U.S. NUCLEAR REGULATORY COMMISSION

STANDARD REVIEW PLAN

OFFICE OF NUCLEAR REACTOR REGULATION

13.3 EMERGENCY PLANNING

REVIEW RESPONSIBILITIES

Primary - Emergency Preparedness Licensing Branch (EPLB), OIE

Secondary - None

I. AREAS OF REVIEW

The applicant's emergency planning, as described in his Safety Analysis Report (SAR), is reviewed by EPLB of the Division of Emergency Preparedness of the Office of Inspection and Enforcement. This primary review responsibility involves evaluation of evidence of preliminary planning (in the Preliminary Safety Analysis Report, PSAR) or substantive evidence of planning (in the Final Safety Analysis Report, FSAR) for emergency preparedness directed at situations involving real or potential radiological hazards. The review is made against 10 CFR Part 50, Appendix E, the planning standards described in 10 CFR Part 50, §50.47(b) and the specific criteria given in the guidance document "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants" (NUREG-0654 Revision 1) and "Functional Criteria for Emergency Response Facilities" (NUREG-0696). In addition, the review at the OL stage includes a review of the FEMA findings on the state of preparedness of offsite authorities with responsibility for taking protective measures in the plume exposure pathway EPZ and the ingestion exposure pathway EPZ.

Although EPLB has the overall review responsbility for emergency preparedness, certain aspects of technical reviews will be performed by or through the Emergency Preparedness Development Branch (EPDB). Examples of these areas are meteorological information, emergency action levels, emergency response facilities, and evacuation time estimates. EPLB will coordinate with EPDB on these reviews.

II. ACCEPTANCE CRITERIA

The acceptance criteria for the overall status of an applicant's emergency preparedness are as follows.

1. The applicant's plans for coping with an emergency meet the requirement standards of 10 CFR Part 50, §50.47(b) as elaborated in 10 CFR Part 50, Appendix E (IV) and the criteria of NUREG-0654 Revision 1, and NUREG-0696. (The criteria of NUREG-0654 have the same status as a regulatory guide.) For the CP review, the requirements of 10 CFR Part 50, §50.34(a)(10) as provided in 10 CFR Part 50, Appendix E, Part II must be met.

2. The FEMA findings on the offsite plans have been reviewed and it is determined that these offsite plans are compatible with applicant's plans and meet the applicable criteria of NUREG-0654, Revision 1. For the CP review, a specific FEMA finding is not required and the reviewer must evaluate the status of preparedness against the requirements of 10 CFR Part 50, Appendix E, Part II, and NUREG-0718, Appendix B, Sections I.D.2 and III.A.1.2. (Section I.D.2 is reviewed only to assure that a slave of the SPDS is located in the TSC and EOF).

3. A full-scale joint exercise, meeting the requirements of 10 CFR Part 50, Appendix E, Part IV.F, has successfully demonstrated that the applicant and the State and local organizations are capable of taking adequate protective actions should a radiological emergency occur.

III. REVIEW PROCEDURES

Following the acceptance of each SAR, the review is conducted on a schedule which is established by NRR for each SAR. The review consists of an evaluation of the emergency planning information submitted by the applicant using the foregoing Acceptance Criteria. Although the bulk of this information should be found in Section 13.3 of the SAR (or referenced therein) the reviewer should gain familiarity with the site, including the emergency planning zones, demography, land use, plant design and layout, and major accidents postulated by the applicant. The reviewer should examine relevant sections of the SAR, particularly sections found in Chapters, 1, 2, 6, 7, 9, 11, and 15.. The reviewer should also gain familiarity with proposed radiation protection activities and other operational matters that interface with emergency plans, particularly as described in the SAR in sections of Chapters 12 and 13. Draft and final environmental statements for the proposed facility should also be consulted when available during the review process. This information may be supplemented by a personal visit to the site by the reviewer and meetings with the applicant. In cases where the applicant is a licensee for a previously licensed plant, NRC Inspection Reports and the Health Physics Appraisal should be reviewed. For each case, formal consultation with the Federal Emergency Management Agency (FEMA) with respect to the relevant state and local government emergency response capabilities is necessary.

For each case assigned, the reviewer must determine whether or not the acceptance criteria identified in II above have been satisfactorily met. Any deficiencies should be identified and should form the basis for request for additional information or transmittal of position statements to the applicant, and should be reviewed with the Section Leader or Branch Chief. Such further review may result in a determination that (a) the applicant has proposed acceptable alternatives, (b) the facts of the case do not warrant the application of the criterion in question, or (c) the facts do warrant the application of the criterion in question and no acceptable alternative has been proposed or identified. If any deficiencies remain in the last category at the conclusion of the review, they must be identified in the Safety Evaluation Report and subsequently resolved with the participation of higher level NRC management.

It should be recognized that the detailed application of the acceptance criteria will in many instances require the exercise of judgement on the part of the reviewer. The reasonableness and adequacy of the factors involved should be viewed in the light of general emergency planning and response experience, bearing in mind that the broad objective of radiological emergency plans is to protect the public by mitigating the potential health and safety consequences of radiation exposure. Ideally, such plans would assure neither an over reaction nor an under reaction to unexpected events. Reviewers should be particularly alert, however, to provisions which may result in a possible under reaction to a serious event.

