

January 20, 1999

FOR: The Commissioners

FROM: William D. Travers /s/
Executive Director for Operations

SUBJECT: RULEMAKING PLAN, "PHYSICAL SECURITY/SAFEGUARDS FOR PERMANENTLY SHUTDOWN POWER REACTORS," FOR AMENDMENTS TO 10 CFR PART 73

PURPOSE:

To obtain the Commission's approval to proceed with rulemaking for the physical security of permanently shutdown power reactors in accordance with the attached rulemaking plan.

BACKGROUND:

There are no specific regulations for relaxation of physical security requirements at power reactor licensees which have certified permanent cessation of operations and fuel removal in accordance with 10 CFR 50.82 associated with the eventual termination of their Part 50 license. In order to address the license termination process concerning a security program at the site, licensees have submitted requests for exemptions from specific regulations in 10 CFR 73.55, justifying this approach on the basis of a reduced risk for public health and safety resulting from the relocation of spent fuel from the reactor to the pool in the spent fuel building. The NRC has addressed this problem in the past by processing these exemption requests on a case-by-case basis. However, a regulation would provide a more uniform basis for the staff's actions; therefore, the staff is proposing a rulemaking to revise security regulations rather than to continue to regulate by issuing license exemptions.

DISCUSSION:

A performance-based regulation would codify and consolidate those regulations in 10 CFR Part 73 appropriate to the risks for power reactor sites that have permanently ceased operations and would reduce their regulatory burden. The requirement for a vehicle barrier system (VBS) could be modified for this category of licensee. The modification would require maintenance of a VBS unless a licensee meets certain performance criteria, supported by documentation that is made available to the NRC for inspection. The technical basis for a redesigned VBS would have to meet Commission design goals already established in 10 CFR 73.55(c)(8) to protect equipment, systems, devices, or material, the failure of which could directly or indirectly endanger public health and safety by exposure to radiation and criteria for protection against a land vehicle.

COORDINATION:

The Office of Nuclear Reactor Regulation and the Office of Enforcement concurred in this plan. The Office of the General Counsel has reviewed this plan and has no legal objections to its content. The Chief Financial Officer has reviewed this plan for resource implications and has no objections to its content. The Chief Information Officer has reviewed this plan for information technology and information management implications and concurs in it.

However, the plan suggests changes in information collection requirements that may require submission to the Office of Management and Budget at the same time the rule is forwarded to the Office of the Federal Register for publication.

RECOMMENDATION:

That the Commission approve the staff's plan to proceed with the rulemaking. Staff requests action within 10 days. Action will not be taken until the SRM is received. We consider this action to be within the delegated authority of the EDO.

William D. Travers
Executive Director for Operations

CONTACT: R. Barry Manili, NRR
(301) 415-2912

Attachment: [Rulemaking Plan](#)

ATTACHMENT

RULEMAKING PLAN: PHYSICAL SECURITY/SAFEGUARDS
FOR PERMANENTLY SHUTDOWN POWER REACTORS

- [Regulatory Issue](#)
- [Current Regulatory Framework](#)
- [How Rulemaking Will Address the Regulatory Problem](#)

- [Rulemaking Options](#)
- [Impacts on Licensees](#)
- [Benefit](#)
- [Preferred Option](#)
- [Office of the General Counsel Legal Analysis](#)
- [Backfit Analysis](#)
- [Agreement State Implementation Issues](#)
- [Supporting Documents](#)
- [Issuance by EDO or Commission](#)
- [Interoffice Management Steering Group](#)
- [Staff Level Working Group/Concurring Official](#)
- [Public/Industry Participation](#)
- [Resources](#)
- [Schedule](#)

REGULATORY ISSUE

There are currently no specific regulations for relaxation of physical security requirements that apply to power reactor licensees that have permanently ceased operations. To address this need, the staff proposes amendments to codify and consolidate the 10 CFR 73.55 security regulations to a level commensurate with the reduced risks associated with protecting a permanently shutdown reactor site.

