

GENERAL INFORMATION

1.3 SITE DESCRIPTION

1.3.1 PURPOSE OF REVIEW

The purpose of this review is to determine that the information provided by an applicant adequately describes the geographic, demographic, meteorologic, hydrologic, geologic, and seismologic characteristics of the site and the surrounding area. The site description is a summary of the information used by the applicant in preparing the Integrated Safety Analysis (ISA) summary, the Emergency Plan, and the Environmental Report as described in Chapters 3.0, 8.0, and 9.0, respectively, of this Standard Review Plan (SRP).

1.3.2 RESPONSIBILITY FOR REVIEW

Primary: Licensing Project Manager

Secondary: ISA (SRP Chapter 3.0) Reviewer, Environmental Protection (SRP Chapter 9.0) Reviewer, and Emergency Plan (SRP 8.0) Reviewer

Supporting: TWRS Site Representative

1.3.3 AREAS OF REVIEW

The information that the NRC staff should review includes the following:

1. Site Geography

- a. Site location: state, county, municipality, topographic quadrangle (71/2 minute series). Maps should clearly indicate the facility location and boundary, if scale permits.
- b. Major nearby highways.
- c. Nearby bodies of water.
- d. Any other significant geographic feature that may impact accident analysis within one mile of the site (e.g., ridges, valleys, specific geologic structures).

2. Demographics

- a. Latest census results for area of concern.
- b. Description, distance, and direction to nearby population centers.

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- c. Description, distance, and direction to nearby public facilities (e.g., schools, hospitals, parks).
- d. Description, distance, and direction to nearby industrial areas or facilities that may present potential hazards (including other nearby nuclear facilities).
- e. Uses of land within one mile of the facility (i.e., residential, industrial, commercial, agricultural).
- f. Uses of nearby bodies of water.

3. Meteorology

- a. Primary wind directions and average wind speeds.
- b. Annual amount and forms of precipitation. The design basis values for accident analysis of maximum snow or ice load, probable maximum precipitation.
- c. Type, frequency, and magnitude of severe weather (e.g., lightning, tornado, hurricane). Design basis event descriptions for accident analysis.

4. Hydrology

- a. Characteristics of nearby rivers, streams, and bodies of water as appropriate.
- b. Depth to the water table; potentiometric surface map.
- c. Groundwater flow direction and velocity for the site.
- d. Characteristics of the uppermost aquifer.
- e. Design basis flood events used for accident analysis.

5. Geology

- a. Characteristics of soil types and bedrock.
- b. Design basis earthquake magnitudes used for accident analysis.
- c. Description of other geologic hazards, e.g., mass wasting.

The above information summarizes and should be consistent with the site information presented in the ISA, the Emergency Plan, and the Environmental Report prepared by the applicant. In contrast to these more detailed descriptions, the summary site description reviewed under this section is expected to be briefer and less detailed.

1.3.4 ACCEPTANCE CRITERIA

1.3.4.1 Regulatory Requirements

The regulation applicable to the areas of review in this SRP section is 10 CFR 70.22, "Contents of Applications."

1.3.4.2 Regulatory Guidance

There are no regulatory guides that apply to the site description for a facility licensed under 10 CFR Part 70.

1.3.4.3 Regulatory Acceptance Criteria

The site description summary should be considered acceptable if it includes the following:

1. A brief description of the site geography, including its location relative to prominent natural and man-made features such as mountains, rivers, airports, population centers, schools, commercial and manufacturing facilities, etc.
2. Population information based on the most current available census data to show population distribution as a function of distance from the facility.
3. Appropriate meteorologic data, including design basis values for accident analysis of maximum snow or ice load, and probable maximum precipitation. The applicant should present appropriate design basis values for lightning, high winds, tornado, hurricane, and other severe weather conditions that are applicable to the site.
4. Appropriate "safe shutdown" hydrology, geology, and seismicity data, including the design basis flood event and the maximum earthquake magnitude and peak ground acceleration (and its expected likelihood, in terms of return period).

The applicant's descriptions should be consistent with the more detailed information presented within the ISA summary information in Chapter 3 of the application, the Environmental Report, and the Emergency Plan, if applicable.

1.3.5 REVIEW PROCEDURES

1.3.5.1 Acceptance Review

The primary reviewer should evaluate the application to determine whether it addresses the "Areas of Review" discussed in Section 1.3.3, above. If significant deficiencies are identified, the applicant should be requested to submit additional material before the start of the safety evaluation.

1.3.5.2 Safety Evaluation

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After the application is determined to be acceptable for review in accordance with Section 1.3.5.1, above, the primary reviewer should perform a safety evaluation against the acceptance criteria described in Section 1.3.4.3. The material to be evaluated in this section is informational, summarizing the reports and information that provide the bases for the ISA evaluations. The secondary reviewers should verify that the information accurately portrays and is consistent with the information in the ISA summary, Environmental Report, Emergency Plan and other documents referenced by the applicant. No technical analysis is required, as the primary reference for the information is the ISA. If information being verified is found to be inconsistent from the primary source, the applicant should be requested to submit clarifying information or corrections. This section may also need to be updated by the applicant based upon any information changes made in response to the staff's environmental, emergency management, and ISA reviews. The primary reviewer, with input from the secondary reviewers, should document the evaluation as described in Section 1.3.6.

The TWRS Site Representative should confirm that the information presented in this section is consistent with the site.

1.3.6 EVALUATION FINDINGS

After completing the evaluation of material in response to this section, the primary reviewer should write an SER section that addresses each topic reviewed under this SRP section and that explains why the NRC staff has reasonable assurance that the site description is acceptable. The SER section should include a summary statement of what was evaluated and the basis for the reviewers' conclusions. License conditions may also be proposed in this SER section to impose requirements where the application is deficient.

The staff can document the evaluation as follows:

The staff has reviewed the site description for [name of facility] according to the Standard Review Plan Section 1.3. [Insert a summary statement of what was evaluated and why the reviewer finds the submittal acceptable.] The applicant has adequately described and summarized general information pertaining to (1) the site geography, including its location relative to prominent natural and man-made features such as mountains, rivers, airports, population centers, schools, and commercial and manufacturing facilities; (2) population information based on the most current available census data to show population distribution as a function of distance from the facility; (3) meteorology, hydrology, and geology for the site; and (4) applicable design basis events. The reviewers have verified the site description is consistent with the information used as a basis for the ISA, the Emergency Plan, and the Environmental Report.

1.3.7 REFERENCE

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1. Code of Federal Regulations, *Title 10, Energy*, Part 70, “Domestic Licensing of Special Nuclear Material.”