



NUCLEAR ENERGY INSTITUTE

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OFFICE OF SECRETARY  
RULEMAKINGS AND  
ADJUDICATIONS STAFF

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April 29, 2008

Ms. Annette L. Vietti-Cook  
Secretary  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

**Subject:** Nuclear Energy Institute Comments on U.S. Nuclear Regulatory Commission Proposed Rulemaking at 10 CFR Parts 60, 63, 73 and 74 – Geologic Repository Operations Area Security and Material Control and Accounting Requirements (Federal Register 72, 72522), dated December 20, 2007

**Project Number: 689**

The Nuclear Energy Institute (NEI)<sup>1</sup> is pleased to have the opportunity to comment on the Nuclear Regulatory Commission's (NRC) proposed rulemaking concerning geologic repository operations area (GROA) security and material control and accounting (MC&A) requirements. The safe and secure operation of a geologic repository is a fundamental element of the integrated strategy<sup>2</sup> to effectively manage used nuclear fuel. In support of this objective, appropriate repository security and MC&A regulations must be in place. Such regulations will provide for the assurance of adequate protection while recognizing both the modern threat environment and the unique characteristics of a geologic repository.

To assure that the proposed regulations can be applied to the GROA in an appropriately tailored and risk-informed manner, we have two recommendations concerning the regulatory approach being taken that we believe NRC should address with a significant revision to this proposal:

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<sup>1</sup> NEI is the organization responsible for establishing unified nuclear industry policy on matters affecting the nuclear energy industry. NEI's members include all nuclear companies licensed to operate commercial nuclear power plants in the United States, nuclear plant designers, major architect/engineering firms, fuel fabrication facilities, nuclear material licensees, and other organizations and individuals involved in the nuclear energy industry.

<sup>2</sup> It is nuclear industry policy that used nuclear fuel from reactor sites should be managed through a three-pronged approach consisting of interim storage at one or more centralized sites, research, development, and commercial demonstration of advanced technologies to close the fuel cycle, and eventual disposal of remaining high level radioactive wastes in a geologic repository.

Template = SECY-067

SECY-02

1. NRC should choose a more appropriate starting point for this rulemaking. The current proposal identifies "the security requirements for power reactors"<sup>3</sup> as its starting point. However, a GROA differs from a reactor site in terms of the hazard present and the risks associated with that hazard regarding any security threat. The absence of an operating reactor and the more complex active safety systems associated with it, along with the inherent self-protecting nature of the material inventories at the repository, makes the GROA an inherently simpler and lower risk facility. Unless this is taken into account, a regulatory approach that goes beyond what is necessary and reasonable for effective security and MC&A at a GROA will inevitably result. Alternatively, using NRC's regulations for Independent Spent Fuel Storage Installation (ISFSI) security as a starting point, and adding provisions to address characteristics unique to the GROA where necessary, would result in a much more effective regulatory approach.
2. In resetting the starting point for this proposal, NRC should move away from the broad approach applied in this proposal to a more focused and tailored approach, based on available information regarding the current GROA concept. Reading the background discussion of the proposed rulemaking leads one to conclude that the GROA design concept is uncertain and trending towards increasing complexity, but in reality this concept is now firmly established and has been greatly simplified as compared to previous design evolutions. We believe that sufficient information on the established concept has been made available by DOE to enable NRC to apply a more focused approach that effectively builds upon existing ISFSI security requirements and develop a regulation that can be suitably tailored to the GROA.

DOE's Transportation, Aging, and Disposal (TAD)-based GROA concept has been firmly established since 2005. DOE has publicly presented information on this concept, at a number of technical exchanges and management meetings, to the NRC Division of High Level Waste Repository Safety. These presentations have provided details on the types of facilities and handling operations that would occur at the GROA. This information was also described in DOE's 2007 Supplemental Environmental Impact Statement for Yucca Mountain and will be further detailed in the Yucca Mountain License Application that NRC should receive in June of this year. Furthermore, thousands of technical documents on the GROA concept are available to NRC on the Yucca Mountain licensing support network. The current GROA concept is well understood. The 2005 design updates incorporating TAD systems greatly simplified the design. These well-established simplifications should be strongly recognized in NRC's regulatory approach.

