



**CENTER FOR NUCLEAR WASTE REGULATORY ANALYSES**  
**DOCUMENT REVIEW REQUEST AND TRANSMITTAL CONTROL (REF. QAP-002)**

**I. DOCUMENT INFORMATION**

a. TITLE: CDS 4.1.2—Version 1.1—Description of the GROA Structures, Systems, and Components—Shafts and Ramps

b. DOCUMENT TYPE

<input type="checkbox"/> Technical Report	<input type="checkbox"/> AP	<input checked="" type="checkbox"/> PADB	<input type="checkbox"/> Paper/Presentation *	<input type="checkbox"/> Project/Test Plan
<input type="checkbox"/> Guidance Document	<input type="checkbox"/> TOP	<input type="checkbox"/> CQAM/QAP	<input type="checkbox"/> OPs/Work Plan	<input type="checkbox"/> PMPR

\* Conference Title: \_\_\_\_\_

Sponsoring Organization(s) \_\_\_\_\_ Location \_\_\_\_\_ Date(s) \_\_\_\_\_

c. PROJECT INFORMATION

Project No. 20-5702-221 Milestone No. N/A Subject Code \_\_\_\_\_

CNWRA DOCUMENT NO. Yes \_\_\_\_\_ No \_\_\_\_\_ Assigned No. CNWRA 95 —

d. SCHEDULE Today's Date 11/29/95 Scheduled Transmittal Date \_\_\_\_\_

**II. RESPONSIBILITIES** (Fill in names on each blank line in this section.)

Author(s) R. Brient Element Manager A. Chowdhury Assigned Secretary Lee Selvey

EDIT LEVEL Low (CNWRA)  High (SwRI)

**III. REVIEW** (see QAP-002 Table 1 for applicable review types)  
**MINOR FORMAT REVISIONS WERE MADE.**

Review Types & Reviewers Determined by Element Manager

  
 (EM Signature)

11/29/95  
 (Date)

	Req'd Date	Initials	Review Complete Date
<input type="checkbox"/> TECHNICAL (Attach CNWRA Form QAP-12) Reviewer(s): <u>Not required</u>	_____	_____	_____
<input type="checkbox"/> PEER (Attach CNWRA Form QAP-13) Reviewer(s): _____	_____	_____	_____
<input type="checkbox"/> CONCURRENCE Reviewer: <u>Not required</u>	_____	_____	_____
<input type="checkbox"/> QA Reviewer: _____	_____	_____	_____
<input type="checkbox"/> PROGRAMMATIC Reviewer: <u>Not required</u>	_____	_____	_____
<input type="checkbox"/> FORMAT Reviewer: <u>Not required</u>	_____	_____	_____

Verification of Compliance with QAP-002

SEM 11/29/95

**IV. TRANSMITTAL**

TO: \_\_\_\_\_ FROM: \_\_\_\_\_

COPIES TO: (Please add/delete names as required.)

<input type="checkbox"/> Standard Distribution (listed below)	_____	_____	_____
<u>J. Linehan</u>	_____	_____	_____
<u>S. Fortuna</u>	_____	_____	_____
<u>B. Stiltenspole</u>	_____	_____	_____
<u>B. Meehan</u>	_____	_____	_____

**COMPLIANCE DETERMINATION STRATEGY  
RRT 4.1.3 - DESCRIPTION OF THE GROA STRUCTURES, SYSTEMS, AND  
COMPONENTS: UNDERGROUND FACILITY**

**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 license application (LA)-related because, as specified in the LA content requirements of 10 CFR 60.21 and the 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 LA. Therefore, the staff will conduct an *Acceptance Review* of the LA 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 LA for this regulatory requirement topic.

However, as noted in the review strategy, most of the descriptive material provided in this section of the LA will be initially reviewed and then evaluated as part of the *Compliance Review* of those sections of the LA that use this information. The reasoning for this approach is twofold. First, it permits review of the descriptive material as a whole and not in a fragmented manner. Second, this approach also permits 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 DOE LA 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 LA, the staff will have conducted prelicensing reviews of the DOE program, including technical reviews and quality assurance reviews and audits. The staff will have documented its concerns, resulting from these pre-LA reviews, as open items. Some of these open items, referred to as objections to LA submittal, may be critical to the staff's LA review, because the lack of acceptable DOE resolution would prevent the 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 LA submittal to the effective conduct of licensing activities is, using the criteria given in Section 3.1 of this review plan.

The descriptions provided in Section 4.1.3 of the LA will form the basis for the *Compliance Review* of the information contained in Section 4.4 "Assessment of Compliance with the Design Criteria for the Geologic Repository Operations Area (GROA) Underground Facility" of the LA. Thus, the review of the information contained in Section 4.1.3 will be performed in parallel with the review of the information contained in Section 4.4. Therefore, during the *Acceptance Review* of the section, the reviewer should determine whether all appropriate information necessary for the staff to conduct a *Compliance Review* of the GROA underground facility design in Section 4.4 has been provided.

In reviewing the descriptions of the GROA underground facility, the reviewer should ascertain whether the DOE has provided, as a minimum, acceptable descriptions of:

- (1) The location and general layout of the underground facility relative to the GROA and the general character of proposed activities for the underground facility
- (2) The subsurface site conditions expected to be encountered in constructing the underground facility
- (3) The identification of major structures, systems, and components important to radiological safety, retrievability, containment, and waste isolation for the underground facility
- (4) The sealing and drainage for the underground facility, including any plans for backfilling
- (5) The details specified in Sections 4.1.3.1 through 4.1.3.10 of the FCRG for the underground systems.

**2.2 Compliance Review**

**2.2.1 Safety Review**

As noted above, most of the descriptive material provided in this section of the LA will be initially reviewed and then evaluated as part of the *Compliance Review* of those sections of the LA that 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 LA will take place.

For each *Compliance Review* described in Section 3.2, 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 actual *Evaluation Finding* for the specific supporting information in that section of the LA 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 underground facility of the GROA. Such a finding would collectively reflect the sum of the specific *Evaluation Findings* made in those sections of the LA described in Section 4.2.

**RATIONALE FOR REVIEW STRATEGY**

Not Applicable.

**Contributing Analysts**

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CNWRA Mikko P. Ahola, Simon Hsiung

**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 License Application 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.]