

Kennedy



**Department of Energy**

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JAN 13 1989

Lake H. Barrett, Quality Assurance, HQ (RW-3) FORS

**CONTRADICTION WITHIN U.S. NUCLEAR REGULATORY COMMISSION REGULATION (NUREG)-1318 REGARDING THE QUALITY ACTIVITIES LIST**

In our effort to bring the Yucca Mountain Project into compliance with NUREG-1318 as required by the Quality Assurance (QA) Plan, Nevada Nuclear Waste Storage Investigation (NNWSI)/88-9, a review of NUREG-1318 revealed an apparent contradiction regarding the content and scope of the Quality Activities List, as delineated in the enclosure. A call was placed to James Kennedy of the U.S. Nuclear Regulatory Commission (NRC) to discuss the apparent contradiction and obtain clarification.

Our understanding from the conversation is that the intent of the NUREG is to have only activities related to natural barriers placed on the Quality Activities List. Other activities will still be considered in implementation of a qualified QA program. We further understand that the NRC agreed that the inclusion of the term "Q-List" is inappropriate as used in Section 3.0 and the Glossary and that the last sentence of the second paragraph of Section 4.3 of the NUREG applies to ". . . activities related to the natural barriers . . ."

This clarification will be reflected in appropriate project procedures and in the next revision to the Yucca Mountain Project QA Plan, NNWSI/88-9.

If you have any questions regarding this matter, please call me at FTS 544-7913.

*James Blaylock*  
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Project Quality Manager  
Yucca Mountain Project Office

YMP:JB-1457

Enclosure:  
Quality Activities  
List Contradiction

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**PROBLEM:**

Apparent contradiction regarding content and scope of the Quality Activities List.

**BACKGROUND:**

The following material is repeated verbatim from NUREG-1318, Portions are underlined for emphasis:

1. A. Definitions from Section 3.0

Activities: Deeds, actions, work, or performance of a specific function or task. In the HLW geologic repository program, the 10CFR Part 60, Subpart G, QA program applies to activities affecting the quality of all systems, structures, and components important to safety, and to the design and characterization of barriers important to waste isolation. These activities include: site characterization, facility and equipment construction, facility operation, performance confirmation, permanent closure, and decontamination and dismantling of surface facilities as they relate to items important to safety and barriers important to waste isolation (10CFR60.151). In addition, the pertinent requirements of 10CFR Part 50, Appendix B, apply to all activities affecting the quality of structures, systems, and components important to safety and engineering barriers important to waste isolation. These activities include: designing (including such activities as safety analyses, laboratory testing of waste package materials to characterize their performance, and performance assessment), purchasing, fabricating, handling, shipping, storing, cleaning, erecting, installing, inspecting, testing, operating, maintaining, repairing, and modifying. These types of activities do not need to be identified as part of the Q-List or Quality Activities List. However, activities related to natural barriers important to waste isolation should be identified and listed on a Quality Activities List. These activities include: performance assessments, site characterization testing, and activities that may impact the waste isolation capability of the natural barrier. For example, site characterization activities such as exploratory shaft construction, borehole drilling, and other activities that could physically or chemically alter properties of the natural barriers in an adverse way.

- B. **Quality Activities List:** In the geological repository program, a list of those major activities conducted during site characterization, construction, operation, or closure that relate to natural barriers important to waste isolation. These activities, which must be covered under the 10CFR Part 60, Subpart G, QA program, include data gathering, performance assessments, and those activities that could affect a natural barrier's ability to isolate waste.

2. **Second Paragraph of Section 4.3:**

- A. Those site characterization activities which potentially will provide data to be relied on in performance assessments of the waste isolation and containment capabilities of natural and engineered barriers, those activities related to the actual performance assessments, and those activities that may adversely impact the waste isolation capabilities of these barriers should be controlled under a Subpart G QA program. Activities should be identified in the Quality Activities List as described in Section 5.3.

**INTERPRETATION:**

1. A. Definition 1.A. clearly states that activities affecting the quality of engineered barriers important to waste isolation do not need to be identified as part of the Quality Activities List, and further, emphasizes that activities related to natural barriers should be on the Quality Activities List.
- B. Definition 1.B. addresses only the natural barriers and makes no mention of the engineered barriers.

**Conclusion:**

Definition 1.A and 1.B are mutually consistent and activities related to the engineered barriers are not to be included in the Quality Activities List.

2. A. Statement 2.A. clearly states that activities related to the engineered barriers should be in the Quality Activities List and refers the reader to Section 5.3
- B. Section 5.3 makes no mention of the Quality Activities List. It discusses engineered and natural barriers and performance objectives.

**Conclusion:**

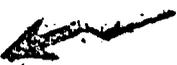
Statement 2.A. contradicts definitions 1.A. and 1.B. by apparently requiring activities related to the engineered barriers to be included in the Quality Activities List. The reference to Section 5.3 is incorrect. The Quality Activities List is not described in Section 5.3.

**Note:**

The definition of "Activities" given in NUREG-1318, Section 3 (definition 1.A above) is different from that given in Appendix A, Glossary, in that the Appendix does not include the term "or Quality Activities List" at the point marked by the asterisk (see attached). Furthermore, reference to the Q-List in this sentence is inappropriate, because the sentence addresses activities and activities are not included on the Q-List by definition.

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