In the two enclosures to this letter, we are providing specific comments which further elaborate on these points as well as address various details of the proposal. Enclosure 1 provides industry's

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<sup>3</sup> 72 *Fed. Reg.*, page 72523, column 3.

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responses to the questions posed in the "Discussion" section of the rulemaking, while Enclosure 2 provides comments on the specific language of the regulation.

Based on these comments, we are recommending that NRC reconsider the proposed rulemaking. Instead of promulgating the proposed approach, NRC should reset its "starting point" to begin from the perspective of an ISFSI, which we believe is the type of facility most analogous to the GROA, and then consider what additional security and MC&A needs might arise from unique facilities and operations present at the GROA.

Such reconsideration will most likely result in a significantly different proposal that would need to be re-noticed. Fortunately, as NRC has recognized in this proposal, it will not be necessary for DOE to develop its security plan until some time after a construction authorization is received, a point in time that is at least three to four years away. Therefore, there is ample time for NRC to develop more appropriate security and MC&A requirements and begin the rulemaking process anew.

Industry looks forward to participating in any future dialogue NRC convenes to develop an improved and revised proposal. If you have any questions, please do not hesitate to contact me at 202-739-8082 or rxm@nei.org.

Sincerely,



Rodney McCullum

Enclosures

c: Mr. Lawrence Kokajko, NRC, Director, Division of High Level Waste Repository Safety  
Dr. Patricia Holahan, NRC, Director, Division of Security Policy  
Ms. Merri Horn, NRC, Office of Federal and State Programs  
Mr. David Crawford, DOE, Director, Disposal Operations Office

**NUCLEAR ENERGY INSTITUTE (NEI)**  
**RESPONSES TO SPECIFIC QUESTIONS POSED IN THE NUCLEAR REGULATORY**  
**COMMISSION'S (NRC) PROPOSED RULEMAKING**  
**10 CFR Parts 60, 63, 73 and 74 – *Geologic Repository Operations Area Security and***  
***Material Control and Accounting Requirements***  
**(72 *Federal Register*, 72522), dated December 20, 2007**

In general, industry does not believe that this proposed rulemaking represents an appropriate regulatory approach for Geologic Repository Operations Area (GROA) security and Material Control and Accounting (MC&A). Our overriding concern in this regard is discussed in detail below in response to Question C. While our responses to the other questions are oftentimes reflective of the general concern articulated in response to Question C, they also address a number of specific issues with the proposed rulemaking, including several specific areas where industry commends NRC for what has been proposed. In recommending a significant revision of this proposal, industry encourages NRC to carry forward and build upon those positives. Finally, it should be noted that this enclosure does not address all of the questions posed in the proposal as industry has no comments on those questions not identified herein.

**C. Why do the requirements need to be revised?**

NRC has stated two premises for its proposal. First, the world has changed since September 11, 2001, and the repository regulations need to be upgraded consistent with the way these changes have been incorporated in reactor regulations. And second, the repository has become more complex. While we agree with the first half of the first premise, that the world of security post-September 11, 2001, has changed, we do not agree that reactor regulation is an appropriate starting point from which to address the implication that this changed world has on GROA security. Also, NRC's second premise is inconsistent with the direction in which repository design has been trending in recent years — the current design (that will be described in the license application) is considerably simpler than previous iterations.

Regarding the first premise, NRC has chosen to use as the starting point for this rulemaking, "the security requirements for power reactors."<sup>1</sup> However, a GROA, differs from a reactor site in terms of the hazard present and the risks associated with that hazard regarding any security threat. The absence of an operating reactor and the more complex active safety systems associated with it, along with the inherent self-protecting nature of the material inventories at the repository, makes the GROA an inherently simpler and lower risk facility. Approaching the GROA as if it were a reactor site will lead to a regulatory approach that goes beyond what is necessary and reasonable for effective security and MC&A at a GROA.

