

8. EMERGENCY MANAGEMENT

8.1 Purpose of Review

The purpose of reviewing the applicant's emergency management plan is to determine if the applicant has established, before the start of operations, adequate emergency management facilities and procedures to protect workers, the public, and the environment. In preparing its emergency plan, the applicant may use either this Standard Review Plan (SRP) or Regulatory Guide 3.67, "Standard Format and Content for Emergency Plans for Fuel Cycle and Materials Facilities," issued January 1992. The applicant may provide the information requested for the emergency plan once and then cross-reference it in other sections.

Regulations in 10 CFR 70.22, "Contents of Application" require an emergency management plan or an emergency evaluation if the licensee is authorized to possess (1) enriched uranium or plutonium for which a criticality accident alarm system is required, (2) uranium hexafluoride in excess of 50 kilograms (kg) (110 pounds (lb)) in a single container or a total of 1,000 kg (2,200 lb), or (3) plutonium in excess of 2 curies in unsealed form or on foils or plated sources. A licensed facility that meets the above criteria is required to possess an emergency management plan when an evaluation (or the integrated safety analysis (ISA) Summary referenced in lieu of the evaluation) shows that the maximum dose to a member of the public off site from a release of radioactive materials would exceed 0.01-sievert (Sv) (1-rem) effective dose equivalent or an intake of 2 milligrams (mg) of soluble uranium.

The baseline design criteria (BDC) of Title 10 of the *Code of Federal Regulations* (10 CFR) Part 70, "Domestic Licensing of Special Nuclear Material," incorporate emergency capability. The criteria are intended to ensure the control of licensed material, the evacuation of personnel, and the availability of emergency facilities.

8.2 Responsibility for Review

Primary: Assigned Licensing Staff

Secondary: Licensing Project Manager

Supporting: Regional Emergency Preparedness Inspector
ISA Reviewer
Fuel Facility Inspection Staff

8.3 Areas of Review

The U.S. Nuclear Regulatory Commission (NRC) staff should review the applicant's submittal for an acceptable level of evidence of planning for emergency preparedness directed at situations involving real or potential radiological hazards. In particular, the review should address those design features, facilities, functions, and equipment that may affect some aspect of emergency planning or the capability of an applicant to cope with facility emergencies. In addition, the review should address coordination with offsite emergency response organizations. The staff should either review the emergency plan in accordance with 10 CFR 70.22(i)(1)(ii) and the guidance contained in the acceptance criteria below or review the applicant's evaluation (or the ISA Summary referenced in lieu of the evaluation) that an emergency plan is not needed in accordance with 10 CFR 70.22(i)(1)(i).

The NRC staff reviewer should address the areas of review, as described in Sections 8.3.1 and 8.3.2 below.

8.3.1 Emergency Plan

If the applicant submits an emergency plan, the staff should evaluate the emergency plan against 10 CFR 70.22(i)(1)(ii) and Regulatory Guide 3.67, which provides a standard format and content for an emergency plan. Elements in the emergency plan to be reviewed include the following:

- a facility description (including both onsite and offsite emergency facilities)
- the types of accidents
- the classification of accidents
- the detection of accidents
- the mitigation of consequences (and safe shutdown)
- the assessment of releases
- the responsibilities of the licensee
- notification and coordination
- information to be communicated and parties to be contacted
- training
- safe shutdown (recovery and facility restoration)
- exercises and drills
- hazardous chemical inventories and locations
- the responsibilities for developing and maintaining the emergency program and its procedures

8.3.2 Evaluation That No Emergency Plan Is Required

If the applicant submits an evaluation or references the ISA Summary to demonstrate that an emergency plan is not required, the staff should review the information against 10 CFR 70.22(i)(1)(i) and NUREG-1140, "A Regulatory Analysis on Emergency Preparedness for Fuel Cycle and Other Radioactive Material Licensees" dated January 1, 1988. NUREG/CR-6410, "Nuclear Fuel Cycle Facility Accident Analysis Handbook," issued March 1998, also contains useful information. Areas evaluated should include the following:

- a description of the facility

- the types of materials used, including both radioactive material and hazardous chemicals
- the types of accidents
- the detection of accidents
- site-specific information used to support the evaluation
- an evaluation of the consequences

Review Interfaces

In addition to Chapter 8 of the application, the reviewer should examine information in the following other areas to ensure that it is consistent with the information in Chapter 8:

- Review information about the facility, process description, geography, and demographics as applied to emergency planning under SRP Chapter 1.
- Review information on the safety program, ISA commitments, and ISA documentation applied to emergency planning under SRP Chapter 3.
- Review information about radiological releases under SRP Chapter 4.
- Review information about chemical releases under SRP Chapter 6.
- Review information on configuration management, maintenance, training and qualifications, procedures, audits and assessment, incident investigations, record management, and other quality assurance elements under SRP Chapter 11.

