



REGULATORY GUIDE

OFFICE OF NUCLEAR REGULATORY RESEARCH

REGULATORY GUIDE 1.101

(Draft was issued as DG-1022)

EMERGENCY PLANNING AND PREPAREDNESS FOR NUCLEAR POWER REACTORS

A. INTRODUCTION

In § 50.47, "Emergency Plans," of 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities," paragraph (a)(1) states that no operating license for a nuclear power reactor will be issued unless a finding is made by NRC that there is reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency. For operating power reactors, 10 CFR 50.54(s)(2) requires that "If...the NRC finds that the state of emergency preparedness does not provide reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency...the Commission will determine whether the reactor shall be shut down until such deficiencies are remedied or whether other enforcement action is appropriate." In both cases, the NRC will base its finding on a review of the Federal Emergency Management Agency (FEMA) findings and determinations as to whether State and local emergency plans are adequate and capable of being implemented, in addition to the NRC assessment as to whether the licensee's emergency plans are adequate and capable of being implemented.

Standards are listed in 10 CFR 50.47 that must be met by the onsite and offsite emergency response plans in order for the staff to make a positive finding

that there is reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency.

This regulatory guide provides guidance to licensees and applicants on methods acceptable to the NRC staff for complying with the Commission's regulations for emergency response plans and preparedness at nuclear power reactors. Licensees and applicants may propose means other than those specified by the provisions of the Regulatory Position of this guide for meeting applicable regulations. No new positions or requirements are being imposed by this regulatory guide. Implementation of the NUMARC guidance by licensees will be on a strictly voluntary basis.

Any information collection activities mentioned in this regulatory guide are contained as requirements in 10 CFR Part 50, which provides the regulatory basis for this guide. The information collection requirements in 10 CFR Part 50 have been cleared under OMB Clearance No. 3150-0011.

B. DISCUSSION

Revision 1 to NUREG-0654/FEMA-REP-1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in

USNRC REGULATORY GUIDES

Regulatory Guides are issued to describe and make available to the public methods acceptable to the NRC staff of implementing specific parts of the Commission's regulations, to delineate techniques used by the staff in evaluating specific problems or postulated accidents, or to provide guidance to applicants. Regulatory Guides are not substitutes for regulations, and compliance with them is not required. Methods and solutions different from those set out in the guides will be acceptable if they provide a basis for the findings requisite to the issuance or continuance of a permit or license by the Commission.

This guide was issued after consideration of comments received from the public. Comments and suggestions for improvements in these guides are encouraged at all times, and guides will be revised, as appropriate, to accommodate comments and to reflect new information or experience.

Written comments may be submitted to the Regulatory Publications Branch, DFIPS, ADM, U.S. Nuclear Regulatory Commission, Washington, DC 20555.

The guides are issued in the following ten broad divisions:

- | | |
|-----------------------------------|-----------------------------------|
| 1. Power Reactors | 6. Products |
| 2. Research and Test Reactors | 7. Transportation |
| 3. Fuels and Materials Facilities | 8. Occupational Health |
| 4. Environmental and Siting | 9. Antitrust and Financial Review |
| 5. Materials and Plant Protection | 10. General |

Copies of issued guides may be purchased from the Government Printing Office at the current GPO price. Information on current GPO prices may be obtained by contacting the Superintendent of Documents, U.S. Government Printing Office, Post Office Box 37082, Washington, DC 20013-7082, telephone (202)512-2249 or (202)512-2171.

Issued guides may also be purchased from the National Technical Information Service on a standing order basis. Details on this service may be obtained by writing NTIS, 5285 Port Royal Road, Springfield, VA 22161.

Support of Nuclear Power Plants,"¹ was published in November 1980 to provide specific acceptance criteria for complying with the standards set forth in 10 CFR 50.47. These criteria provide a basis for NRC licensees and State and local governments to develop acceptable radiological emergency plans and improve emergency preparedness. NUREG-0654/FEMA-REP-1 is the product of the joint FEMA/NRC Steering Committee established to coordinate the agencies' work in emergency preparedness associated with nuclear power plants. Revision 2 of Regulatory Guide 1.101 endorsed Revision 1 of NUREG-0654/FEMA-REP-1. It should also be noted that there are ongoing studies of shutdown risk, and when these studies are complete the results may warrant additional revisions to this regulatory guide.

C. REGULATORY POSITION

The criteria and recommendations contained in Revision 1 of NUREG-0654/FEMA-REP-1 are considered by the NRC staff to be acceptable methods for complying with the standards in 10 CFR 50.47 that must be met in onsite and offsite emergency response plans. Furthermore, FEMA, NRC, and other involved Federal agencies intend to use the guidance contained in Revision 1 of NUREG-0654/FEMA-REP-1 in their individual and joint reviews of the radiological emergency response plans and preparedness of State and local governments and the plans and preparedness of applicants for and holders of a license to operate a nuclear power reactor.

The guidance contained in NUMARC/NESP-007 (Revision 2, January 1992),² "Methodology for

¹Copies are available for a fee from the U.S. Government Printing Office, P.O. Box 37082, Washington, DC 20113-7082; and from the National Technical Information Service, Springfield, VA 22161.

²Copies of this NUMARC document, as well as the Regulatory Analysis that was developed for Revision 3 of Regulatory Guide 1.101, are available at the Commission's Public Document Room, 2120 L Street NW., Washington, DC.

Development of Emergency Action Levels," is considered by the NRC staff to be an acceptable alternative method to that described in Appendix 1 to NUREG-0654/FEMA-REP-1 for developing emergency action levels (EALs) required in Section IV.B of Appendix E, "Emergency Planning and Preparedness for Production and Utilization Facilities," to 10 CFR Part 50. Licensees who propose to revise their currently approved EAL classification scheme using the NUMARC/NESP-007 method must adhere to the requirements in Section IV.B of Appendix E to 10 CFR Part 50, which states, in part, that:

"These emergency action levels shall be discussed and agreed on by the applicant and State and local governmental authorities and approved by NRC. They shall also be reviewed with the State and local governmental authorities on an annual basis."

Licensees may use either NUREG 0654/FEMA-REP-1 or NUMARC/NESP-007 in developing their EAL scheme but may not use portions of both methodologies.

D. IMPLEMENTATION

The purpose of this section is to provide information to licensees and applicants regarding the NRC staff's plans for using this regulatory guide.

Except in those cases in which an applicant or licensee proposes an acceptable alternative method for complying with specific portions of the Commission's regulations, the method described in this regulatory guide will be used in the evaluation of emergency plans and preparedness for nuclear power reactors.

REGULATORY ANALYSIS

A separate regulatory analysis was prepared for this Revision 3 to Regulatory Guide 1.101. The regulatory analysis is contained in "Regulatory Analysis for Revision 3 of Regulatory Guide 1.101 To Accept the Guidance in NUMARC/NESP-007, Revision 2, as an Alternative Methodology for the Development of Emergency Action Levels," and is available for inspection or copying for a fee in the Commission's Public Document Room, 2120 L Street NW., Lower Level, Washington, DC, in the file for Revision 3 of Regulatory Guide 1.101.

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

**OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, \$300**

**FIRST CLASS MAIL
POSTAGE AND FEES PAID
USNRC
PERMIT NO. G-67**