Security requirements for the GROA should recognize that repository safety systems are not the same as at reactors and that the repository hazard consists of mostly static inventories of material that tend to be contained and self-protecting. We recognize that there are fuel handling operations at the GROA and agree that NRC should issue requirements to protect the security of such operations. Therefore, it would be more appropriate to start from Independent Spent Fuel Storage Installation (ISFSI) regulations and add security requirements specifically tailored to the fuel and other material handling operations that will be conducted at the repository.

In the second premise, NRC states that "potential surface operations at a GROA have become more complex over the years" and cites the inclusion of "bare fuel handling

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<sup>1</sup> 72 *Fed. Reg.*, page 72523, column 3.

operations in a spent fuel pool to transfer SNF from non-TAD (transportation, aging, and disposal) canisters to a TAD canister"<sup>2</sup> as an example of this increased complexity. However, the overall effect of the GROA changes related to the TAD has been to greatly simplify the GROA concept. Previous design concepts included handling of the used fuel bare in dry handling facilities of unprecedented scale. In the TAD based design changes adopted by DOE in 2005 only 10% of the used fuel is handled bare in a more conventional wet handling facility while the remaining 90% would not even be handled bare at all in the GROA, having already arrived packaged in a TAD.

Similarly, because DOE intends to carry forward this TAD based design into repository licensing, we also disagree with the statement that "DOE has not set forth a final concept of operations for the GROA. Therefore, it is not clear what types of facilities will be part of the surface operations or what type of handling of the HLW within the surface facilities may occur."<sup>3</sup> DOE has publicly presented information on this concept, at a number of technical exchanges and management meetings, to the NRC Division of High Level Waste Repository Safety. These presentations have provided details on the types of facilities and handling operations that would occur at the GROA. This information was also described in DOE's 2007 Supplemental Environmental Impact Statement for Yucca Mountain. Furthermore, significant information concerning the GROA design is available on the Yucca Mountain Licensing Support Network. Rather than proposing a broad regulatory approach for security and MC&A at the GROA, NRC should take advantage of the detailed information DOE has provided on the current design concept to develop a proposed regulation that is appropriately focused and tailored to the GROA.

#### **D. When do the security and MC&A plans need to be submitted?**

Industry commends NRC for recognizing that there is no need for detailed plans to be developed many years before the repository receives used nuclear fuel and other forms of high-level radioactive material and begins operations. This recognition should apply to all plans that are not required to be implemented until repository operations or shortly before operations. However, instead of expressing this recognition as a requirement for DOE to submit a security plan 180 days after construction authorization, it would be more appropriate to specify the submittal schedule as a period of time before operation of the repository. For example, the requirement could be to submit the plans at some point in time that is tied to DOE's submittal of a license application amendment to receive and possess used fuel and HLW. This would facilitate NRC staff review regardless of DOE's construction schedule as well as better support the statement made in the Federal Register notice that, "...there may be some aspects that would be better integrated during construction." Stating the requirement in this manner would still allow plenty of time for NRC to effectively review the security plan and for DOE to implement it, while avoiding the possibility that, if DOE's construction schedule for any reason becomes protracted, not enough information on the as-built configuration of the facility would be available for the plan to be completed 180 days after construction authorization.

#### **E. What types of materials would be covered by the new security and MC&A requirements?**

Industry questions NRC's assertion that there is sufficient uncertainty regarding what waste forms will be received at Yucca Mountain to justify "MC&A requirements that are broad

<sup>2</sup> 72 *Fed. Reg.*, page 72523, column 1.

<sup>3</sup> 72 *Fed. Reg.*, page 72523, column 1.

enough to cover the spectrum of materials that could potentially be dispositioned at a GROA without the need for future rulemaking."<sup>4</sup> DOE has very clearly defined the range of materials that will be dispositioned at the GROA in its Final Environmental Impact Statement (EIS) and Draft Supplemental EIS. Commensurate with NRC's decision on whether or not to docket the Yucca Mountain license application, staff will also have to make a decision on whether or not to adopt DOE's EIS. NRC should coordinate its reconsideration of this proposed rule with its review of the EIS so that the revised rulemaking proposal can be built on accurate knowledge of the types of materials that need to be covered and the security and MC&A requirements therein can be appropriately tailored for these materials. Specifically, the rule should address the credit provided for self-protecting nuclear materials.