8.4 Acceptance Criteria

8.4.1 Regulatory Requirements

The regulation at 10 CFR 70.22(i)(1)(i) specifies when an applicant is not required to submit an emergency plan to the NRC; if an applicant is required to submit an emergency plan, 10 CFR 70.22(i)(3) describes the information that the emergency plan must include. In addition, 10 CFR 70.64(a)(6) requires applicants to address the control of licensed material, the evacuation of personnel, and the availability of emergency facilities for the design of new facilities.

8.4.2 Regulatory Guidance

Regulatory guidance for preparing an emergency plan includes the following sources:

- Regulatory Guide 3.67
- NUREG-1140
- NUREG/CR-6410

8.4.3 Regulatory Acceptance Criteria

8.4.3.1 Emergency Plan

The reviewer should evaluate the adequacy of the proposed emergency plan against the requirements in 10 CFR 70.22(i)(3) and the specific acceptance criteria provided in

Sections 8.4.3.1.1 through 8.4.3.1.14 of this SRP. The reviewer should find the applicant's emergency plan acceptable if it meets the regulatory requirements and the acceptance criteria described below.

8.4.3.1.1 Facility Description

The emergency plan should describe the facility and site, the area near the site, and the licensed activities. These descriptions should include the following:

- a detailed drawing of the site showing the following features:
 - onsite and near offsite (within 1.61 kilometers (km) (1 mile (mi))) structures with building numbers and labels
 - roads and parking lots on site and main roads near the site
 - site boundaries showing fences and gates
 - major site features
 - water bodies within approximately 1.61 km (1 mi)
- a general area map covering a radius of approximately 16.1 km (10 mi), a U.S. Geological Survey topographical quadrangle (7½-minute series, including the adjacent quadrangle(s) if the site is located less than 1.61 km (1 mi) from the edge of the quadrangle), and a map or aerial photograph indicating onsite and near-site structures within a radius of approximately 1.61 km (1 mi)¹
- stack heights, typical stack flow rates, and efficiencies of any emission control devices
- a general description of licensed and other major activities conducted at the facility and the type, form, and quantities of radioactive and other hazardous materials that are normally on site, by location (use and storage) and building, and hazardous characteristics (exposure rates, pH, temperature, and other characteristics) that are important to emergency management
- certification by the plant manager (or the individual authorized by the applicant) that the applicant has met all responsibilities under the Emergency Planning and Community Right To Know Act of 1986, Title III, Public Law 99-499, in accordance with 10 CFR 70.22(i)(3)(xiii)

8.4.3.1.2 Onsite and Offsite Emergency Facilities

The emergency plan should list and describe onsite and offsite facilities that could be relied on in an emergency. The emergency plan should include the following:

¹ The map should include the location of sensitive facilities near the site, such as hospitals, schools, nursing homes, nearest residents, fire department, prisons, environmental sampling locations, and other structures and facilities that are important to emergency management.

- a list and description of both onsite and offsite emergency facilities, by location and purpose
- a description of emergency monitoring equipment that is available for personnel and area monitoring and for assessing the release to the environment of radioactive or hazardous chemicals incident to the processing of licensed material
- a description of the onsite and offsite services that support emergency response operations, including the following:
 - decontamination facilities
 - medical treatment facilities
 - first aid personnel
 - fire fighters
 - law enforcement assistance
 - ambulance services
- the applicant's commitment to the following:
 - facilities of adequate size and appropriate location that are designated, equipped, and ready for emergency use
 - adequate backup facilities required by the emergency plan and supporting documents that are available and ready for use
 - appropriate equipment and supplies necessary to support emergency response activities that are accessible during accident conditions
 - emergency equipment that is inventoried, tested, and serviced on a periodic basis to ensure accountability and reliability
 - sufficient reliable primary and backup communications channels available to accommodate emergency needs
 - offsite emergency resources and services that are identified and ready to ensure their timely mobilization and use
 - operational engineering information, such as current as-built drawings and procedures, that are readily available in the emergency facilities
 - sufficient equipment for personnel protection and monitoring
 - systems in place to alert onsite and offsite personnel in case of an emergency

