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1. GENERAL INFORMATION

1.1 Facility and Process Description

1.1.1 Purpose of Review

The purpose of this review is to ascertain whether an application for a new, renewed, or amended license includes an overview of the facility layout and a summary description of its manufacturing processes. This overview will be used by all reviewers, NRC managers, and the general public to understand the purpose of the facility and to obtain an overview of the design of its processes. A more detailed description of the facility and its manufacturing processes is contained in the ISA summary.

1.1.2 RESPONSIBILITY FOR REVIEW

Primary: Licensing Project Manager

Secondary: None

Supporting: None

1.1.3 AREAS OF REVIEW

The staff should review the general facility and process descriptions provided by the applicant, which should include (1) scaled drawings showing the locations of facility buildings and other major structures, hazardous materials storage areas, onsite roadways, railroad spurs or sidings, and major ingress and egress routes for the site; (2) a text index with descriptive titles that indicate the purpose of each feature; (3) the interrelationships among the features; (4) the relationship of facility features to site features; (5) a narrative description of the flow of licensed material through the facility's manufacturing processes; and (6) the proximity of facility buildings to the site boundary and nearby populations. This information should be consistent with that presented chapter 9 "Environmental Protection" and chapter 8 "Emergency Management" of this SRP.

1.1.4 ACCEPTANCE CRITERIA

1.1.4.1 Regulatory Requirements

The regulations applicable to the areas of review in this SRP are 10 CFR 70.22, "Contents of Applications," and 10 CFR 70.65(b)(1), (2), and (3), "Additional Content of Applications."

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1.1.4.2 Regulatory Guidance

There are no regulatory guides that apply to a general facility description for a fuel cycle facility.

1.1.4.3 Acceptance Criteria

The reviewer will determine that the applicant's presentations with respect to this section of the SRP are acceptable if the following criteria are met:

- (1) The application presents information at a level of detail that is appropriate for general familiarization and understanding of the proposed facility and processes. This information may be less detailed than that presented in the ISA summary.
- (2) The application summarizes the facility information contained in the ISA summary. This includes descriptions of the overall plant layout on scaled drawings, including the site's geographical features and plant structural features (such as buildings, towers, and tanks) and transportation right-of-ways. In addition, the summary should describe the relationship of specific facility features to the major processes that will be ongoing at the facility.
- (3) The major chemical or mechanical processes involving SNM to be licensed are described in summary form, based in part on information presented in the ISA summary. This description should include reference to the building locations of major process component; brief descriptions of the process steps; the chemical forms of SNM in process; the maximum amounts of SNM in process in various building locations; and the types, amounts, and discharge points of waste materials discharged to the environment from the processes.
- (4) The application presents a summary identification of the raw materials, by products, wastes, and finished products of the facility. This information should include data regarding expected levels of trace impurities or contaminants (particularly fission products or transuranic elements) characterized by identity and concentration. In addition, this summary should identify the proposed possession at the facility of any moderator or reflector with special characteristics, such as beryllium or graphite.

1.1.5 REVIEW PROCEDURES

1.1.5.1 Acceptance Review

To begin the staff's review the primary reviewer determines whether the application includes the topics discussed in Section 1.1.3, "Areas of Review." If the reviewer identifies significant deficiencies in the application, the staff should request that the applicant submit additional material before the start of the safety evaluation. With the complete submittal available, the reviewer should examine the facility and process descriptions and assess their acceptability by

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comparison with the acceptance criteria in Section 1.1.4.3 and consistency with information in the ISA summary.

1.1.5.2 Safety Evaluation

The material to be reviewed is informational in nature, and no technical analysis is required. In addition the information to be reviewed is used only as background for the more detailed descriptions in later sections of the application. Therefore, the primary reviewer confirms whether the descriptive information presented is consistent with the information presented in the ISA summary.

1.1.6 EVALUATION FINDINGS

If the license application provides sufficient information and the regulatory acceptance criteria in Section 1.1.4.3 are appropriately satisfied, the staff concludes that this evaluation is complete. The reviewer writes material suitable for inclusion in the SER prepared for the entire application. The report includes a summary statement of what was reviewed and why the reviewer finds the submittal acceptable. The staff can document the review as follows:

The staff has reviewed the general facility description for [name of facility] according to Section 1.1 of the Standard Review Plan. The applicant has adequately described (1) the facility and processes so that the staff has an overall understanding of the relationships of the facility features and (2) the function of each feature. The applicant has cross-referenced its general description with the more detailed descriptions elsewhere in the application. The staff concludes that the applicant has complied with the general requirements of 10 CFR 70.22, "Contents of Applications," 10 CFR 70.60, "Applicability," and 10 CFR 70.65(b)(1), (2), and (3), "Additional Content of Applications," as applicable to this section.

1.1.7 REFERENCES

Code of Federal Regulations, Title 10, Part 70, "Domestic Licensing of Special Nuclear Material," U.S. Government Printing Office, Washington, DC.