**H. Would shipper receiver comparisons with independent measurements be required...?**

Industry commends NRC for recognizing that such comparisons should not be required. However, the manner in which requirements that DOE "routinely assure the validity of each originator's assigned special nuclear material (SNM) content values..." will be implemented needs to be better understood. The NRC's wording implies that shipper receiver comparisons with independent measurements may be required. Independent measurements could increase personnel dose and would not be considered as low as reasonably achievable (ALARA). The wording should be revised to state clearly that shipper receiver comparisons with independent measurements will not be required.

**I. What measurements would be necessary...?**

Industry commends NRC for appropriately recognizing that records kept by the originating facilities are adequate to assure the safety, security and accountability of nuclear materials at the sites the materials were generated. Therefore, no additional physical measurements should be required at the repository facilities since the only handling of materials will be either intact fuel assemblies or those received in canisters that will not be opened at the GROA.

Industry is, however, concerned about the qualifier "At this point" that NRC has included in this discussion after indicating that such requirements are not necessary. Is this intended to indicate that NRC might be considering changing this to add measurement requirements in the future? If so, such foreshadowing would contradict the goal of stable and predictable regulation. NRC should either clarify precisely what is meant here or delete this qualifying phrase so as to avoid any misinterpretation.

**J. What would an MC&A detection and response program involve?**

This section discusses rapidly detecting and responding to indications of SNM loss, including possible theft or diversion. This includes triggering investigations and resolving action on anomalies, as well as a way to thwart and attempts to covertly steal or divert SNM by insiders' action individually or in collusion.

The background section at page 72523, 3rd column, states, "The reactor requirements are used as the starting point because of the similarity in materials, the material's attractiveness for malevolent use, and the potential consequences of its malevolent use. The security requirements should provide protection equivalent to those at power reactor..."

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<sup>4</sup> 72 *Fed. Reg.*, page 72524, column 3.

The rule should take into consideration the extensive background checks and an insider mitigation program similar to power reactors.

The Insider Mitigation Program provides a high assurance of protection as implemented and is a reliable way to thwart attempts to covertly steal or divert SNM by insiders' action individually or in collusion.

The focus of this program should be on rapidly detecting and responding to indications of SNM loss, including possible theft or diversion. This includes triggering investigations and resolving action on anomalies.

**K. What additional requirements....formula quantities...other than as irradiated nuclear reactor fuel...?**

Industry questions the need for additional measures for strategic SNM, other than reactor fuel given that all such material will arrive at the repository in disposable canisters and not be handled in any manner that is not both contained and self-protecting at the GROA. This is another area in which NRC should, in reconsidering this proposal, review the considerable GROA design information which has been made available by DOE, and revise its requirements to be appropriately tailored for application at the GROA.

**L. What special MC&A-related needs exist?**

Industry questions the need for specific item control and physical inventorying in the underground drifts. This somewhat defeats the purpose of isolating the material in a deep underground repository and could result in worker radiation exposures that would not be ALARA. Given that the inventory of material is known when it is emplaced in the tunnels, and that it is emplaced in containers that are designed to last for thousands of years, there should be no need for any additional controls or inventorying other than monitoring and protecting the entrances to the tunnels once the materials are emplaced underground.

**M. What is the objective of the proposed physical security requirements?**

Industry commends NRC for its application of a graded approach in this regard. Comments concerning the graded approach are provided in Section O below.

**N. What threat would a GROA be required to defend against?**

A specific physical protection protocol for a GROA should be implemented using a design basis threat derived from appropriate intelligence.

**O. Why do the security requirements differ for various aspects of a GROA?**

Industry commends NRC for establishing the five proposed protection levels described in this rulemaking. This is an appropriate implementation of the graded approach. We do, however, recommend one modification to this approach. The protection for significant radiological sabotage and moderate radiological sabotage (levels 2 and 3) are based on "any individual located at the lesser of the controlled area boundary or 400 meters." The industry recommends that the protection be based on a public individual (not an employee of the GROA) at the locations that are freely accessible to the public (e.g. owner controlled boundary).