Currently, licensees have to certify to the Commission that fuel has been removed in accordance with 10 CFR 50.82 and that eventual termination of the Part 50 license is planned. In connection with this, licensees have been requesting exemptions from the security requirements for operating reactors on a site-specific basis. The licensees justify their requests for exemption on the basis of reduced risk to public health and safety resulting from the relocation of spent fuel from the reactor to the pool in the spent fuel building. Licensees have further indicated that spent nuclear fuel now located in the fuel pool has reduced the number of scenarios that could result in a radiological release. Accordingly, the staff is developing a rulemaking to revise security regulations for these sites.

CURRENT REGULATORY FRAMEWORK

Current licensees that have permanently shut down their reactor operations and have stored the spent fuel in the pool are required to meet the security requirements for operating reactors in 10 CFR 73.55 for protecting the site against the design-basis threat defined in [10 CFR 73.1\(a\)\(1\)](#). This level of security would require a site with a permanently shutdown reactor to provide protection at the same level as that for an operating reactor site. By removing the fuel from the reactor and rendering the reactor inoperable, a significant reduction in risk to public health and safety from reactor sabotage is realized.

In an associated regulatory arena, [10 CFR 73.51](#), "Physical Protection for Spent Nuclear Fuel and High-Level Radioactive Waste," allows facilities not associated with an operating power reactor to store spent fuel at an ISFSI. This rule provides performance-based regulations specifically designed for these types of storage installations, i.e., fuel in dry cask containers or other storage formats. The objective of the 10 CFR 73.51 rule was to reduce regulatory burden regarding security requirements without reducing protection levels to public health and safety for spent fuel storage not associated with an operating reactor. When 10 CFR 73.51 was drafted, it included permanently shutdown reactors, but these types of facilities were withdrawn from the rule when NRR technical staff identified a potential safety issue. Failure of 10 CFR 73.51 to account for the risk posed by vehicle-borne bombs at facilities where potential criticality and fuel heat-up were still an issue resulted in the removal of permanently shutdown Part 50 licensees from the scope of the rule.

The staff intends to prepare a performance-based regulation similar to 10 CFR 73.51 that will reduce the regulatory burden and will be appropriate for spent fuel storage at power reactor sites, but one which will account for the threat of vehicle-borne bombs.

HOW RULEMAKING WILL ADDRESS THE REGULATORY PROBLEM

This proposed rulemaking would provide regulations that specifically apply to power reactor sites that have permanently ceased operations. The new rulemaking will codify and consolidate current regulations at a level commensurate with the reduced risks associated with protecting a permanently shutdown site. To accomplish this, the staff reviewed existing regulations in [10 CFR 73.55](#) and has determined what requirements are necessary for a permanently shutdown power reactor. By analyzing the security areas that need to be protected, the staff has eliminated those requirements that are beyond the protection strategy needed for a permanently shutdown power reactor site and its capability to preclude a radiological release that could impact public health and safety.

One issue remains concerning the possible continued need for a VBS at these sites to protect against incidents involving the use of an explosives-laden vehicle to create a criticality or radiological release. The staff would codify a process which would allow a licensee to modify or remove its VBS provided they met certain performance criteria. Documentation demonstrating compliance with this performance criteria and justification of the removal of the VBS would be available to the Commission for its inspection.

RULEMAKING OPTIONS

1. Status quo

One alternative to issuing a new rule for permanently shutdown reactor sites will be to continue to process licensee requests for exemptions to the existing security regulations in 10 CFR 73.55. This process allows the headquarters staff to deal with each licensee that ceases operation of a power reactor on a site-specific basis. The current process of handling these cases through exemptions has involved licensee security plan revisions and staff review of those revisions. The proposed rule would achieve operational savings for a licensee equivalent to those achieved by exemptions, since both

allow a reduction in the existing security commitments for an operating reactor site; however, the proposed rule would preclude the long-term use of the exemption process.

2. Rulemaking without vehicle bomb protection

Another alternative would be to write the rule without the requirement for a VBS. This does not appear to be a good option since the rule would not address the existing design-basis threat that includes the use of vehicle bombs in attempting sabotage of a facility with the potential for fuel heat-up and criticality.

