COMPLIANCE DETERMINATION METHOD FOR REVIEW PLAN NO. 3.1.2 DESCRIPTION OF INDIVIDUAL SYSTEMS AND CHARACTERISTICS OF THE SITE: HYDROLOGIC SYSTEM

3.0 REVIEW PROCEDURES AND ACCEPTANCE CRITERIA

3.1 Acceptance Review

In conducting the *Acceptance Review* for docketing, the staff will compare information in the license application concerning the description of the Hydrologic System of the site with the corresponding section of the FCRG and with the resolution status of staff objections to the license application submittal in the Open Item Tracking System (OITS). The staff will then determine whether this information meets the following Acceptance Criteria:

(1) The information presented in the license application is clear, completely documented, consistent with the level of detail presented in the corresponding section of the FCRG, and the references have been provided.

(2) DOE has either resolved, at staff level, NRC objections to the license application submittal which apply to this regulatory requirement topic or provided all information requested in Section 1.6 of the FCRG for unresolved objections. Namely, it should be determined whether DOE has:

- Identified all unresolved objections.
- Explained the differences between NRC and DOE positions which precluded resolution of each objection.
- Described pertinent attempts to achieve resolution.
- Explained why resolution has not been achieved.
- Described the effects of the different positions on demonstrating compliance with 10 CFR Part 60.

(3) Unresolved objections, individually or in combination with others, will not prevent either the reviewer from conducting a meaningful *Compliance Review* or the Commission from making a decision regarding construction authorization within the 3-year statutory period.

3.2 Compliance Reviews

The compliance determinations undertaken by NRC staff will consider whether the Acceptance Criteria specified for each of the following *Compliance Reviews* have been met. The results of the compliance determinations shall be documented in the staff's Safety Evaluation Report (SER) to provide the basis for the actual *Evaluation Findings*.

3.2.1 Safety Review of 10 CFR 60.21(c)(1)

The staff's *Compliance Review* will consist of the following two steps. First, the staff will review the descriptive information provided for the hydrologic system. This will provide an overall understanding of how DOE has presented its information on the many individual aspects of the hydrologic system and how this information has been integrated. The types of descriptive information to be provided to other review plans are listed in Section 4.2.2.

Second, after the staff has conducted each of the *Compliance Reviews* for those sections of the license application identified in Section 4.2.2, the individual *Evaluation Findings* from these reviews will be considered on balance to determine whether the following Acceptance Criterion has been met:

(1) The descriptive information for the hydrologic system provides an acceptable basis for all of the associated assessments that rely on this information.

3.3 Rationale for Review Procedures and Acceptance Criteria

3.3.1 Rationale for Safety Review of 10 CFR 60.21(c)(1)

The information presented in the description of the hydrologic system must be reviewed in the context of whether it supports the findings which must be made in those review plans which make use of the descriptive information. Therefore, the review procedure requires the reviewer to examine the evaluation findings from those review plans prior to making a conclusion as to the adequacy of the descriptive material.

4.0 IMPLEMENTATION

4.1 Review Responsibilities

The review responsibilities for this review plan are as follows:

Lead:	DWM/PAHB Hydrologic Transport Section
Support:	None

4.2 Interfaces

4.2.1 Input Information

Input Information	***Review Plan No.***
None	None

4.2.2 Output Information

Output from activities associated with this review plan will provide specific information important for use in other review plans as the following table indicates.

Output Information	*Review Plan No.*
See FCRG — Section 3.1.2 for examples	3.2.2.1 - FAC: Nature and Rates of Hydrogeologic Processes
See FCRG — Section 3.1.2 for examples	3.2.2.3 - FAC: Groundwater Travel Time Substantially Exceeding 1000 Years
See FCRG — Section 3.1.2 for examples	3.2.2.4 - FAC: Unsaturated Zone Hydrogeologic Conditions
See FCRG — Section 3.1.2 for examples	3.2.3.1 - FAC: Nature and Rates of Geochemical Processes
See FCRG — Section 3.1.2 for examples	3.2.3.2 - FAC: Geochemical Conditions
See FCRG — Section 3.1.2 for examples	3.2.4.1 - FAC: Precipitation that is a Small Percentage of Potential Evapotranspiration (Potentially Adverse Condition)
See FCRG — Section 3.1.2 for examples	3.2.1.4 - PAC: Evidence of Dissolution
See FCRG — Section 3.1.2 for examples	3.2.1.10 - PAC: Evidence of Extreme Erosion
See FCRG — Section 3.1.2 for examples	3.2.1.11 - Presence of Naturally Occurring Materials
See FCRG — Section 3.1.2 for examples	3.2.1.13 - PAC: Evidence of Drilling
See FCRG — Section 3.1.2 for examples	3.2.2.5 - PAC: Flooding
See FCRG — Section 3.1.2 for examples	3.2.2.6 - PAC: Human Activity and Groundwater
See FCRG — Section 3.1.2 for examples	3.2.2.7 - PAC: Natural Phenomena Affecting Groundwater
See FCRG — Section 3.1.2 for examples	3.2.2.8 - PAC: Structural Deformation and Groundwater
See FCRG — Section 3.1.2 for examples	3.2.2.9 - PAC: Changes to Hydrologic Conditions