**S. What is a target set as it applies to a GROA?**

The use of target set in this section for security purposes is confusing and additional clarity is needed. For a facility which has a DBT the target set is similar to what is presented; however, for non-DBT facilities, the target sets (critical target area) are locations or quantities of material. The means of providing security for these two different target sets are different. Therefore, a clear explanation of what the expectations are is needed to address this concern.

The term "significant operational disruption" is new and a definition is required. This is necessary in order to understand the difference between an "operational disruption" and a "significant operational disruption."

**V. How would the security plans handle construction at a GROA after receipt begins?**

Industry commends NRC for recognizing that the repository will be developed in a phased manner and accommodating this approach with "security requirements are flexible enough to allow the DOE to establish a protected area that could separate remaining construction activities from operations involving HLW and other radioactive material." NRC's further recognition that "The protected area and security plans would be expanded to include new facilities or areas before radioactive material could be received in that new facility or area" provides an appropriate framework in which such flexibility can be effectively implemented.

Although this discussion applies specifically to security matters, it is equally applicable to other aspects of repository operations including radiation protection and nuclear safety. NRC should seek to apply this same concept equally in other areas of repository operations.

**Y. What safeguards reporting requirements would be proposed for a GROA...?**

The site's primary security function in a safeguards event should be to protect against the threat and make notifications to local law enforcement agencies (LLEA) for back-up assistance. Making notifications to multiple agencies can impede the response and command and control functions.

The site should make prompt notification to LLEA and, as soon as reasonably possible, based on the event, make notification to the NRC Operations Center. The LLEA and FBI should have the responsibility to make notification to other federal agencies. The licensee should notify the NRC Operations center promptly of suspicious activities, attempts at access, etc., that may indicate pre-operational surveillance, reconnaissance or intelligence-gathering activities targeted against the GROA.

**Z. Does the NRC plan to issue guidance documents...?**

NEI understands that it is the Commission's policy that guidance documents should be issued when the proposed rule is issued so that stakeholders are clearly and fully informed about NRC expectations and acceptable methods for implementation of the regulations. Stakeholders should have access to any proposed guidance documents on a need to know basis and be given the opportunity to comment on such proposals at the same time the proposed rulemaking is available for comment.

**AA. Would the GROA facilities be subject to IAEA safeguards...?**

The commingling of the waste from the DOE weapons facilities with the waste from the commercial applications creates a major issue concerning IAEA Safeguards. IAEA Safeguards applications are limited to non-weapons programs; therefore, unless the waste from the weapons programs is isolated and processed in fully-separated facilities and disposal drifts, away from the waste from the commercial facilities, the facility cannot be subject to IAEA Safeguards. It is NEI's understanding that the waste will not be segregated.

**NUCLEAR ENERGY INSTITUTE (NEI)**  
**DETAILED COMMENTS ON THE NUCLEAR REGULATORY COMMISSION'S (NRC) PROPOSED**  
**RULEMAKING**  
**10 CFR Parts 60, 63, 73 and 74 – *Geologic Repository Operations Area Security and Material***  
***Control and Accounting Requirements***  
**(72 *Federal Register*, 72522), dated December 20, 2007**

In addition to the general comments expressed in Enclosure 1, which address the overall regulatory approach being proposed by NRC in the form of answers to the questions posed by the agency, industry has specific comments on the draft regulatory language contained in the proposed regulations. These specific comments, itemized in this enclosure, are intended to be supportive of the industry positions taken on the proposed regulatory approach as well as to offer detailed recommendations for additional improvements to the regulatory language, which can be applied when NRC reconsiders this proposal as recommended by industry. The industry is concerned that the comments being provided in the ongoing part 73 rulemaking also be incorporated appropriately. The industry has concern where new requirements above and beyond what is required for reactors are identified herein, and not only do we disagree with the application of such requirements to the GROA, but also do not think it would be appropriate to extend them to reactors.

**SPECIFIC COMMENTS**

**60.24(d)(4), 63.24(d)(4)**

Will the requirement for MC&A plan be applied to power reactors?