8.4.3.1.3 Types of Accidents

For each general type of accident identified in the ISA Summary for which protective actions may be needed, the emergency plan should describe the following:

- the process and physical location(s) where the accidents could occur
- complicating factors and possible onsite and offsite consequences, including releases of nonradioactive hazardous chemicals incident to the processing of licensed material that could impact emergency response efforts
- the accident sequence that has the potential for the greatest radiological or toxic chemical impact
- figure(s) projecting doses and toxic substance concentrations as a function of distance and time for various meteorological stability classes, including a description of how the applicant projected such doses or concentrations (e.g., computer models and assumptions)

8.4.3.1.4 Classification of Accidents

The emergency plan should classify accidents as follows:

- The emergency plan classification system should include the following two classifications:
 - (1) Alert: Events that may occur, are in progress, or have occurred that could lead to a release of radioactive material or hazardous chemicals incident to the processing of licensed material; however, the release is not expected to require a response by an offsite response organization to protect persons off site.
 - (2) Site area emergency: Events that may occur, are in progress, or have occurred that could lead to a significant release of radioactive material or hazardous chemicals incident to the processing of licensed material and that could require a response by offsite emergency response organizations to protect persons off site.
- The emergency plan should identify the classification (alert or site area emergency) expected for each accident identified in the emergency plan.
- The emergency plan should specify emergency action levels (EALs) at which an alert or site area emergency will be declared. EALs are specific conditions that require the performance of emergency response measures. The applicant's EALs should be consistent with Appendix A to Regulatory Guide 3.67 and should be comparable to the U.S. Environmental Protection Agency (EPA) Protective Action Guides described in EPA 400-R-92-001, "Manual of Protective Action Guides and Protective Actions for Nuclear Incidents," issued May 1992. Transportation accidents more than 1.61 km (1 mi) from the facility should not be classified.
- The emergency plan should designate the personnel positions and alternates with the responsibility for accident classification during normal operations and back shifts.

8.4.3.1.5 Detection of Accidents

For each type of accident identified, the emergency plan should describe the following:

- the means of detecting the accident
- the means of detecting any release of radioactive material or hazardous chemicals incident to the processing of licensed material
- the means of alerting the operating staff
- the anticipated response of the operating staff

8.4.3.1.6 Mitigation of Consequences

For each accident identified in the ISA Summary, the emergency plan should briefly describe measures and equipment to be used for safe shutdown and the mitigation of consequences to workers on site and off site and to the public off site.

8.4.3.1.7 Assessment of Releases

The emergency plan should describe the following aspects of the applicant's procedures to be used to promptly and effectively assess the release of radioactive material or hazardous chemicals incident to the processing of licensed material:

- procedures for estimating or measuring the release rate or source term
- valid computer codes used to project doses or concentrations to the public or environment and their associated assumptions, along with adequate justifications to show the validity of the assumptions
- types, methods, frequencies, implementation times, and other details of onsite and offsite sampling and monitoring that will be performed to assess a release of radioactive materials or hazardous chemicals incident to the processing of licensed material
- the method for assessing collateral damage to the facility (especially items relied on for safety)

The emergency plan should describe the applicant's procedure for validating any code used to assess releases of radioactive material or hazardous chemicals incident to the processing of licensed material.

8.4.3.1.8 Responsibilities

The emergency plan should describe the emergency response organization and administration that ensure effective planning, implementation, and control of emergency preparedness activities. In addition, the applicant should make the following commitments:

- Procedures will clearly define the organizational structure and chain of command.
- Staffing and resources will be sufficient to accomplish all assigned tasks.

