UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD
Before Administrative Judges:

09-892-HLW-CAB04
Thomas S. Moore, Chairman
Paul S. Ryerson
Richard E. Wardwell

In the Matter of:	)	December 7, 2009
	)	
U.S. Department of Energy	)	
	)	Docket No. 63-001
(High Level Waste Repository	)	
Construction Authorization Application)	)	
	)	

U.S. DEPARTMENT OF ENERGY BRIEF ON
CONTENTION NEV-SAFETY-162

I. Introduction

In their May 11, 2009 "Memorandum and Order (Identifying Participants and Admitted Contentions)," Construction Authorization Boards (CAB) 01, 02 and 03 admitted for hearing NEV-SAFETY-162 relating to the U.S. Department of Energy's (DOE or Department) drip shield installation schedule.[1] The relevant parties identified this as a "legal" contention to be briefed.[2]

In response to the September 30, 2009 Case Management Order #2 (issued by CAB 04), DOE and Nevada expressed differing views on the nature of the legal issue to be briefed.[3] In its

[1] *See U.S. Dep't of Energy* (High Level Waste Repository), LBP-09-06, 69 NRC __ (slip op., Attachment A at 8) (May 11, 2009).

[2] *See* U.S. Department of Energy, State of Nevada, and Nuclear Energy Institute Joint Proposal Identifying Phase 1 Legal Issues for Briefing, Attachment 1 at 4 (Oct. 6, 2009).

[3] *See* U.S. Department of Energy Views on NEV-SAFETY-162 (Oct. 6, 2009); State of Nevada's Legal Issue for NEV-SAFETY-162 (Nevada Legal Issue).

October 23, 2009 "Order (Identifying Phase 1 Legal Issues for Briefing)," CAB 04 directed the parties to "brief [this legal issue] in the form stated by Nevada."[4] Nevada stated the legal issue as follows:

> Whether, in making the pre-construction authorization finding required by 10 C.F.R. § 63.31(a)(2), it must be considered whether, given DOE's plan to install drip shields only after all of the wastes have been emplaced, it will be impossible to make the pre-operational finding in 10 C.F.R. § 63.41(a) that construction of the underground facility has been substantially completed in accordance with the license application, as amended, the Atomic Energy Act, and applicable regulations.[5]

As discussed below, in making the finding required by § 63.31(a)(2) necessary for issuance of the construction authorization, the NRC is not required to consider whether it will be possible to make the "pre-operational" findings set forth in 10 C.F.R. § 63.41(a).

II. Argument

10 C.F.R. § 63.31(a)(2) states:

> **Construction Authorization**
>
> On review and consideration of an application and environmental impact statement submitted under this part, the Commission may authorize construction of a geologic repository operations area at the Yucca Mountain site if it determines:
>
> (a) *Safety*. (2) That there is reasonable expectation that the materials can be disposed of without unreasonable risk to the health and safety of the public.

In order to make the pre-construction authorization finding required by 10 C.F.R. § 63.31(a)(2), the only determination that NRC is required to make is that there is a "reasonable expectation" that disposal will create no "unreasonable risk" to public health and safety.

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4 CAB 04, Order (Identifying Phase 1 Legal Issues for Briefing) (Oct. 23, 2009) (unpublished).

5 Nevada Legal Issue at 1.

There is nothing in the language of the regulation pertinent to construction authorization (Section 63.31(a)(2)) that requires the NRC to consider, at that stage, whether it will be later able to make the finding set forth in Section 63.41(a), in order to determine that "the materials can be disposed without unreasonable risk to the health and safety of the public."

Furthermore, the regulations distinguish between the findings to be made in support of the construction authorization and those to be made as a precondition to the issuance of the "receive and possess" license and allocate them logically. Section 63.31(a)(2) covers only the former. Section 63.41 covers only the latter. Section 63.31 is entitled "Construction authorization," and § 63.41 is entitled "Standards for issuance of a license" and focuses exclusively on the standards to be met at a later phase of this proceeding -- at the time DOE seeks authority to receive and possess licensed material. Had the NRC intended to require a finding to be part of the construction authorization determination, it would have explicitly included that finding in § 63.31(a)(2).

A directly analogous example in which the NRC had to make similar broad health and safety findings before issuing a construction authorization is the Mixed-Oxide (MOX) Fuel Fabrication Facility proceeding. There, the applicant applied for and received a construction authorization and is now constructing the facility, based upon the "Requirements for the approval of applications" set forth in 10 C.F.R. § 70.23(b).[6] Section 70.23(a)(8), which governs the standards for NRC grant of a license to operate a MOX Facility, includes a provision that is analogous to § 63.41(a), requiring the NRC to find that "construction of the principal structures, systems, and components approved pursuant to [§ 70.23(b)] . . . has been completed in accordance with the application." In the MOX Facility construction proceeding, neither the

[6] *See Duke Cogema Stone & Webster* (Savannah River Mixed Oxide Fuel Fabrication Facility), CLI-02-07, 55 NRC 205, 215-16 (2007) (identifying Section 70.23(b) as applicable to construction authorization and Section 70.23(a)(8) as applicable to a license to operate).