**73.2**

Definition of target set is not consistent with current requirements. What is meant by "significant operational disruption" is not clear. Industry proposes that the definition of target set be reworded as follows:

*"Target set for a geologic repository operations area means the combination of equipment or operator actions which, if all are prevented from performing their intended safety function or prevented from being accomplished, would result in radiological contamination barring extraordinary action by site operators. For a geological repository operations area (GROA), a target set means quantities and form of high-level radioactive waste and other radioactive material and the protective and mitigative measures to protect against potential large scale releases of fission products from malevolent actions."*

**73.53(d)(1)**

The requirement to protect from a single act is new and if extended to power reactors could require significant capital expenditures. Industry proposes that paragraph (1) be reworded as follows:

*"(1) Design and implement the physical protection program to satisfy the performance requirements of this section. The physical protection program must include diverse and redundant equipment, systems, technology, programs, supporting processes, and implementing procedures;..."*

**73.53(g)(3)**

The requirement for standoff distance has been added. The requirement to design/construct to protect against security related events is vague. Industry proposes that paragraph (ii) be reworded as follows:

*"Be designed and constructed commensurate to the required function of each barrier and in support of the DOE's protective strategy;..."*

**73.53(i)(7)(i)(B)**

Personal recognition is acceptable but not included in this regulation. Industry proposes that the following wording be added:

(B) Confirm the identity of each visitor through personal recognition or physical presentation of a recognized identification card issued by a local, State, or Federal Government agency that includes a photo or contains physical characteristics of the individual requesting escorted access; ... Non-employee photo identification badge

**73.53(i)(8)(ii)**

The requirement for escorts to have radio communication is above current regulation. Industry proposes the following wording to describe a more reasonable approach for escorts to summon assistance:

(ii) Individuals assigned to escort visitors shall be shall be trained on the responsibility to summon assistance when needed.

**73.53(j)(2)(i)**

Industry proposes that paragraph (i) be revised as follows. All search equipment and processes have limitations and are not all inclusive. The best measure that can be achieved is a high assurance of detection.

“(i) Search procedures must ensure that officers have a high assurance that items possessed by an individual, or contained within a vehicle or package, are not a prohibited item before granting access beyond the access control point for which the search is conducted...”

**73.53(j)(8)(iii)**

For the same reasons stated in the comment on 73.53(j)(2)(i) above, industry proposes that paragraph (iii) be removed

**73.53(k)(4)(i)**

Requirement to assure single act cannot remove alarm system capability goes beyond current regulation. Industry proposes this be removed. Also, video assessment equipment requirement is vague, industry proposes the following changes to clarify.

Remove (i)

Replace with the following wording;

“Video assessment equipment must be capable of operating as intended or compensatory measures must be employed to reasonably provide accurate and timely assessments in response to an alarm annunciation or other notification of unauthorized activity...”

**73.53(k)(10)(ii)**

Implement controls for personnel assigned to monitor video technology go above and beyond regulation. Industry proposes that paragraph (ii) be reworded as follows:

“(ii) Personnel assigned to monitor video technology have the responsibility to maintain the level of alertness required to effectively perform the assigned duties and responsibilities.”

**73.53(l)(1)**

Alternate communications should not be required in areas where plant “dead spots” exist. Industry proposes that paragraph (1) be reworded as follows;

"1) DOE shall establish and maintain a primary communication capability with onsite and offsite resources to ensure effective command and control during both normal and emergency situations."

### **73.53(p)(7)**

All equipment can not be operable at all times. Industry proposes rewording paragraph (7) to address compensatory measures as follows;

"(7) All intrusion detection equipment, communication equipment, physical barriers, and other security-related devices or equipment, to include backup power supplies, must be maintained in reliable condition and properly compensated if the equipment is not operable."

### **73.53(q)**

Industry proposes rewording paragraph (q) as follows to improve the compensatory measures requirement. Compensatory measures can not always be as effective as the equipment that they replace. A high assurance of compensation is satisfactory.