- Procedures will clearly define responsibilities and authority for each management, supervisory, and professional position. Responsibility is assigned for the coordination of onsite and offsite emergency response preparedness.
- Procedures will clearly define interfaces with supporting groups, both on site and off site.
- Mutual cooperation agreements exist or will be entered into with local agencies, such as fire, police, ambulance and rescue, and medical units.
- Plant management measures will be in place through procedures to audit and assess emergency preparedness to ensure site readiness to handle emergencies and to identify and correct problems.
- The onsite emergency response organization will provide effective command and control of the site during the assessment, mitigation, and recovery phase of an accident.
- The emergency public information system will provide advance and ongoing information to the media and public on subjects that would be discussed during an emergency, such as radiation hazards, chemical hazards, site operation, and site emergency plans.
- The schedule of emergency preparedness procedure development will ensure that procedures are available to support startup and operation of new processes and facilities on site.

8.4.3.1.9 Notification and Coordination

The emergency plan should provide reasonable assurance that emergency notification procedures will enable the emergency organization to correctly classify emergencies, notify emergency response personnel, and initiate or recommend appropriate actions in a timely manner, on the basis of the following:

- Emergency events are classified on the basis of the current emergency plan.
- Notification procedures minimize distraction of shift operating personnel and include concise, preformatted messages. Appropriate followup messages to offsite authorities are issued promptly.
- Information on the nature and magnitude of the hazards is made available to the appropriate emergency response personnel.
- Radiological and chemical source term data are available to the command post, technical support center, emergency operation center, and appropriate State personnel in cooperation with the NRC.
- When available, offsite field monitoring data are logged, compared with source term data, and used in the protective action recommendation process.
- Protective Action Guides are available and are used by the appropriate personnel in a timely manner.

- The emergency public information program ensures timely dissemination of accurate, reliable, and understandable information.
- Systems are in place, if required, to alert, notify, and mobilize onsite and offsite response personnel in case of an emergency.
- Procedures are in place to notify and coordinate with responsible parties when some personnel, equipment, and facility components are not available.

The emergency plan should describe who will take the following actions and how he or she will act promptly and effectively:

- the decision to declare an alert or site area emergency
- the activation of the onsite emergency response organization during all shifts
- the prompt notification of offsite response authorities that an alert or site area emergency has been declared, including the licensee's initial recommendation for offsite protective actions (normally within 15 minutes of classification)
- the notification to the NRC Operations Center (as soon as possible and, in any case, no later than 1 hour after a declared emergency)
- the decision regarding which onsite protective actions to initiate
- the decision regarding which offsite protective actions to recommend
- the decision to request support from offsite organizations
- the decision to terminate the emergency or enter recovery mode

8.4.3.1.10 Information To Be Communicated

The emergency plan should describe the information to be communicated during an emergency, including the following:

- a standard reporting checklist to facilitate timely notification
- the types of information to be provided concerning facility status, radioactive releases or hazardous chemicals incident to the processing of licensed material, and protective action recommendations
- a description of preplanned protective action recommendations to be made to each appropriate offsite organization
- the offsite officials to be notified, as a function of the classification of the event
- the recommended actions to be taken by offsite organizations for each accident treated in the emergency plan

8.4.3.1.11 Training

The emergency plan should describe the frequency, performance objectives, and plans for the emergency response training that the licensee will provide to workers. The plan should include the following:

- the topics and general content of training programs for the licensee's onsite and offsite emergency response personnel to satisfy the objectives described above
- the administration of the training program, including responsibility for training, the positions to be trained, the schedules for training, the frequency of retraining, the use of team training, and the estimated number of hours of initial training and retraining
- the training to be provided on the use of protective equipment, such as respirators, protective clothing, monitoring devices, and other equipment used in emergency response
- the training program for onsite personnel who are not members of the emergency response staff
- any special instructions and orientation tours that the licensee would offer to fire, police, medical, and other nonlicensee emergency personnel who may be required to respond to an emergency to ensure that they know the emergency plan, assigned duties, and effective response to an actual emergency

8.4.3.1.12 Safe Shutdown (Recovery and Facility Restoration)

The emergency plan should describe the following aspects of the applicant's plans for adequately restoring the facility to a safe status after an accident and recovery after an emergency:

- the methods and responsibilities for assessing the damage to and status of the facility's capabilities to safely control radioactive material or hazardous chemicals associated with the process
- the procedures for promptly determining the actions necessary to reduce any ongoing releases of radioactive material or hazardous chemicals incident to the processing of licensed material and to prevent further incidents
- the provisions for promptly and effectively accomplishing required restoration actions
- key positions in the recovery organization

