
Issue 88: Earthquakes and Emergency Planning

DESCRIPTION

Historical Background

This issue was initiated to address concerns raised by the Union of Concerned Scientists. (References ¹, ², and ³.) The purposes for including this issue as a generic issue are to: (1) provide brief background information that summarizes the history of the issue; (2) reduce the probability of resurrecting the issue and duplicating effort; and (3) identify the final disposition of the issue.

Safety Significance

Recent PRAs have indicated that earthquakes (and other external events) can cause severe reactor accidents which are comparable with internally initiated accident event sequences. The results argued for a reexamination of the emergency response measures to ascertain whether they are adequate to protect the health and safety of the public.⁴ This issue effects all operating and planned nuclear power plants.

Proposed Solution

In June 1979, the Commission began a formal reconsideration of the role of emergency planning in ensuring the continued protection of the public health and safety in areas around nuclear power plants. On August 19, 1980, the Commission published its rule on emergency planning establishing 16 planning standards [see

10 CFR 50.47(b)]⁵ which must be generally met by both onsite and offsite emergency response plans for nuclear power plants. The planning standards are addressed by specific evaluation criteria in NUREG-0654,⁶ Revision 1. Thus, the NRC emergency planning requirements and guidance reflect coordinated efforts with the Federal Emergency Management Agency (FEMA). Both the NRC and FEMA shared the view that the required emergency response plans have considerable flexibility to respond to a wide variety of adverse conditions, including those resulting from an earthquake.

However, on December 21, 1984, the Commission published proposed amendments to its emergency planning requirements [10 CFR 50.47(b) and 10 CFR 50, Appendix E]. These amendments proposed to explicitly adopt by rule the Commission's interpretations of its existing rules. Final amendments to 10 CFR 50, Appendix E, were prepared by the staff and forwarded to the Commission in SECY-85-283.⁷

In October 1986, the Commission determined that the proposed amendments were not necessary. Based on examinations and reviews of public comments concerning the proposed amendment, it was stated:⁸

¹ Memorandum for H. Denton from T. Speis, "Earthquakes and Emergency Planning," January 18, 1984. [8402020014]

² Letter to W. Dircks (U.S. Nuclear Regulatory Commission) from S. Sholly (Union of Concerned Scientists), December 22, 1983. [8502270371]

³ Letter to J. Asselstine (U.S. Nuclear Regulatory Commission) from S. Sholly (Union of Concerned Scientists), December 22, 1983. [8502090516]

⁴ Letter to J. Asselstine (U.S. Nuclear Regulatory Commission) from S. Sholly (Union of Concerned Scientists), December 22, 1983. [8502090516]

⁵ Federal Register Notice 45 FR 37011, "Decommissioning of Nuclear Facilities Regulation (10 CFR Parts 30, 40, 50, and 70)," May 30, 1980.

⁶ NUREG-0654, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," U.S. Nuclear Regulatory Commission, February 1980, (Rev. 1) November 1980.

⁷ SECY-85-283, "Final Amendments to 10 CFR Part 50, Appendix E; Consideration of Earthquakes in Emergency Planning," U.S. Nuclear Regulatory Commission, August 21, 1985. [8508300319]

⁸ Federal Register Notice 51 FR 39390, "10 CFR Part 50, Emergency Planning and Preparedness;

"The Commission is satisfied that none of the information submitted by commenters indicates that its interpretations of emergency planning rules in the San Onofre and Diablo Canyon proceeding was mistaken or that the potential for seismic impacts on emergency planning is a significant enough concern for large portions of the nation to warrant amendment of the regulations. Nor did the comments suggest any additional cost-effective measures which might be taken to provide further assurance of protection in the event of an earthquake occurring simultaneously with a radiological release. Moreover, the en banc decision of the United States Court Of Appeals for the District Of Columbia Circuit, affirming the Commission's interpretation of its emergency planning rules, has removed regulatory uncertainty in this area ... If the need to consider earthquakes in emergency planning is raised in an adjudication, the Commission expects to adhere to the Diablo Canyon and San Onofre precedents unless a convincing case is made that application of these precedents to the facts of the case would cause a significant safety problem."

In view of the above, the Commission decided that a rulemaking which would simply make explicit the Commission's interpretation of its rules is unnecessary and the proposed amendment was withdrawn.⁹ The withdrawal of the proposed amendment will therefore not have a significant effect on the emergency preparedness requirements established in August 1980.

CONCLUSION

This issue was RESOLVED and no new requirements were established.

Withdrawal," October 28, 1986.

⁹ Federal Register Notice 51 FR 39390, "10 CFR Part 50, Emergency Planning and Preparedness; Withdrawal," October 28, 1986.

