JIM GIBBONS
Governor

PR 60, 63, 73 and 74
(72FR72521)

STATE OF NEVADA

ROBERT R. LOUX
Executive Director

(4)

DOCKETED
USNRC

May 6, 2008 (3:05pm)

OFFICE OF SECRETARY
RULEMAKINGS AND
ADJUDICATIONS STAFF

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April 30, 2008

Secretary
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001
Attn: Rulemakings and Adjudications Staff

Subject: RIN 3150-A106.

Dear Madam Secretary:

The State of Nevada provides the following comments in response to the Commission's notice of proposed rulemaking entitled "Geologic Repository Operations Area Security and Material Control and Accounting Requirements," RIN 3150-AI-06, 72 Fed. Reg. 72522, December 20, 2007, comment period extended, 73 Fed. Reg. 10187, February 22, 2008. This letter also includes a contingent petition for rulemaking, as explained below.

Nevada commends the Commission for acknowledging that, in light of the events on 9-11, its current physical security material and control and accounting requirements for the proposed Yucca Mountain repository are severely deficient. Nevada agrees that the current requirements are not adequate to protect public health and safety or the common defense and security and that a new regulatory approach for protecting Yucca Mountain is necessary. Consequently, Nevada supports many features of the proposed rule, and the few but important criticisms

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SECY-02

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that follow should not be understood to suggest that the rule be delayed unnecessarily or abandoned.

1. The Design Basis Threat Must Include Airborne Attacks

The proposed rule would apply a graded approach to establishing Yucca Mountain physical security requirements that would appear to require different design basis threats for different parts of the facility. However, the design basis threat (or performance objective) specified in 10 C.F.R. § 73.1 (a) (the "DBT") defines the outer limits of DOE's responsibility, as a licensee, to protect against acts of terrorism and diversion. In proposing to apply the DBT in § 73.1 (a), the Commission thereby proposes to apply the DBT applicable to nuclear power reactors and Class I fuel cycle facilities to the highest level of risk posed by a geologic repository operations area as well. This DBT was developed in a 2007 rulemaking and it does not include airborne attacks, such as those that occurred on 9-11. Therefore, the Commission is proposing to license Yucca Mountain with no regulatory provision that would require protection or mitigation against airborne attacks. As explained below, this is very wrong. A DBT for Yucca Mountain that fails to include airborne attacks such as those that occurred on 9-11 would not adequately protect public health and safety.

As the Commission explained in the 2007 DBT rulemaking, the DBT considers "the [terrorist] tactics that have been observed in use." 72 Fed. Reg. 12705, 12708, March 19, 2007 [2007 DBT Rule]. Given the tactics in use on 9-11, this approach to developing the DBT would seem to require a physical security DBT to include airborne attacks, including airborne attacks using a large commercial airliner. However, the Commission explained that "the DBTs , as articulated in the rule, are based on adversary characteristics which a private sector security force can reasonably be expected to defend." 2007 DBT Rule at 12713. Thus the 2007 definition of the DBT was influenced by the Commission's judgment with respect to the proper division of responsibility between the public and private sectors. This consideration played an especially critical role in the Commission's deliberations with respect to airborne attacks. The Commission omitted airborne attacks from its DBT because "the airborne threat is one that is beyond what a private security force can reasonably be expected to defend against." 2007 DBT Rule at 12710.

However, this consideration does not apply to DOE, an Executive Branch Agency with an important national security component and numerous well-established relationships with the President and other agencies such as the

Departments of Homeland Security, Defense, and Transportation. The Commission may reasonably demand more from DOE, especially with respect to an airborne component of a DBT, not only because it is a Federal Agency, but also because the Yucca Mountain Project is supported by the current President and will need to be supported by future Presidents if it is continue. Surely DOE, with a President's support, may muster whatever protective measures are needed or appropriate, and limits applicable to the private sector are completely irrelevant to defining a Yucca Mountain design basis threat. Therefore, the Commission's consistent approach of considering "the [terrorist] tactics that have been observed in use" requires, in the case of Yucca Mountain, a design basis threat that includes airborne attacks, including attacks like those the occurred on 9-11.

It follows from the above that the Commission must also require DOE to propose and adopt design features that would protect against airborne attacks and mitigate their consequences. Elsewhere in the propose rule the Commission requires design features (such as physical barriers) as a part of physical protection and there is no reason to treat airborne attacks as a special case. Indeed, a full suite of protective design features for airborne attacks should be required, including bearnhenges and locating certain facilities underground.