Staff, the Board, nor the Commission interpreted the construction authorization standard to require a prediction of the NRC's ability to make at a later time the finding regarding "completion" of construction of SSCs. In fact, the Commission ruled that they were separate findings.[7] This precedent reinforces the effect of the plain language and structure of §§ 63.31 and 63.41—namely, that the Board should not read into § 63.31(a)(2) a requirement to predict the NRC's ability to make a later finding regarding completion of construction.

Contrary to the statement in the agreed-upon legal issue, it will not be impossible for NRC to make the required pre-operational finding in 10 C.F.R. § 63.41(a) that construction of the underground facility has been substantially completed because of DOE's plans to install the drip shields after waste emplacement. This is made clear by the explicit language of the rules. Section 63.41(a) states:

> Construction may be considered substantially complete for the purposes of this paragraph if the construction of –
>
> (1) Surface and interconnecting structures, systems, and components; and
>
> (2) Any *underground storage space* required for *initial operation*, are substantially complete.[8]

Section 63.41(a)(1) relates only to surface operations. Compare generally 10 C.F.R. § 63.41(a)(1) ("surface") with 10 C.F.R. § 63.41(a)(2)("underground").[9] Accordingly, since the drip shields are not part of surface operations, that section is not at issue in this contention.

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7 *See id.* at 217 ("The NRC can, therefore, confine its initial adjudicatory hearing to only the construction issues that are the subject of a Commission decision at this stage.")

8 Emphasis added.

9 The legal issue posited by Nevada and approved by the Board does not specifically reference 10 C.F.R. § 63.41(a)(1). And Nevada specifically discusses only subsection 63.41(a)(2) in its pleadings. *See e.g.*, State of Nevada's Reply to DOE's Answer to State of Nevada's Petition to Intervene as a Full Party at 695 (Feb. 24, 2009) (Nevada's Reply to DOE's Answer).

Only § 63.41(a)(2) relates to the legal issue. However, drip shields are not part of the common sense meaning of "underground storage space required for initial operation" in § 63.41(a)(2). First, the term "space" is commonly defined as "a blank or empty area."[10] Interpreting "space" or "storage space" to include the drip shields is inconsistent with the common-sense understanding of the terms.

Second, the "substantial completion" finding for issuing a license to receive and possess is limited to underground storage space "required for initial operation."[11] Section 63.102(c) defines "operations" in three phases: (1) the period of emplacement; (2) any subsequent period before permanent closure during which the emplaced wastes are retrievable; and (3) permanent closure. This language strongly suggests that the "initial" (*i.e.*, first) operations period is the period during which wastes are being emplaced. And, as discussed in the license application, the drip shields are not installed during waste emplacement, but during closure,[12] which occurs during the third phase of "operations" described in § 63.102(c).

Finally, DOE will have to provide reasonable assurance that the drip shields will be installed in accordance with its commitment in the LA and Nevada will not be deprived of an opportunity to raise factual issues as to DOE's ability to actually install the drip shields.

On the first point, 10 C.F.R. § 63.41(b) states that a license to receive and possess may be issued based on a finding that:

> The activities to be conducted at the [GROA] will be in conformity with the *application* as amended….

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10 *American Heritage College Dictionary* 1326 (4th ed. 2004).

11 10 C.F.R. § 63.41(a)(2).

12 *See* Safety Analysis Report (SAR) at 1.3.1-34 ("The closure activities begin with emplacement of the drip shields.")) SAR references in this brief are to SAR revision 1, dated February 19, 2009.

Under this provision, the NRC will have to determine that there is reasonable assurance that the drip shields can be installed in accordance with DOE's LA commitments, and indeed could if it chose, impose a license condition on this subject governing installation prior to permanent closure. Even without a license condition, the NRC can confirm that DOE actually installs the drip shields prior to authorizing DOE to permanently close the repository. Section 63.51 requires DOE to submit a license amendment request before permanently closing the repository. This amendment request must include an update of the license application covering, among other things, "[a]ny substantial revision of plans for permanent closure" and "[o]ther information bearing on permanent closure that was not available at the time a license was issued."[13] DOE's obligation to install the drip shields therefore will not escape regulatory scrutiny.

On the second point (regarding Nevada's ability to raise factual issues as to DOE's ability to install the drip shields), Nevada has already proffered, and has had admitted by the Boards, just such contentions.[14]

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[13] 10 C.F.R. § 63.51(6), (7).

[14] *See e.g.*, Contentions NEV-SAFETY-130 (questioning whether drip shields can be designed, fabricated and installed as planned); NEV-SAFETY-133 (questioning system for installing drip shields); NEV-SAFETY-142 to 148 (challenging design specifications and performance assessments for drip shields).

III. Conclusion

For the reasons discussed above, in making the finding required by § 63.31(a)(2) necessary for issuing the Construction Authorization, the NRC is not required to consider whether it will be possible to make the "pre-operational" findings set forth in 10 C.F.R. § 63.41(a).

Respectfully submitted,
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