(q) *Compensatory measures.* DOE shall identify measures and criteria needed to compensate for the loss or reduced performance of personnel, equipment, systems, and components that are required to meet the requirements of this section. Compensatory measures must be designed to provide a high assurance that the vulnerability can not be exploited. Compensatory measures must be implemented within specific timelines necessary to meet the requirements stated in paragraph (d) of this section and described in the approved security plans.

### **73.53(v)(1)(iii)**

Requirement should be deleted as security officers are deemed trustworthy and reliable and may function as compensatory measures without redundant measures

### **73.70**

What are "adequate safeguards"? Industry proposes the following change to replace "adequate safeguards" with "administrative controls".

Remove: "The licensee shall maintain adequate safeguards against tampering with and loss of records."

Add: "the licensee will maintain administrative controls to ensure the accuracy of the records."

### **73.71a(a) through (c)**

Industry proposes that the first three paragraphs of 73.71a be reworded and replaced with the following text to simplify and make more reasonable notification requirements:

"The site should make prompt notification to LLEA and, as soon as reasonably possible based on the event, make notification to the NRC Operations Center. The LLEA and FBI should have the responsibility to make notification to other federal agencies. The licensee should notify the NRC Operations center promptly of suspicious activities, attempts at access, etc., that may indicate pre-operational surveillance, reconnaissance, or intelligence gathering activities targeted against the GROA."

### **73.71a(d)(4)**

The requirement to maintain an open, continuous communication channel with the Operations Center can impact manning available to defend against the attack. Industry proposes rewording paragraph (4) as follows:

“(4) For events reported under paragraph (b) of this section, the licensee shall communicate and update the NRC Operations Center upon request from the NRC based on resources available and response to the threat to the facility.”

#### **APPENDIX B VII.B.3.b.(1)**

Requirement to build exposure to elements into fitness tests is not clear. Industry proposes the following language to clarify:

“(1) The physical fitness test must consider physical conditions, such as strenuous activity, physical exertion and levels of stress as they pertain to each individual's assigned security job duties, for both normal and emergency operations and must simulate site-specific conditions under which the individual will be required to perform assigned duties and responsibilities...”

#### **APPENDIX B VII.C.2.b**

40 hour OJT requirement goes beyond what is currently required and lacks basis. Industry proposes the following language for a more reasonable requirement that individuals must “demonstrate abilities” to effectively perform:

“b. In addition to meeting the requirement stated in paragraph C.2.a. of this section, before assignment, individuals assigned duties and responsibilities to implement the Safeguards Contingency Plan shall demonstrate their ability to effectively apply the knowledge, skills, and abilities required to effectively perform assigned”

#### **APPENDIX B VII.C.3.b.(1)**

It will be difficult to have each participant demonstrate skills in all drills and hands on requirements go above and beyond current requirements. Industry proposes the following more reasonable drill requirement language:

(1) Drills and exercises must be designed to challenge potential vulnerabilities and logical adversary tactics.

#### **APPENDIX C**

This section incorporates items that are normally included in protective strategy briefs. Industry is concerned that the level of detail required in this Appendix is excessive and goes beyond what is currently required at reactors. This section is more appropriately written at a less detailed level, so that the adjustments to the protective strategy can be implemented efficiently.

#### **APPENDIX G**

Reporting requirements should be revised to be more reasonable as described above in General Comment Y and specific comment on 73.71(a).

## Secy

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**From:** REED, Joseph [jsr@nei.org] on behalf of McCULLUM, Rodney [rxm@nei.org]  
**Sent:** Tuesday, April 29, 2008 2:28 PM  
**Subject:** Nuclear Energy Institute Comments on U.S. Nuclear Regulatory Commission Proposed Rulemaking at 10 CFR Parts 60, 63, 73 and 74 - Geologic Repository Operations Area Security and Material Control and Accounting Requirements (Federal Register 72, 72522)  
**Attachments:** 04-29-08\_NRC\_Comments on Proposed Rulemaking, Geologic Repository Operations Area Security and Material Control Requirements.pdf; 04-29-08\_NRC\_Comments on Proposed Rulemaking, Geologic Repository Operations Area Security and Material Control Requirements\_Enclosure 1.pdf; 04-29-08\_NRC\_Comments on Proposed Rulemaking, Geologic Repository Operations Area Security and Material Control Requirements\_Enclosure 2.pdf