2. <u>The Distinction Between Events Potentially Causing 25 Rem and Events Potentially Causing 5 Rem Should be Abandoned</u>

In the interest of "risk-informing" its proposed physical security requirements, the proposed rule uses a graded approach whereby the level of protection required is greatest when a sabotage event could cause a dose at the controlled area boundary or 400 meters of 25 rem (0.25 Sv) or more. When the dose would be at or above 5 rem (0.05 Sv), but below 25 rem, the materials are considered to pose a "moderate" radiological sabotage hazard, and fewer requirements are imposed.

Because "risk" includes both the likelihood and the consequences of an event, a graded approach based only on potential consequences is not, in any strict sense, "risk-informed." Moreover, there is no stated basis for the proposed distinction between potential consequences of 5 rem and potential consequences of 25 rem. While the biological effects are somewhat different, the likely adversary may care little about this, focusing instead on the psychological, sociological, and political effects, and in these respects the two dose levels are approximately equivalent because both pose risks that are well in excess of allowable risks to the public and will likely cause alarm or possibly even panic.

Evaluating this "risk informed" approach is also impossible because the design basis threat for "moderate" radiological sabotage cannot be understood or compared meaningfully to the DBT in 10 C.F.R. § 73.1. First, the use of the word "or" between "impede" and "mitigate" in § 73.53 (c)(3)(ii) suggests that physical security would be adequate even if it was designed only to effect some small "mitigation," utterly failing to "detect, assess, intercept, challenge, delay and neutralize, [or] impede." This would be utterly inadequate. Moreover, in comparison to the DBT in § 73.1, neither the nature of the assault nor the size and composition of the adversary force are specified, it is unclear whether suicide attacks are included, vehicles with bombs apparently are assumed to be located in the "proximity of" but not necessarily "in" vital areas, and apparently no cyber attacks are allowed. No reasons are offered for these differences. Clearly, the level of protection is considerably less, but how much so it is impossible to say or even evaluate meaningfully.

Nevada urges that the distinction be abandoned, and that the DBT in § 73.1 (a)(1) be applied whenever the potential dose consequences are at or above 5 rem.

3. Nevada Must Review the Complete Basis For The DBT

The Yucca Mountain design basis threat is based on safeguards and classified defense information with respect to tactics that have been observed, discussed, or trained for, and mitigation measures. In its 2007 DBT rulemaking the Commission also makes repeated references to site-specific vulnerability assessments, concluding without supporting detail that the risks of terrorist attacks against nuclear power reactor and related spent fuel storage facilities are low. With specific reference to airborne attacks, the Commission concluded that mitigation measures put in place after 9-11are sufficient to ensure adequate protection of the public health and safety. 2007 DBT Rule at 12710-12711.

Although access to protected unclassified and classified information is apparently critical to understanding the basis for the Yucca Mountain design basis threat and proposed rule, and although presumably DOE has easy access to such information, the Commission has not made any of this information available to Nevada. Section 181 of the Atomic Energy Act provides that "in the case of agency proceedings or actions which involve Restricted Data, defense information, safeguards information protected from disclosure under the authority of section 147 or information protected from dissemination under the authority of section 148, the Commission shall provide by regulation for such parallel procedures as

will effectively safeguard and prevent disclosure...to unauthorized persons, with minimum impairment of the procedural rights which would be available if [such protected information] were not involved." The Commission has adopted such parallel procedures for Restricted Data and defense information in 10 C.F.R. Part 2, Subpart I, but these appear to apply only to classes of adjudications, not rulemaking, despite the fact that the term "proceedings" in section 181 clearly includes rulemaking.

If necessary, Nevada asks the Commission to promulgate immediately a rule of particular applicability to extend Subpart I to this particular rulemaking. Nevada has already applied for security clearances for several of its representatives and experts. The instant rulemaking should be suspended until any necessary rule of particular applicability extending Subpart I is in place, the pending security clearance applications have been approved, and the cleared individuals have been given a reasonable opportunity to review all of the information supporting the DBT and proposed rule and provide comments, as appropriate.