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1.2 INSTITUTIONAL INFORMATION

1.2.1 PURPOSE OF REVIEW

The purpose of this review is to establish whether the license application includes adequate information identifying the applicant, the applicant's characteristics, and the proposed activity.

1.2.2 RESPONSIBILITY FOR REVIEW

Primary: Licensing Project Manager

Secondary: None

Supporting: Office of the General Counsel; Office of Administration/Division of Security

1.2.3 AREAS OF REVIEW

Information provided for review should include the identity and address of the applicant's facility and corporate headquarters; corporate information sufficient to show the relationship of the applicant's organization relative to other corporate entities; the existence and extent of foreign ownership or influence; financial information sufficient to indicate the resources available to the applicant to pursue the activities for which the license is sought; the site location as legally described in land records; a description of each proposed licensed activity in the form of requested authorized uses; the type of license being applied for; and the type, quantity, and form(s) of material(s) proposed to be used at the licensed facility.

1.2.4 ACCEPTANCE CRITERIA

1.2.4.1 Regulatory Requirements

The regulations applicable to the areas of review in this SRP are 10 CFR 70.22, "Contents of Applications," 10 CFR 70.65(b)(1), (2), and (3), "Additional Contents of Applications," 10 CFR 70.33, "Renewal of Licenses," and 10 CFR Part 95, "Security Facility Approval and Safeguarding of National Security Information and Restricted Data."

1.2.4.2 Regulatory Guidance

There are no regulatory guides that apply to institutional information for a fuel cycle facility.

1.2.4.3 Regulatory Acceptance Criteria

The application is acceptable if the following criteria are met:

- (1) Corporate Identity

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The applicant has furnished its full name and address. The address of the fuel cycle facility is provided if it is different from that of the applicant. If the application is for renewal, the applicant identifies the number of the license to be renewed. A full description of the plant site location (State, county, and municipality) is given. The State where the applicant is incorporated or organized and the location of the principal office are indicated. If the applicant is a corporation or other entity, the names and citizenship of its principal officers are provided. The application shall include any information known to the applicant concerning the control or ownership, if any, exercised over the applicant by any alien, foreign corporation, or foreign government. Primary ownership and relationships to other components of the same ownership are explicitly described. The presence and operations of any other company on the site to be licensed are fully described.

(2) Financial Qualifications

A description of financial qualifications demonstrates the applicant's current and continuing access to the financial resources necessary to engage in the proposed activity in accordance with 10 CFR 70.22(a)(8) and 10 CFR 70.23(a)(5).

(3) Type, Quantity, and Form of Licensed Material

The application identifies the elemental name, maximum quantity, and specifications, including the chemical and physical form(s), of the SNM that the applicant proposes to acquire, deliver, receive, possess, produce, use, transfer, or store. For each SNM the specifications include the isotopic content and amount of enrichment by weight percent.

(4) Authorized Uses

A summary, non-technical narrative description is provided for each activity or process in which the applicant proposes to acquire, deliver, receive, possess, produce, use, process, transfer, or store SNM. The authorized uses of SNM proposed for the facility are described and are consistent with the Atomic Energy Act of 1954, et seq. The description is consistent with more detailed process descriptions submitted as part of the ISA summary reviewed under chapter 3.0 of this SRP.

If the application is for a renewal, the applicant states the period of time for which license renewal is requested, and why the renewal application should be considered timely in accordance with 10 CFR Part 70.

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(5) Special Exemptions or Special Authorizations

Specific requests for exemptions or authorizations of an unusual nature should be listed in this section and justified in the appropriate technical section of the application.

(6) Security of Classified Information

If applicable, the applicant has requested and received a facility security clearance in accordance with 10 CFR Part 95.

1.2.5 REVIEW PROCEDURES

1.2.5.1 Acceptance Review

To begin the staff's review, the primary reviewer determines whether the application is complete and addresses each issue in Section 1.2.3, "Areas of Review." If the reviewer identifies significant deficiencies in the application, the staff will request that the applicant submit additional material before the start of the safety evaluation.

1.2.5.2 Safety Evaluation

The material to be reviewed is for the most part informational in nature, and detailed technical analysis is generally not required beyond the acceptance criteria. The reviewer requests review assistance, as needed, from the Division of Security and the Office of the General Counsel in the review of corporate and financial information.

1.2.6 EVALUATION FINDINGS

If the information provided is consistent with the guidance of this SRP, the staff will conclude that this evaluation is complete. The staff can document its review as follows:

The staff has reviewed the institutional information for [name of facility] according to Section 1.2 of the Standard Review Plan. On the basis of the review, the NRC staff has determined that the applicant has adequately described and documented the corporate structure and financial information, and is in compliance with those parts of 10 CFR 70.22 and 70.65 related to other institutional information. In addition, in accordance with 10 CFR 70.22(a)(2) and (4), the applicant has adequately described the types, forms, quantities, and proposed authorized uses of licensed materials to be permitted at this facility as follows:

| <u>Material</u> | <u>Form</u> | <u>Quantity</u> | <u>Authorized Use(s)</u> |
|-----------------|-------------|-----------------|--------------------------|
|-----------------|-------------|-----------------|--------------------------|

The applicant's proposed activities are consistent with the Atomic Energy Act. The applicant has provided all institutional information necessary to understand the ownership, financial qualifications, location, planned activities, and nuclear materials to be handled in connection with the requested license.