3. Rulemaking with vehicle bomb protection

A third alternative, the preferred option, would be to develop a new regulation to address security at permanently shutdown power reactor sites. Under this proposed rule, sites could maintain their existing plans based on 10 CFR 73.55, or they could choose the new regulations designed specifically for permanently shutdown reactor sites. If a licensee chooses the elements detailed in the new regulation, prior NRC review and approval would not be necessary. As part of this process, a licensee could choose to use the existing VBS that was in place when the reactor was still operating or could relocate or even remove the VBS pursuant to the proposed regulation, provided the licensee meets certain performance criteria, similar to language in the original VBS regulation for operating power reactors. The technical basis for a redesigned VBS would have to meet Commission design goals already established in 10 CFR 73.55(c)(8) to protect equipment, systems, devices, or material, the failure of which could directly or indirectly endanger public health and safety by exposure to radiation and criteria for protection against a land vehicle bomb. Documentation justifying modification of the VBS would have to be available to the Commission for its inspection.

IMPACTS ON LICENSEES

Licensees who are in the process of defueling power reactors have security programs in place and could, therefore, simply reconfigure and/or relocate the security equipment and systems to accommodate the spent fuel pool building protected area. The security program would continue to provide protection for the spent fuel; however, the security program and the security areas to be protected on a continuing basis could be reduced. Cost factors would be on a site-specific basis depending on the location and relocation of existing security equipment in relation to areas of the plant that will be dismantled during the decommissioning process.

BENEFIT

A new rule specifically written for permanently shutdown reactor sites would benefit the licensee in several ways. By reducing the size of the protected area from operating reactor size to permanently shutdown reactor size, the licensee would realize a savings in the number of security force members that are needed to protect the site. In addition, much of the original security equipment and systems would no longer need to be maintained and could be removed. The reduced size of the site would allow easier dismantling of those buildings and structures that were needed for the operating reactor site.

PREFERRED OPTION

The staff recommends Option 3: A revised rule addressing permanently shutdown reactor sites, which includes vehicle bomb protection. Under this option, future power reactor sites with permanently shutdown reactors will have a set of regulations specifically addressing the standards for protecting spent fuel at these sites.

OFFICE OF THE GENERAL COUNSEL LEGAL ANALYSIS

The proposed rulemaking revisions would address an issue that has been handled in the past by individual exemption requests. It is more appropriate to address a recurring issue by rulemaking rather than by routine exemptions. The establishment of a performance-based rule with physical security requirements that are consistent with the decreased sabotage risk at a permanently shutdown and defueled reactor will protect public health and safety and common defense and security while reducing the regulatory burden for the licensee. OGC has not identified any basis for a legal objection to the rulemaking plan.

OGC does not believe that the proposed rule will require a backfit analysis under [10 CFR 50.109](#). The proposed rule could be viewed as a voluntary relaxation, since it appears that licensees could continue to maintain their existing physical security capabilities and be in compliance with the proposed rule. As such, if licensees are not compelled to change their physical security program, then there is no "imposed change" constituting a backfit as defined in Section 50.109(a)(1). Alternatively, the proposed rule would appear to fall within the exception in Section 50.109(a)(4)(iii) with respect to "defining or redefining what level of protection to public health and safety and common defense and security should be regarded as adequate." The current requirements in 10 CFR 73.55 are considered to be necessary for adequate protection to public health and safety, but make no distinction between operating reactors and permanently shutdown reactors. The changes being contemplated to that section would redefine (by relaxing) those requirements for permanently shutdown plants.

An environmental assessment (EA) must be prepared for this rule in accordance with [10 CFR 51.21](#), inasmuch as none of the categorical exclusions in Section 51.22(c) would appear to apply to this rulemaking. An environmental impact statement need not be prepared if, on the basis of the EA, the staff can make a finding of no significant environmental impact (FONSI).