Nevada notes in this regard that nuclear industry representatives were granted access to this or very similar information. 2007 DBT Rule at 12715. Clearly, Nevada has an equal "need to know." Withholding this information from Nevada under these circumstances would be fundamentally unfair and violate section 4 of the Administrative Procedure Act.

4. The Proposed Rule Adopts an Unduly Narrow View of NRC Authority

The proposed rule and the earlier 2007 DBT Rule are based on the Commission's authority under section 161b and 161i of the Atomic Energy Act to promulgate rules to assure adequate protection of the public health and safety. However, the Commission also has the power to ask for additional measures of protection, going beyond protection which is merely "adequate," in order to "minimize danger to life or property." The Commission should implement this authority here by requiring the Yucca Mountain physical security plan to include a specific analysis of all feasible and reasonable measures that will minimize danger to the public health and safety, and to include them even though they may not be needed to counter the DBT.

The proposed rule would require site and facility-specific assessments to, among other things, choose the proper level of design basis threat and develop and analyze "target sets." Therefore the specific analysis we request would impose no undue burden. Moreover, it would compensate to some extent for a striking

deficiency in the apparent way the Commission defines a design basis threat. The 2007 DBT Rule explains that, in establishing a DBT, the Commission does not assume the "worst case," but instead considers "tactics that have been observed in use, discussed, or trained for by potential adversaries." 2007 DBT Rule at 12708. This leaves no margin for error in intelligence estimates. While the Commission explains that, if there are new developments, the DBT can include them, this still assumes sufficient intelligence information and, moreover, modifying security plans to reflect a new DBT may take time. Also, in the case of completed facilities, it may be infeasible to make changes in location or design that would otherwise be the most effective way to implement the new DBT. Adding additional security measures beyond those needed to meet the DBT, to minimize danger, would provide added protection and allow physical security to degrade more gradually in the face of unanticipated treats.

5. The Proposed Rule Would Unlawfully Curtail Hearing Rights

Under the proposed rule the construction authorization application ("CA/LA") would be sufficient if it included "descriptions" of DOE's physical protection plan, safeguards contingency plan, security organization personnel training and qualifications plan, and material control and accounting plan. *See* proposed §§ 63.21(b)(3) and 63.21(b)(4). The plans themselves are not required to be a part of the CA/LA, or even to accompany it, but are instead required to be submitted to NRC for its approval 180 days after issuance of the construction authorization ("CA"). *See* proposed § 63.24(d). This post-CA submittal of the plans would be in the form of a supplement to the license application. See also proposed §§ 73.53(b) and 74.71(c). None of these plans needs to be implemented until the operating license is issued. *See* proposed §§ 73.53(b) and 74.71(c).[1]

The preamble to the proposed rule explains that the CA/LA needs to have descriptions of these plans to demonstrate that DOE can adequately address and meet NRC's requirements, that some aspects of the plans can be better integrated during construction, and that submittal 180 days after issuance of the CA will

[1] The proposed rule would not amend 10 C.F.R. § 63.31 (a)(3)(v) which, in necessary effect, requires that an emergency plan (as distinguished from a description of such a plan) be included in the CA/LA, and there is no indication in the proposed rule preamble that a change to § 63.21 (a)(3)(v) in this regard is under consideration, much less justified. For example, there is no proposal to amend § 63.24 to require the submission of emergency plans with the "operating license" application, as would be necessary if a description were sufficient at the CA/LA stage. If the Commission were to propose such a change, Nevada's would want the opportunity to comment, and its comments here regarding hearing rights associated with physical security and material control and accounting plans would be a point of departure in preparing comments.

allow DOE to include new technology not available when the CA/LA was filed. 72 Fed. Reg. 72522, 72524.

The required content of the CA/LA, as specified in the regulation, could well dictate the scope of the licensing review and hearing. This means that the new rule could have the effect of confining the licensing review and hearing to issues with respect to the adequacy of the "descriptions" of the plans, as opposed to issues with respect to the adequacy of the plans themselves. But, Nevada cannot understand how the adequacy of the "descriptions" can be evaluated without consideration of the plans being described, or how NRC can consider whether DOE will be able to comply with NRC's requirements without seeing in detail how those requirements will be implemented in actual plans. Indeed, the Commission's proposed requirement for DOE to submit actual plans very shortly after the CA is issued, before any significant construction will have begun, as opposed to postponing submission of the plans until the operating (receipt and possession) license phase, suggests clearly that the Commission regards mere descriptions as inadequate for the CA phase of review. Indeed mere descriptions, without underlying plans, will likely be insufficient to reveal particular design features necessary for developing and implementing adequate plans, and yet such design features are a necessary part of any CA/LA.

