grade" an individual on his/her

knowledge, but to verify that he/she received the proper training and knows where to find the appropriate procedures and equipment.

In reviewing the training provided to offsite responders, the inspector should determine whether the licensee has in place a method to ensure that the training frequency is maintained and that the training content is revised to reflect changes to the plant and onsite hazards. Particular attention should be paid to new processes, buildings, and hazardous chemicals, including their location and inventory. Unique problems, such as water exclusion areas for criticality control, should be clearly identified to off-site responders beforehand. The prefire plan should take this information into account.

03.04 OffSite Support Agencies

Inspector contact with selected agencies need only be established once. However, a followup contact may be desirable if serious deficiencies are found involving how the agency interprets its responsibilities. In such cases, the licensee should be informed so that it can take appropriate action to clarify the situation. Such agencies are not licensees and should only be encouraged (if previously asked by the licensee) to take part in drills.

Some licensees are required to comply with the EPA SARA (Superfund Amendment and Special Reauthorization Act) Title III regulations, also known as the "Emergency Planning and Community Right-To-Know Act" (the Act) of 1986, which specifies action in: (1) emergency response planning, (2) emergency response reporting, (3) hazardous chemical inventory reporting, and (4) toxic chemical release reporting. Review the "Hazardous Chemicals" section of the emergency response plan to determine what requirements apply to the licensee and determine how the licensee certifies compliance with the Act. Verify that the licensee reviews major facility and process changes (i.e., addition of new processes or significant changes in process technology and chemistry) to ensure that it remains in compliance with the Act.

03.05 Drills and Exercises

Although resource limitations may prohibit the observation of each biennial drill, not more than one should be skipped. If there were significant problems with the previous drill, then the next scheduled drill should be observed. It may be necessary for the region to announce an inspection to ensure adequate coordination with the licensee.

03.06 Emergency Equipment and Facilities

It is not intended that all equipment or evacuation points be examined --only a random selection based on the inspector's

professional judgment and the licensee's past performance. Only one offsite sampling area and one criticality badge station need be observed. If problems are identified, the licensee should take appropriate action to ensure that the remaining stations are unaffected.

88050-04 REFERENCES

10 CFR 70.22(g)(i), Footnote Reference - Section IV, "Content of Emergency Plans," Appendix E, 10 CFR 50.

Reg. Guide 3.16, "General Fire Protection Guide for Plutonium Processing and Fuel Fabrication Plants," January 1974.

Reg. Guide 3.34, "Assumptions Used for Evaluating the Potential Radiological Consequences of Accidental Nuclear Criticality in a Uranium Fuel Fabrication Plant," Rev. 1, July 1979.

Reg. Guide 3.67, "Standard Format and Content for Emergency Plans for Fuel Cycle and Materials Facility," Rev. 0, January 1992.

Reg. Guide 3.35, "Assumptions Used for Evaluating the Potential Radiological Consequences of Accidental Nuclear Criticality in a Plutonium Processing and Fuel Fabrication Plant," Rev. 1, July 1979.

Reg. Guide 8.5, "Criticality and Other Interior Evacuation Signals," Rev. 1, March 1981.

Reg. Guide 8.12, "Criticality Accident Alarm Systems," December 1974.

Reg. Guide 8.42, "Emergency Planning for Fuel Cycle Facilities and Plants Licensed Under 10 CFR Parts 50 and 70," Rev. 1, September 1979.

NUREG-0810, "Standard Review Plan for the Review of Radiological Contingency Plans for Fuel Cycle and Materials Facilities," July 1981.

NUREG-1140, "A Regulatory Analysis of Emergency Preparedness for Fuel Cycle and Other Radioactive Material Licensees," reprinted 1987.

NUREG-1320, "Nuclear Fuel Cycle Accident Analysis Handbook," 1988.

ANSI/AN-8.3-1986, "Criticality Accident Alarm System."

NRC Information Notice No. 89-46, "Confidentiality of Exercise Scenarios."

NRC Memorandum from R. M. Bernero and E. L. Jordan to J. M. Taylor, "Lessons Learned Review of the Sequoyah Fuels Corporation Event of November 17, 1992," dated October 27, 1994.

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