Output Information	*Review Plan No.*
See FCRG — Section 3.1.2 for examples	3.2.2.10 - PAC: Complex Engineering Measures
See FCRG — Section 3.1.2 for examples	3.2.2.11 - PAC: Potential for Unsaturated Zone Saturation
See FCRG — Section 3.1.2 for examples	3.2.2.12 - PAC: Perched Water Bodies
See FCRG — Section 3.1.2 for examples	3.2.3.4 - PAC: Groundwater Conditions and the Engineered Barrier System
See FCRG — Section 3.1.2 for examples	3.2.3.7 - PAC: Gaseous Radionuclide Movement
See FCRG — Section 3.1.2 for examples	3.2.4.2 - PAC: Changes to Hydrologic System from Climate
See FCRG — Section 3.1.2 for examples	3.3 - Assessment of Compliance with the Groundwater Travel Time Performance Objective
See FCRG — Section 3.1.2 for examples	4.5 - Assessment of Integrated GROA Compliance with the Performance Objectives
See FCRG — Section 3.1.2 for examples	4.5.1 - Protection Against Radiation Exposures and Releases of Radioactive Material to Unrestricted Areas
See FCRG — Section 3.1.2 for examples	4.5.2 - Retrievability of Waste
See FCRG — Section 3.1.2 for examples	5.4 - Assessment of Compliance with the Engineered Barrier System Performance Objectives
See FCRG — Section 3.1.2 for examples	6.1 - Assessment of Compliance with the Requirement for Cumulative Releases of Radioactive Materials
See FCRG — Section 3.1.2 for examples	6.2 - Assessment of Compliance with the Individual Protection Requirements
See FCRG — Section 3.1.2 for examples	6.3 - Assessment of Compliance with the Groundwater Protection Requirements
See FCRG — Section 3.1.2 for examples	8.1.2 - Performance Confirmation Program for the Natural Systems of the Geologic Setting: Hydrologic System
See FCRG — Section 3.1.2 for examples	8.4 - Radiation Protection During Performance Confirmation

Output Information	*Review Plan No.*
See FCRG — Section 3.1.2 for examples	4.1 - Description of the GROA Structures, Systems, and Components
See FCRG — Section 3.1.2 for examples	4.1.1 - Surface Facilities
See FCRG — Section 3.1.2 for examples	4.1.2 - Shafts and Ramps
See FCRG — Section 3.1.2 for examples	4.1.3 - Underground Facility
See FCRG — Section 3.1.2 for examples	4.1.4 - Radiation Protection Systems
See FCRG — Section 3.1.2 for examples	4.2 - Assessment of Compliance with Design Criteria for Surface Facilities
See FCRG — Section 3.1.2 for examples	4.3 - Assessment of Compliance with Design Criteria for Shafts
See FCRG — Section 3.1.2 for examples	4.4 - Assessment of Compliance with Design Criteria for the Underground Facility
See FCRG — Section 3.1.2 for examples	5.2 - Assessment of Compliance with the Design Criteria for the Waste Package and Its Components
See FCRG — Section 3.1.2 for examples	5.3 - Assessment of Compliance with the Design Criteria for the Engineered Barrier System
See FCRG — Section 3.1.2 for examples	5.5 - Radiation Protection

5.0 EXAMPLE EVALUATION FINDINGS

The staff should consider the *Example Evaluation Findings* presented below together with the Acceptance Criteria set forth in Section 3.0 when making the actual *Evaluation Findings* resulting from the *Acceptance Review* for docketing, and the subsequent *Compliance Review*. The actual *Evaluation Findings* resulting from the *Compliance Reviews*, and the supporting basis, should be documented in the staff's SER.

5.1 Finding for Acceptance Review

The NRC staff finds the information presented by DOE, as defined by the applicable 10 CFR Part 60 Regulatory Requirements, is acceptable (not acceptable) for docketing and a subsequent *Compliance Review*.

5.2 Findings for Compliance Reviews

5.2.1 Finding for 10 CFR 60.21(c)(1)

TBD from ongoing *Example Evaluation Findings Task*.

6.0 REFERENCES

Nuclear Regulatory Commission, "Format and Content for the License Application of the High-Level Waste Repository," Office of Nuclear Regulatory Research. [Refer to the "products List for the Division of High-Level Waste Management" to identify the most current edition of the FCRG in effect.]