April 29, 2008

Annette L. Vietti-Cook  
Secretary  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

**Subject:** Nuclear Energy Institute Comments on U.S. Nuclear Regulatory Commission Proposed Rulemaking at 10 CFR Parts 60, 63, 73 and 74 – Geologic Repository Operations Area Security and Material Control and Accounting Requirements (*Federal Register* 72, 72522), dated December 20, 2007

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To assure that the proposed regulations can be applied to the GROA in an appropriately tailored and risk-informed manner, we have two recommendations concerning the regulatory approach being taken that we believe NRC should address with a significant revision to this proposal:

1. NRC should choose a more appropriate starting point for this rulemaking. The current proposal identifies "the security requirements for power reactors" as its starting point. However, a GROA differs from a reactor site in terms of the hazard present and the risks associated with that hazard regarding any security threat. The absence of an operating reactor and the more complex active safety systems associated with it, along with the inherent self-protecting nature of the material inventories at the repository, makes the GROA an inherently simpler and lower risk facility. Unless this is taken into account, a regulatory approach that goes beyond what is necessary and reasonable for effective security and MC&A at a GROA will inevitably result. Alternatively, using NRC's regulations for Independent Spent Fuel Storage Installation (ISFSI) security as a starting point, and adding provisions to address characteristics unique to the GROA where necessary, would result in a much more effective regulatory approach.
2. In resetting the starting point for this proposal, NRC should move away from the broad approach applied in this proposal to a more focused and tailored approach, based on available information regarding the current GROA concept. Reading the background discussion of the proposed

rulemaking leads one to conclude that the GROA design concept is uncertain and trending towards increasing complexity, but in reality this concept is now firmly established and has been greatly simplified as compared to previous design evolutions. We believe that sufficient information on the established concept has been made available by DOE to enable NRC to apply a more focused approach that effectively builds upon existing ISFSI security requirements and develop a regulation that can be suitably tailored to the GROA.

DOE's Transportation, Aging, and Disposal (TAD)-based GROA concept has been firmly established since 2005. DOE has publicly presented information on this concept, at a number of technical exchanges and management meetings, to the NRC Division of High Level Waste Repository Safety. These presentations have provided details on the types of facilities and handling operations that would occur at the GROA. This information was also described in DOE's 2007 Supplemental Environmental Impact Statement for Yucca Mountain and will be further detailed in the Yucca Mountain License Application that NRC should receive in June of this year. Furthermore, thousands of technical documents on the GROA concept are available to NRC on the Yucca Mountain licensing support network. The current GROA concept is well understood. The 2005 design updates incorporating TAD systems greatly simplified the design. These well-established simplifications should be strongly recognized in NRC's regulatory approach.

In the two enclosures to this letter, we are providing specific comments which further elaborate on these points as well as address various details of the proposal. Enclosure 1 provides industry's responses to the questions posed in the "Discussion" section of the rulemaking, while Enclosure 2 provides comments on the specific language of the regulation.

Based on these comments, we are recommending that NRC reconsider the proposed rulemaking. Instead of promulgating the proposed approach, NRC should reset its "starting point" to begin from the perspective of an ISFSI, which we believe is the type of facility most analogous to the GROA, and then consider what additional security and MC&A needs might arise from unique facilities and operations present at the GROA.

Such reconsideration will most likely result in a significantly different proposal that would need to be re-noticed. Fortunately, as NRC has recognized in this proposal, it will not be necessary for DOE to develop its security plan until some time after a construction authorization is received, a point in time that is at least three to four years away. Therefore, there is ample time for NRC to develop more appropriate security and MC&A requirements and begin the rulemaking process anew.

Industry looks forward to participating in any future dialogue NRC convenes to develop an improved and revised proposal. If you have any questions, please do not hesitate to contact me at 202-739-8082 or [rxm@nei.org](mailto:rxm@nei.org).

Sincerely,

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