It may be that the Commission believes that questions about the adequacy of the actual plans must be resolved before any significant construction begins, but is postponing submission of them until just shortly after the CA is issued in an effort to preclude any consideration of the actual plans in the licensing hearing. Otherwise, why not postpone submission of the actual plans until the operating license application? Put another way, if the Commission believes that the actual plans as so important that they must be submitted 180 days after the CA, before significant construction begins, why are they not sufficiently important to be included (or referenced) in the CA/LA itself? It is no answer to say, as suggested in the preamble, that the submission of the plans is being postponed to allow DOE to include new technologies, because this argues for submittal of the plans at the operating license stage, when DOE will have much more time to consider new technologies, but still before they will need to be fully implemented.

Moreover, what will the Commission do if the 180-day submittal is inadequate? Presumably, the Commission will not revoke the CA unless it appeared that DOE was simply unable to comply. But this confirms that an inability to comply can be determined only after consideration of actual proposed

plans, and that the proposed requirement that DOE include "descriptions" of the plans in the CA/LA is just "window dressing" of no real use to NRC.

The NRC tried something like this before and was reversed by the D.C. Circuit. In the 1980s NRC was concerned that hearings on emergency plan exercises were delaying the issuance of operating licenses for nuclear power plants, and issued a rule that said exercises had to be taken into account before the operating license was issued but could not be considered in the hearing. The D.C. Circuit vacated the rule because, from the content of the rule, the adequacy of the exercise was apparently a material issue that had to be considered before the license was issued, and section 189 of the Atomic Energy Act precluded the NRC from categorically refusing to consider a material issue in the licensing hearing. *Union of Concerned Scientists v. NRC*, 735 F.2d 1437 (D.C. Cir. 1984). It appears from the proposal that the Commission is trying to circumvent the law of this case by providing for submission of plans after the CA is issued, not before. However, this effort cannot succeed because the requirement to submit the plans 180 days after the CA, before significant construction begins, still implies clearly that the plans present material issues that must be resolved in connection with the issuance of the CA.

In sum, Nevada believes that this aspect of the draft proposed rule violates the hearing requirements in section 189 of the Atomic Energy Act.

6. NRC Mistakenly Refused to Exercise Full Authority Over DOE

The proposed rule would provide that NRC-mandated physical security and material control and accounting plans would not apply after the repository is closed permanently and the license is terminated. *See* proposed §§ 73.53 (b)(2) and 74.73 (k) and 72 Fed. Reg. 72522, 72527-72528. The preamble explains that this is because NRC loses jurisdiction over DOE after the license is terminated. *Id.* This is an incorrect legal conclusion. For other licensees, NRC asserts continuing jurisdiction after license termination. *See* 10 C.F.R. § 20.1401(c). There is no reason to distinguish DOE repositories, especially since section 202 of the Energy Reorganization Act of 1974 grants NRC "licensing and *related regulatory authority*" over DOE facilities for disposal of high-level waste and spent fuel (emphasis added).

Moreover, NRC has insisted on exercising continuing, long-term authority over DOE in less compelling circumstances. DOE has long-term custody of mill trailing piles, which present radiological hazards that are less severe than

repositories but are equally long-term. Under 10 C.F.R. § 40.27, NRC exercises regulatory authority over this DOE custodial function through the issuance, by rule, of a general license to DOE. There is no reason why NRC should not do something equivalent here. The NRC should consider the nature of the threat posed after permanent closure and devise an appropriate risk-informed approach to address it.

7. NRC Should Require Independent Verification of Waste Canister Contents

DOE is not required to conduct independent measurements on waste receipts. "DOE would be allowed to accept originator-assigned values." *See* proposed rule preamble at 72 Fed. Reg. 72522, 72525. This means that DOE will be entitled to assume that the originators' records for what went into the TAD (or other canister) are correct. Nevada does not believe that this is consistent with the proposed fundamental objective 10 C.F.R. § 74.71 (a) (1). DOE should be required to verify the contents of each TAD or other canister. Reactor records have been erroneous in the past and may be erroneous in the future.

Sincerely,

Robert R. Loux
Executive Director