8.4.3.1.13 Exercises and Drills

The emergency plan should state the applicant's commitment to conduct exercises and drills in a manner that demonstrates the capability of the organization to plan and perform an effective response to an emergency. An adequate plan should demonstrate the following:

- Qualified individuals for each position in the emergency response organization demonstrate task-related knowledge through periodic participation.
- Drill performance is assessed against specific scenario objectives using postulated accidents that adequately test personnel, equipment, and resources, including previously identified weaknesses.
- Effective player, controller, evaluator, and observer predrill briefings are conducted.
- Scenario data and exercise messages provided by the controllers effectively maintain the timeline and do not interfere with the emergency organization's response to exercise scenario events, except where safety considerations are involved.
- Trained evaluators are used to identify and record participant performance, scenario strengths and deficiencies, and equipment problems.
- The prestaging of equipment and personnel is minimized to realistically test the activation and staffing of emergency facilities.
- Critiques are conducted promptly and include a followup plan for correcting any identified weaknesses and improving training effectiveness.
- Emergency drills demonstrate that resources are effectively used to control the site, mitigate further damage, control radiological releases, perform required onsite activities under simulated radiation/airborne and other emergency conditions, accurately assess the facility's status during an accident, and initiate recovery.
- Emergency drills demonstrate personnel protection measures, including controlling and minimizing hazards to individuals during fires, medical emergencies, mitigation activities, search and rescue, and other similar events.
- The emergency drills demonstrate that onsite communications effectively support emergency response activities.
- The emergency drills demonstrate that the emergency public information organization disseminates accurate, reliable, timely, and understandable information.
- Provisions are made for conducting quarterly communications checks with offsite response organizations.
- Offsite organizations are invited to participate in the biennial onsite exercise, which tests the major elements of the emergency plan and response organizations.

8.4.3.1.14 Responsibilities for Developing and Maintaining the Emergency Program and Its Procedures

The emergency plan should describe the following aspects of the responsibilities for developing and maintaining the emergency program and its procedures:

- the means for ensuring that revisions to the emergency plan and the procedures used to implement the emergency plan are adequately prepared, kept up to date (normally within 30 days of any changes), and distributed to all affected parties, including the NRC
- the provisions for approving the implementing emergency procedures, making and distributing changes to the procedures, and ensuring that each person responsible for an emergency response function has immediate access to a current copy of the emergency procedures²
- procedures for allowing offsite response organizations 60 days to comment on any new emergency plan or significantly updated emergency plans³

8.4.3.2 Evaluation That No Emergency Plan Is Required

The staff should review the adequacy of the evaluation (or the referenced ISA Summary) that no emergency plan is required against the requirements in 10 CFR 70.22(i)(2) and the specific criteria provided in Sections 8.4.3.2.1 through 8.4.3.2.4 of this SRP. This evaluation should be acceptable if it meets the regulatory requirements and the acceptance criteria given below.

8.4.3.2.1 Facility Description

The evaluation should describe the facility and site, the area near the site, and the licensed activities conducted at the facility. To be considered sufficient to support the evaluation, these descriptions should include the following:

- a detailed drawing of the site showing (1) onsite and near offsite (within 1.61 km (1 mi)) structures, with building numbers and labels, (2) roads and parking lots on site and main roads near the site, (3) site boundaries, including fences and gates, (4) major site features, (5) water bodies within approximately 1.61 km (1 mi), and (6) the location(s) of the nearest residents
- the stack heights, typical stack flow rates, and efficiencies of any emission control devices
- a general description of licensed and other major activities conducted at the facility and the type, form, and quantities of radioactive material used

8.4.3.2.2 Types of Accidents

The evaluation should describe or refer to each type of accident identified by the ISA Summary that has maximum offsite consequences that exceed the limit specified in 10 CFR 70.22(i)(1)(i). In addition, the following information should be available for review:

- the process and physical location where the accident could occur

² Provisions for approving changes to the emergency plan and the procedures and the individuals authorized to make those changes should be clearly stated.

³ The applicant does not need to provide offsite organizations with amendments to emergency plans that do not affect an organization and those allowed by 10 CFR 70.32(i) before it submits them to the NRC.

