1.0 GENERAL INFORMATION
1.3 SITE DESCRIPTION

1.3.1 PURPOSE OF REVIEW

The purpose of this review is to establish that the information provided by the applicant adequately describes the geographic, demographic, meteorologic, hydrologic, geologic, and seismologic characteristics of the site and surrounding area. The site description should be abstracted from, and therefore consistent with, material presented in the applicant's design basis (for the application for construction approval) or Safety Program Description and Integrated Safety Analysis (ISA) Summary (for the license application), the environmental report, and the emergency plan.

1.3.2 RESPONSIBILITY FOR REVIEW

Primary: Project Manager

Secondary: ISA Reviewer, Emergency Protection Reviewer, Environmental Reviewer

Supporting: None

1.3.3 AREAS OF REVIEW

The site description should be submitted with the application for construction approval and updated in the license application. The areas of review for the applicant's site description should include:

A. Site Geography

i. Site location: state, county, municipality, topographic quadrangle (7 ½ minute series), longitude, and latitude;

ii. Public roads;

iii. Nearby bodies of water; and

iv. Any other significant geographic feature that may impact an accident consequence within 2 km (1.24 miles).

B. Demographics (including socio-economics) and Land-Use

i. Latest census results for the area of concern, including minority and low-income populations;

ii. Description, distance, and direction to nearby population centers;

iii. Description, distance, and direction to nearby public facilities, (e.g., schools, hospital, parks);

iv. Description, distance, and direction to nearby industrial areas or facilities that may present potential hazards (including other nearby nuclear facilities);

v. Land-use within 2 km (1.24 miles) of the facility (i.e., residential, industrial, commercial, agricultural); and

vi. Uses of nearby bodies of water.

C. Meteorology

i. Local wind directions and average and maximum wind speeds;

ii. Annual amount and forms of precipitation;

iii. The design basis values for analyzing the maximum snow or ice load and probable maximum precipitation; and

iv. Type, frequency, and magnitude of severe weather (e.g., lightning, tornado, hurricane).

D. Hydrology

i. Characteristics of nearby rivers, streams, and other bodies of water, as appropriate;
ii. Depth to the water table;
iii. Potentiometric surface map;
iv. Groundwater flow direction and velocity for the site;
v. Characteristics of the uppermost aquifer; and
vi. Design basis flood events used for accident analysis.

E. Geology

i. Characteristics of soil types and bedrock;
ii. Design basis earthquake magnitudes used for accident analysis; and
iii. Description of other geologic hazards, e.g., mass wastings.

1.3.4 ACCEPTANCE CRITERIA

1.3.4.1 Regulatory Requirements

The regulations applicable to the site description are contained in 10 CFR 70.22(f), which requires a description of the plantsite for applications for special nuclear material in a plutonium processing and fuel fabrication plant.

1.3.4.2 Regulatory Guidance

There is no regulatory guidance applicable to the site description.

1.3.4.3 Regulatory Acceptance Criteria

The reviewer should find the applicant's site description, including the site geography, demographics (including socio-economic data), meteorology, hydrology, and geology, acceptable if the following regulatory acceptance criteria are met:

A. The information is current and accurate. To the extent possible, data reflect observations and measurements made over a period of years, especially for conditions that are expected to vary seasonally (e.g., precipitations, wind speed and direction, and groundwater levels).

B. The data sources are appropriately referenced and documented.

C. The information is consistent with the more detailed material submitted by the applicant in the design basis (for the application for construction approval) or the Safety Program Description and ISA Summary (for the license application), environmental report, and emergency plan.

D. The applicant commits to update the site description in the license application.

1.3.5 REVIEW PROCEDURES

1.3.5.1 Acceptance Review

The primary reviewer should perform an acceptance review to determine if the application adequately addresses the specific items in Section 1.3.3, "Areas of Review." If the primary reviewer verifies that the site description is adequately addressed, the primary reviewer should accept the application for the safety evaluation in Section 1.3.5.2. If the primary reviewer identifies significant deficiencies in the material provided, the primary reviewer should request that the applicant submit additional information prior to the start of the safety evaluation.

1.3.5.2 Safety Evaluation

After determining that the application for construction approval is acceptable for review in accordance with Section 1.3.5.1, the primary reviewer should perform a safety evaluation against the acceptance criteria described in Section 1.3.4. On the basis of its review, the staff may request that the applicant provide additional information or modify the application to meet the acceptance criteria in SRP Section 1.3.4.

The primary reviewer should not perform a detailed technical analysis of the material since this material is considered background for the more detailed material submitted elsewhere in the application. However, the primary reviewer should coordinate with the secondary reviewers to ensure that the site description adequately summarizes material presented in support of the ISA Summary, the emergency plan, and environmental report.

When the applicant updates the site description in the license application, the primary reviewer should review the new or changed information. The primary reviewer should also verify with the secondary reviewers that the updated site description in the license application remains consistent with material that supports other chapters of this SRP.

1.3.6 EVALUATION FINDINGS

The primary reviewer should document the safety evaluation by preparing material suitable for inclusion in the Safety Evaluation Report (SER). The primary reviewer should describe the review, explain the basis for the findings, and state the conclusions.

The staff could document the safety evaluation of the application for construction approval as follows:

> *The staff reviewed the site description for approval to construct [insert name of facility] according to Section 1.3 of NUREG-1718. The staff evaluated [insert a summary of the material reviewed] and found that [state the findings].*
>
> *Based on the review, the staff concluded that the applicant's site description meets the regulatory requirements in 10 CFR 70.22(f) for construction approval.*

The staff could document the safety evalution for the license application as follows:

> *The staff reviewed the site description for [insert name of facility] according to Section 1.3 of NUREG-1718. The staff evaluated [insert a summary of the material reviewed] and focussed on new or changed information when compared to the safety evaluation for the construction approval. The staff found that [state the findings].*
>
> *Based on the review, the staff concluded that the applicant's site description meets the regulatory requirements in 10 CFR 70.22 for a license to posses and use SNM.*

1.3.7 REFERENCES

A. Code of Federal Regulations, Title 10, Part 70, Domestic Licensing of Special Nuclear Material, U.S. Government Printing Office, Washington, D.C., 1999.

B. Proposed 10 CFR Part 70, “Domestic Licensing of Special Nuclear Material; Possession of a Critical Mass of Special Nuclear Material.” 64 FRN 41338, July 30, 1999.