The staff should verify that no consensus codes and standards exist with respect to physical security for permanently shutdown nuclear power plants that could be adopted as an alternative to the proposed modifications to Part 73. Because the proposed rule would establish a general regulatory standard, a 75-day public comment period should be provided for the proposed rule, in order to comply with the North America Free Trade Act (NAFTA). There do not appear to be any new information collection requirements associated with this rule that would require compliance with the Paperwork Reduction Act of 1995. The final rule must be evaluated for compliance with the Small Business Regulatory Enforcement Fairness Act of 1996. If it is determined not to be a major rule under this Act, the rule can become effective without waiting for the required 60-day period for Congressional review of major rules.

BACKFIT ANALYSIS

The proposed rule either does not constitute a backfit under Section 50.109(a)(1) or, alternatively, if it could be viewed as a backfit, it falls within the exception from the requirement to prepare a backfit analysis in Section 50.109(a)(4)(iii). The proposed rule could be viewed as a voluntary relaxation because licensees could continue to maintain their existing physical security capabilities and be in compliance with the proposed rule. As such, if licensees are not compelled to change their physical security program, then there is no "imposed change" constituting a backfit as defined in Section 50.109(a)(1). Alternatively, the proposed rule would appear to fall within the exception in Section 50.109(a)(4)(iii) with respect to "defining or redefining what level of protection to public health and safety and common defense and security should be regarded as adequate." The current requirements in Section 73.55 are considered to be necessary for adequate protection to public health and safety but make no distinction between operating reactors and permanently shutdown reactors. The changes being contemplated to that section would redefine (by relaxing) those requirements for permanently shutdown plants.

Under this proposed rule, sites could maintain their existing plans based on 10 CFR 73.55, or they could choose the new performance-based regulations designed specifically for permanently shutdown reactor sites. If a licensee chooses the performance-based elements detailed in the new regulation, prior NRC review and approval would not be necessary.

AGREEMENT STATE IMPLEMENTATION ISSUES

The new rule for permanently shutdown reactor sites will not apply to facilities or licensees regulated by Agreement States.

SUPPORTING DOCUMENTS

A regulatory analysis and an OMB statement will be prepared. An environmental assessment will be prepared for this rule in compliance with 10 CFR 51.22.

ISSUANCE BY EDO OR COMMISSION

This rulemaking will be issued by the Commission.

INTEROFFICE MANAGEMENT STEERING GROUP

Because this rulemaking will affect only NRR, no interoffice management steering group is needed.

STAFF LEVEL WORKING GROUP/CONCURRING OFFICIAL

The staff level working group will consist of Robert Skelton, Barry Manili, Richard Rosano, and Sandra Frattali. The concurring officials will be Ted Quay and David Matthews.

PUBLIC/INDUSTRY PARTICIPATION

This rulemaking will use the interactive rulemaking web site, as appropriate, to enhance input from the public. Since the nuclear industry is expected to be interested in this rulemaking, a public meeting may be scheduled.

RESOURCES

It is estimated that this rulemaking will require at least 2.3 NRR FTE and 0.1 OGC FTE over a two-year period as indicated in SECY 98-258. In response to a staff requirements memorandum dated June 30, 1998, an October 6, 1998 memorandum from the Acting Director/DRPM/NRR concerning Direction Setting Issue (DSI) No. 24, "Decommissioning Licensing Action and Priorities and Milestones for Addressing Rulemaking and Guidance Development," contains the necessary budgeted resources for NRR staff in preparation for the rulemaking effort related to establishing codified regulations in 10 CFR Part 73 for permanently shutdown power reactor sites that have ceased operations in accordance with 10 CFR 50.82.

| | |
|-------------|-----------------------|
| NRR Leads | R. Skelton, B. Manili |
| NRR Support | S. Frattali |
| OGC Contact | Kathryn Winsberg |

SCHEDULE

| | |
|---|--------------------|
| Rulemaking package for office concurrence | June 30, 1999 |
| CRGR and ACRS review | August 15, 1999 |
| Proposed Rule to EDO | September 30, 1999 |
| Proposed Rule to Commission | October 30, 1999 |
| Proposed Rule published in <i>Federal Register</i> with 75-day comment period | December 30, 1999 |
| Resolve public comments | April 15, 2000 |
| Final Rule to EDO and SECY paper | September 30, 2000 |
| Publication of Rule | October 30, 2000 |