- complicating factors and offsite consequences, including the release of nonradioactive hazardous chemicals incident to the processing of licensed material
- the accident sequence that has the potential for the greatest radiological and toxic chemical impact

8.4.3.2.3 Detection of Accidents

For each type of accident identified, the evaluation should describe the following:

- the means of detecting the accident
- the means of detecting any release of radioactive or hazardous chemicals incident to the processing of licensed material
- the means of alerting the operating staff
- the anticipated response of the operating staff

8.4.3.2.4 Evaluation of Maximum Public Exposure

To demonstrate that no emergency plan is required, an applicant may either (1) request that its total possession limit for radioactive material be reduced below the emergency plan threshold in 10 CFR 70.22(i)(1) or (2) perform a site-specific evaluation (or refer to the ISA Summary, as appropriate) to demonstrate that maximum public exposure is less than the limits specified in 10 CFR 70.22(i)(1)(i).

The evaluation should make available the following information sufficient to allow for independent verification:

- the type of accident (e.g., fire, explosion, hazardous chemicals released that are incident to the processing of licensed material, and nuclear criticality)
- the location of the accident
- the maximum source term
- the solubility of material
- the facility design or items relied on for safety and the proposed release fraction
- the location and distance of the nearest member of the public to the facility
- the dose model and process used to verify the reliability of the model and the validity of the assumptions
- the assumed worst case weather condition
- the maximum calculated exposure to a member of the public at the facility boundary

The evaluation should list and describe the factors in 10 CFR 70.22(i)(2) that the applicant considered in evaluating the maximum dose to members of the public. The applicant should demonstrate why the factors used in the evaluation are appropriate when compared with the factors in NUREG-1140. If the factors and evaluation show that the maximum dose to a member of the public off site from a release of radioactive materials could not exceed 0.01-Sv (1-rem) effective dose equivalent or the intake of 2 mg of soluble uranium, no emergency plan is required in accordance with 10 CFR 70.22(i)(1)(i).

8.4.3.3 Requirements for New Facilities or New Processes at Existing Facilities

The application should address the BDC for new facilities or new processes at existing facilities that require a license amendment under 10 CFR 70.72, "Facility Changes and Change Process." Regulations in 10 CFR 70.64 (a)(6) require that the BDC must be applied to the design of new processes but do not require retrofits to existing facilities or existing processes; however, all facilities and processes must comply with the performance requirements in 10 CFR 70.61, "Performance Requirements." The licensee or applicant should clearly state how the design of the facility or process provides for the emergency capability to maintain control of the following:

- licensed material and hazardous chemicals produced from licensed material, including:
 - how the site, facility, or process was designed to process and store both licensed materials and hazardous chemicals either produced from licensed material or used in the process (referencing the licensee or applicant's sitewide security plan, if desired)
 - controls on the interface of hazardous chemicals with the licensed material process safety program
- evacuation of onsite personnel, including the criteria used designing the facility to allow personnel to evacuate (e.g., time, dose, ease of egress)
- onsite emergency facilities and services that facilitate the use of available offsite services, including:
 - the offsite services that will be needed in an emergency at the facility
 - the criteria used to design the facility to detect accidents
 - the criteria used to design the facility to alert facility staff of an accident
 - the criteria was used to design the facility to notify and coordinate with both onsite and offsite personnel
 - the criteria used to design the facility to allow for the transportation of personnel to onsite and offsite facilities or locations

8.5 Amendments or Changes to the Emergency Plan

The applicant may make changes to the approved emergency plan without NRC approval if the changes do not decrease the effectiveness of the plan and the applicant submits copies of the changes to the NRC and appropriate organizations within 6 months of making the changes in accordance with 10 CFR 70.32(i). The applicant may not implement proposed changes that decrease the effectiveness of the emergency plan without prior application to and approval of the NRC.

8.6 Review Procedures

8.6.1 Acceptance Review

The primary reviewer should evaluate the application to determine whether it addresses the areas of review discussed in Section 8.3 above. If significant deficiencies are identified, the reviewer(s) should ask the applicant to submit additional material before the safety evaluation begins.

8.6.2 Safety Evaluation

After determining that the application is acceptable for review in accordance with Section 8.6.1 above, the primary reviewer should perform a safety evaluation against the acceptance criteria described in Section 8.4 above. If the primary reviewer identifies the need for additional information during the safety evaluation, the primary reviewer should coordinate with the licensing project manager in preparing a request for additional information.