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1.2.7 REFERENCES

Code of Federal Regulations, Title 10, Part 70, "Domestic Licensing of Special Nuclear Material," U.S. Government Printing Office, Washington, DC.

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1.3 SITE DESCRIPTION

1.3.1 PURPOSE OF REVIEW

The purpose of this review is to determine whether 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 that the applicant used in preparing the environmental report, emergency plan, and ISA summary.

1.3.2 RESPONSIBILITY FOR REVIEW

Primary: Licensing Project Manager

Secondary: ISA Reviewer, Environmental Protection Reviewer, and Emergency Plan Reviewer

Supporting: Fuel Facility Inspection Staff

1.3.3 AREAS OF REVIEW

The information that the applicant presented in this section is summarized from the information presented in more detail in the applicant's environmental report, emergency plan, and ISA Summary. The information that the NRC staff will review includes the following (as appropriate for the facility being reviewed):

(1) Site Geography

- a. site location: State, county, municipality, topographic quadrangle (eight 7 1/2 minute quadrants), site boundary, and controlled area boundary
- b. major nearby highways
- c. nearby bodies of water
- d. Any other significant geographic feature that may impact accident analysis within 1 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
- 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 1 mile of the facility (i.e., residential, industrial, commercial, agricultural)
- f. uses of nearby bodies of water

(3) Meteorology

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- a. primary wind directions and average wind speeds
- b. annual amount and forms of precipitation, as well as the design- basis values for accident analysis of maximum snow or ice load and probable maximum precipitation
- c. type, frequency, and magnitude of severe weather (e.g., lightning, tornado, hurricane) and design- basis event summary descriptions for accident analysis

(4) Hydrology

- a. characteristics of nearby rivers, streams, and bodies of water as appropriate
- b. depth to the water table and 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)

1.3.4 ACCEPTANCE CRITERIA

1.3.4.1 Regulatory Requirements

Regulations applicable to the areas of review in this SRP are 10 CFR 70.22, "contents of Applications."

1.3.4.2 Regulatory Guidance

There are no regulatory guides that apply to site descriptions for a fuel cycle facility.

1.3.4.3 Regulatory Acceptance Criteria

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

- (1) The summary briefly describes 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). The summary also describes the site boundary and the controlled area.
- (2) The summary provides population information on the basis of the most current available census data to show population distribution as a function of distance from the facility.
- (3) The applicant's presentation or discussion addresses appropriate meteorologic data, including a summary of design- basis values for accident analysis of maximum snow or ice load, and probable maximum precipitation, as developed by the applicant and presented in the ISA summary. The applicant presents appropriate design- basis values for lightning, high winds, tornado, hurricane, and other severe weather conditions that are applicable to the site.

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- (4) The application includes a summary description of the hydrology and geology (including seismicity) for the area, and cites the design- basis flood event for which the plant may be safely shut down. The application also provides earthquake accelerations for the site associated with a 250-year and 500-year earthquake.
- (5) The applicant's descriptions are consistent with the more detailed information presented within the ISA summary, the environmental report, and the emergency plan, if applicable.

1.3.5 REVIEW PROCEDURES

1.3.5.1 Acceptance Review

The staff will initially determine whether the application is complete and addresses all topics discussed in Section 1.3.3, "Areas of Review." The information in this section provides a general summary of the bases reported in the ISA summary and is consistent with the applicant's environmental report and emergency plan. The applicant may include references to the more detailed data used to complete evaluations in the ISA summary.

If the reviewer identifies significant deficiencies in the application, the staff will request that the applicant submit additional material before the start of the safety evaluation.

For license renewals, the details necessary to support the information in the site description summary may be referenced to prior submittals or material included elsewhere in the renewal application.

1.3.5.2 Safety Evaluation

The material described in this section of the SRP is informational, summarizing that contained 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 summary. The applicant may also need to update this section to verify any information changes made in response to the staff's environmental, emergency management, and ISA summary reviews.

1.3.6 EVALUATION FINDINGS

If the license application provides sufficient information and is consistent with the guidance in this SRP, the staff will conclude that this evaluation is complete and the applicant's site description is acceptable. The staff can document its review as follows:

The staff has reviewed the site description for [name of facility] according to Section 1.3 of the Standard Review Plan. 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 on the basis of the most current available census data to show population distribution as a

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function of distance from the facility; (3) meteorology, hydrology, and geology for the site; and (4) applicable design- basis events. The reviewer verified that the site description is consistent with the information used as a basis for the environmental report, emergency management plan, and ISA summary.

1.3.7 REFERENCES

Code of Federal Regulations, Title 10, Part 70, "Domestic Licensing of Special Nuclear Material," U.S. Government Printing Office, Washington, DC.