At the PSAR stage, the reviewer should assess the applicant's plans as they relate to Section II of 10 CFR Part 50, Appendix E and NUREG-0718, Appendix B, Sections I.D.2 and III.A.1.2 (Section I.D.2 is reviewed only to assure that a slave of the SPDS is located in the TSC and EOF). He should request a status report from FEMA on the state and local plans and preparedness in support of the licensee, but should emphasize that formal FEMA findings are not required for this review and FEMA participation in CP hearings is not contemplated.

At the beginning of the FSAR stage review, the reviewer should examine the Construction Permit docket record, including PSAR, staff Safety Evaluation Report(s), recommendations of the Advisory Committee on Reactor Safeguards, and the public hearing record, for information that may bear on the FSAR review of plans for coping with emergencies. For multi-unit sites, the reviewer should also carefully distinguish whether the plans are applicable only to the first unit or to subsequent units as well.

The reviewer should also formally request FEMA to review offsite supporting plans and provide findings and determinations of this review to the NRC on a schedule agreed upon between the two agencies. The FEMA review may be performed pursuant to the FEMA proposed rule "Review and Approval of State and Local Radiological Emergency Plans and Preparedness" 44 CFR Part 350, (Federal Register, Pages 42341-42347, June 24, 1980), or the NRC/FEMA Memorandum of Understanding (Federal Register, Pages 82713-82717, December 16, 1980). At the conclusion of the review, findings on acceptability of the applicant's proposed plans for coping with emergencies should be prepared for input to the staff's Safety Evaluation Report.

Special assistance requests, particularly with regard to the evaluation of meteorological information, emergency action levels, emergency response facilities, and evacuation time estimates should be coordinated through the Emergency Preparedness Development Branch, OIE, which will routinely provide for the technical review of these areas.

IV. EVALUATION FINDINGS

The desired evaluation findings at the PSAR stage should be substantially equivalent to the following statement:

> Based on our review of the applicant's preliminary plans for coping with emergencies, and our review of FEMA's status report on offsite plans and capabilities, we find that preliminary plans are acceptable and either meet or exceed the minimum requirements of 10 CFR Part 50, Appendix E, Part II and the criteria of NUREG-0718, Appendix B, Sections I.D.2 and III.A.1.2 (Section I.D.2 is reviewed only to assure that a slave of the SPDS is located in the TSC and EOF). They provide reasonable assurance that there will be compatibility of the final emergency plans with facility

design features, site layout, and site location to such considerations as access routes, surrounding population, land use, and local jurisdictional boundaries for the EPZs as well as the means by which the standards of 10 CFR Part 50, §50.47(b) will be met.

(Subsequent paragraphs should summarize the specific bases for the finding, including how the plans meet each of the elements A through H of 10 CFR Part 50, Appendix E, Part II, and the results of the status report submitted by FEMA.)

The desired Safety Evaluation Report at the FSAR stage should summarize specific bases for the conclusions including how the plans meet each of the standards of 10 CFR Part 50, §50.47(b). The desired evaluation finding at the FSAR stage should be substantially equivalent to the following:

Based on our review against the criteria in "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," NUREG-0654, Revision 1, November 1980, and NUREG-0696, "Functional Criteria for Emergency Response Facilities," we conclude that, providing the items identified as required conditions of the full-power license are accomplished, the Emergency Plan provides for an acceptable state of emergency preparedness and meets the requirements of 10 CFR Part 50 and Appendix E thereto and the criteria of NUREG-0737, Items I.D.2, III.A.1.2, and III.A.2. (Section I.D.2 is reviewed only to assure that a slave of the SPDS is located in the TSC and EOF).

The license has committed to correct the following areas where improvement is needed by the dates indicated.

(List the conditions)

The Federal Emergency Management Agency (FEMA) has provided interim findings on the state and local emergency response plans. FEMA concludes that State and local preparedness is adequate to cope with an accident at

Based upon our review of the licensee's plans and procedures, the NRC and FEMA evaluation of the joint exercise, and our review of the FEMA findings, we find that the state of onsite and offsite emergency preparedness provides reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency.

V. IMPLEMENTATION

The following is intended to provide guidance to applicants and licensees regarding the NRC staff's plan for using this SRP section.

Except in those cases in which the applicant proposes an acceptable alternative method for complying with specified portions of the Commission's regulations, the methods described herein will be used by the staff in its evaluation of conformance with Commission regulations.

Implementation schedules for conformance to parts of the methods discussed herein are contained in the referenced regulations, regulatory guides, and NUREGs.

VI. REFERENCES

1. NUREG-0654, Revision 1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants."

2. 10 CFR Part 50, §50.34(a)(10).

3. 10 CFR Part 50, §50.34(b)(6)(v).

4. 10 CFR Part 50, §50.47(b).

5. 10 CFR Part 50, Appendix E, "Emergency Plans for Production and Utilization Facilities."

6. Regulatory Guide 1.70, "Standard Format and Content of Safety Analysis Reports for Nuclear Power Plants."

7. Proposed 44 CFR Part 350, "Review and Approval of State and Local Radiological Emergency Plans and Preparedness."

8. NRC/FEMA Memorandum of Understanding, December 16, 1980.

9. NUREG-0696, Functional Criteria for Emergency Response Facilities.

10. NUREG-0718, "Licensing Requirements for Pending Applications for Construction Permits and Manufacturing Licenses."