8.6.2.1 Emergency Plan

After the NRC staff receives an acceptable application from the applicant, the primary reviewer should conduct a complete review of the applicant's emergency plan and assess its acceptability in accordance with Section 8.4.3.1 above. The reviewer should verify that emergency planning is consistent with the potential accident sequences described in the ISA Summary. The ISA Summary reviewer and emergency plan reviewer should coordinate their efforts to ensure the resolution of any issues concerning the emergency plan relative to ISA Summary information.

Although the section of the licensee's submittal entitled "Emergency Management Program" should contain the bulk of this information, the primary and secondary reviewers should gain familiarity with the site, including its demography, land use, facility design and layout, and major accidents postulated by the applicant, as presented in relevant sections of the application. The primary and secondary reviewers should also become familiar with proposed radiation protection activities and other operational matters that interface with emergency plans (particularly the functions reviewed using SRP Chapters 4 and 11). The reviewers should consult draft and final environmental statements for the proposed facility. This information may be supplemented by a personal visit to the site by the reviewer and meetings with the applicant. As the final step, the primary reviewer should prepare a safety evaluation report (SER) section in accordance with Section 8.7 below.

8.6.2.2 *Evaluation That No Emergency Plan Is Required*

The primary reviewer should verify that the evaluation is consistent with the potential accident sequences described in the ISA Summary. The ISA Summary reviewer and the primary reviewer should coordinate their efforts to ensure the resolution of any issues concerning the evaluation relative to ISA information. As the final step, the primary reviewer should prepare an SER section in accordance with SRP Section 8.7 that either agrees with the applicant's conclusion that no emergency plan is required or indicates that the staff does not accept the applicant's evaluation and recommends that an emergency plan be required.

8.7 Evaluation Findings

The primary reviewer writes an SER section addressing each topic reviewed under this SRP chapter and explains why the NRC staff has reasonable assurance that the emergency management part of the application is acceptable. The agency may propose license conditions to impose requirements where the application is deficient. The report includes a summary statement describing what was evaluated and why the reviewer finds the submittal acceptable. The staff can document the evaluation as follows:

The staff has evaluated [insert a summary statement describing what was evaluated and why the reviewer finds the submittal acceptable]. In accordance with 10 CFR 70.22(i), the licensee commits to maintain and execute an emergency plan for responding to the radiological hazards resulting from a release of radioactive material or hazardous chemicals incident to the processing of licensed material. The NRC staff reviewed the emergency plan with respect to 10 CFR 70.22(i) and the acceptance criteria in SRP Section 8.4.3. The NRC staff determined that the applicant's emergency plan is adequate to demonstrate compliance with 10 CFR 70.22(i) in that (1) the facility is properly configured to limit releases of radioactive materials in the event of an accident, (2) a capability exists for measuring and assessing the significance of accidental releases of radioactive materials, (3) appropriate emergency equipment and procedures are provided on site to protect workers against radiation and other chemical hazards that might be encountered after an accident, (4) a system has been established to notify Federal, State, and local government agencies and to recommend appropriate protective actions to protect members of the public, and (5) the necessary recovery actions are established to return the facility to a safe condition after an accident.

The requirements of the emergency plan are implemented through approved written procedures. Changes that decrease the effectiveness of the emergency plan may not be made without NRC approval. The NRC will be notified of other changes that do not decrease the effectiveness of the emergency plan within 6 months of making the changes.

8.8 References

U.S. Code of Federal Regulations, Chapter I, Title 10, "Energy," Part 70, "Domestic Licensing of Special Nuclear Material."

U.S. Nuclear Regulatory Commission, "Part 30 Statements of Consideration and Emergency Preparedness for Fuel Cycle and Other Radioactive Material Licensees," *Federal Register*, 54 FR 14051 (April 7, 1989.)

U.S. Nuclear Regulatory Commission, "Nuclear Fuel Cycle Accident Analysis Handbook," NUREG/CR-6410, March 1998.

U.S. Nuclear Regulatory Commission, "Response Technical Manual (RTM) 96," NUREG/BR-0150, Vol. 1, Revision 4, 1996.

U.S. Environmental Protection Agency, "Manual of Protective Action Guides and Protective Actions for Nuclear Incidents," EPA 400-R-92-001, May 1992.