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**COMPLIANCE DETERMINATION STRATEGY  
RRT 4.1.1 - DESCRIPTION OF THE GROA STRUCTURES, SYSTEMS, AND  
COMPONENTS: SURFACE FACILITIES**

**1.0 APPLICABLE REGULATORY REQUIREMENTS**

- 10 CFR 60.21(c)(1)(i)
- 10 CFR 60.21(c)(2)
- 10 CFR 60.21(c)(3)
- 10 CFR 60.21(c)(9)
- 10 CFR 60.21(c)(11)
- 10 CFR 60.21(c)(12)

**TYPES OF REVIEW**

- Acceptance Review (Type 1)
- Safety Review (Type 3)

**RATIONALE FOR TYPES OF REVIEW**

**Acceptance Review (Type 1) Rationale**

This regulatory requirement topic is considered to be license application-related because, as specified in the license application content requirements of 10 CFR 60.21 and Section 4.1.1 of regulatory guide "Format and Content for the License Application for the High-Level Waste Repository (FCRG)," it must be addressed by the U.S. Department of Energy (DOE) in its license application. Therefore, the staff will conduct an Acceptance Review of the license application for this regulatory requirement topic.

**Safety Review (Type 3) Rationale**

This regulatory requirement topic is related to radiological safety, retrievability, containment, and waste isolation. It is a requirement for which compliance is necessary to make a safety determination for construction authorization as defined in 10 CFR 60.31(a) (i.e., regulatory requirements in Subparts E, G, H, and I). Therefore, the staff will conduct a Safety Review of the license application for this regulatory requirement topic.

However, as noted in the review strategy, most of the descriptive material provided in this section of the license application will be initially reviewed and then evaluated as part of the Compliance Review of those sections of the license application which use this information. The reasoning for this approach is twofold. First, it will permit the review of the descriptive material in whole and not in a fragmented manner. Second, this approach will also permit a critical review of the descriptive information in the context of the assessments and evaluations it supports.

**2.0 REVIEW STRATEGY**

**2.1 Acceptance Review**

To determine whether this section of the Department of Energy's (DOE's) license application is

acceptable for docketing, the staff will determine whether the information submitted is consistent with that identified in the corresponding section of the Regulatory Guide "Format and Content for the License Application for the High-Level Waste Repository" (FCRG).

Before the receipt of the license application, the staff will have conducted pre-licensing reviews of DOE's program, including technical reviews and quality assurance reviews and audits. The staff will have documented its concerns, resulting from these pre-license application reviews, as open items. Some of these open items, referred to as objections to license application submittal, may be critical to the staff's license application review, because lack of acceptable DOE resolution would prevent NRC from conducting a meaningful review. Therefore, as part of its Acceptance Review for docketing, the staff will evaluate how significant any unresolved objection to license application submittal is, to the effective conduct of licensing activities, using the criteria given in Section 3.1 of this review plan.

The description provided in Section 4.1.1 of the license application will form the basis for the Compliance Review of the information contained in Section 4.2 ("Assessment of Compliance with Design Criteria for Surface Facilities") of the license application. Thus, the information contained in Section 4.1.1 will be reviewed in parallel with the information contained in Section 4.2. Therefore, the reviewer should determine that all appropriate descriptive information necessary for the staff to conduct a Compliance Review of the GROA surface facilities design (see Section 4.2, "Assessment of Compliance with Design Criteria for Surface Facilities") is present in this section of the license application.

Information to be reviewed under Section 4.1.1 includes, at a minimum, acceptable descriptions of the following:

- (1) The location and general layout of the surface facilities relative to the GROA and the general character of proposed activities for the surface facilities;
- (2) The subsurface site conditions expected to be encountered in constructing surface facilities;
- (3) The identification of major SSCs important to radiological safety, and retrievability;
- (4) The schedules for inspections, testing, and maintenance; and
- (5) The details specified in Sections 4.1.1.1 through 4.1.1.12 of the FCRG.

If it is determined that the descriptive information in Section 4.1.1 of the license application is inadequate to support the Compliance Review of Section 4.2, then additional information to be requested from DOE should be identified as a part of the review.

**2.2 Compliance Review**

**2.2.1 Safety Review**

As noted above, most of the descriptive material provided in this section of the license application will be initially reviewed and then evaluated as part of the Compliance Review of those sections of the license application which use this information. Section 4.2 ("Interfaces") of this review plan describes where the Compliance Review(s) of the information in this section of the license application will take place.

For each of the Compliance Reviews described in Section 4.2, a portion of the review will therefore focus on whether the descriptive information provides an acceptable basis for the associated assessment. Thus, this portion of the review will result in an Evaluation Finding for the specific supporting information in that section of the license application in which it is being used.

Therefore, under this review plan, no additional Compliance Review will be done; the staff will make only an "aggregate" Evaluation Finding for the whole description of the surface facilities of the GROA. Such a finding would collectively reflect the sum of the specific Evaluation Findings made in those sections of the license application described in Section 4.2.

**RATIONALE FOR REVIEW STRATEGY**

Not Applicable.

**Contributing Analysts**

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**APPLICABLE REGULATORY REQUIREMENTS FOR EACH TYPE OF REVIEW**

Type 1

- 10 CFR 60.21(c)(1)(i)
- 10 CFR 60.21(c)(2)
- 10 CFR 60.21(c)(3)
- 10 CFR 60.21(c)(9)
- 10 CFR 60.21(c)(11)
- 10 CFR 60.21(c)(12)

Type 3

- 10 CFR 60.21(c)(1)(i)
- 10 CFR 60.21(c)(2)
- 10 CFR 60.21(c)(3)
- 10 CFR 60.21(c)(9)
- 10 CFR 60.21(c)(11)
- 10 CFR 60.21(c)(12)

**6.0 REFERENCES**

**References for Review Strategies**

Nuclear Regulatory Commission, "Format and Content for 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 recent edition of the FCRG in effect.]

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**Table 4.1.1-1 A Minimum Set of Structures, Systems, and Components for Geologic Repository Operations Area Surface Facilities.**

1. Hot cells
2. On-Site radioactive waste management systems
3. Ventilation systems (intake and exhaust)
4. Fire suppression and explosion protection systems
5. Utility systems
6. Emergency systems
7. Communication systems
8. Operational support systems
9. Decommissioning and decontamination systems
10. Instrumentation and control systems (including radiation)
11. On-Site transportation systems (personnel and material)
12. Waste handling systems
13. Electrical support systems
14. Excavation and ground support systems
15. Waste retrieval systems