Proposed Application of Section 161A. Authority to Various Classes of NRC-Regulated Facilities and Activities

ISSUE:

Should the Commission designate additional classes of facilities, radioactive material, or other property as appropriate for section 161A. authority?

BACKGROUND:

The firearms guidelines contained in Enclosure 1 (which are mandated by section 161A. of the Atomic Energy Act of 1954, as amended), require the Commission to promulgate regulations or issue orders designating certain classes of licensed facilities, radioactive material, and other property as appropriate for the application of enhanced weapons authority and preemption authority or for preemption authority alone. The Commission previously approved the staff's recommendation to designate the classes of facilities for power reactors and Category I strategic special nuclear material (SSNM) as appropriate for enhanced weapons authority and preemption authority. This was accomplished in the language for the proposed new section 10 CFR 73.19 under the proposed power reactor security rule.[1]

DISCUSSION:

This enclosure provides the staff's recommendations for applying enhanced weapons authority and preemption authority, preemption authority alone, or neither authority across the spectrum of classes of NRC-regulated facilities owned or possessed by NRC licensees and certificate holders and classes of radioactive material and other property being transported to or from a facility owned or operated by an NRC licensee or certificate holder.

The proposed power reactor security rule only authorized this authority for two classes of licensed facilities, power reactors and Category I SSNM licensees. The staff recommended this approach due to restrictions on the scope of the proposed power reactor security rule and the delivery schedule. The staff's view during development of the proposed rule was that additional classes of licensed facilities and radioactive material transport (who are currently required by NRC regulations or orders to use armed security personnel as part of their physical protection strategy) would be appropriate candidates for section 161A. authority in some future rulemakings. Examples of such classes of facilities would include: conversion, gaseous diffusion, and independent spent fuel storage installations. Examples of such classes of radioactive material undergoing transport would include: Category I SSNM and spent fuel. The staff has not identified any classes of "other property" whose transport would be appropriate for section 161A. authority. The only other property potentially identified by the staff for consideration would be the transport of classified enrichment technology.

[1] See proposed new 10 CFR 73.19, "Authorization for preemption of firearms laws and use of enhanced weapons," in the "Proposed Power Reactor Security Rule," published in the *Federal Register* on October 26, 2006, (71 FR 62663) at pages 71 FR 62849 and 62850.

The staff's recommendations are summarized in Table 3-1 below for applying section 161A. authority. If the Commission approves Table 3-1, the staff would use this direction and develop a proposed rule that would be sent to the Commission for its review. The staff notes that the Commission's approval of Table 3-1 does not preclude future changes to this weapons policy, if necessitated by changes to the current threat environment or by changes to NRC security requirements.

The staff has included for completeness in Table 3-1 the power reactor and Category I SSNM classes of facilities, but as noted above, the Commission has already approved these two classes of facilities for section 161A. authority (thus no additional Commission approval is needed for these two classes of facilities). The staff has also included for completeness in Table 3-1 other classes of licensed facilities—which the NRC is authorized to regulate under the AEA and for whom such authority would be appropriate—even though no such NRC licensees or certificate holders currently exist or are contemplated (e.g., production reactors or plutonium separation facilities).

The staff used the following screening criteria in developing Table 3-1 and binning the various classes of facilities, radioactive material, and other property:

1. Preemption authority alone is appropriate for NRC-regulated facilities and activities for which the NRC requires by regulation or order the use of armed security personnel as part of a licensee's or certificate holder's protective strategy. This would permit such licensees and certificate holders to more effectively and efficiently implement their security programs and/or increase their defensive capabilities.

2. Preemption authority alone is appropriate for NRC-regulated facilities and activities for which the NRC has approved a security plan that requires the use of armed security personnel as part of a licensee's or certificate holder's protective strategy, even though the use of armed personnel is not otherwise required by regulation or order. This would permit such licensees and certificate holders to more effectively and efficiently implement their security programs and/or increase their defensive capabilities.

3. Preemption authority alone is appropriate for licensees and certificate holders where the potential exists for the theft of Secret-Restricted Data information, material, or components which could compromise proliferation-sensitive, high-efficiency uranium enrichment technology. This would permit such licensees and certificate holders to more effectively and efficiently implement their security programs' anti-proliferation components.

4. Enhanced weapons authority and preemption authority is appropriate for NRC-regulated facilities and activities for which a successful malevolent act results in radiological sabotage or a chemical release that could have a significant adverse effect on public health and safety or the common defense and security. This would permit such licensees and certificate holders to increase their defensive capabilities to prevent such events.

5. Enhanced weapons authority and preemption authority is appropriate for NRC-regulated facilities and activities for which a successful malevolent act results in the theft or diversion of SNM that could have an unacceptable likelihood of an adversary gaining sufficient SNM to successfully develop an improvised nuclear device or a nuclear weapon. This would permit such licensees and certificate holders to increase their defensive capabilities to prevent such events.

Although there would be advantages, including efficiency and timeliness, to incorporating the additional classes of facilities and radioactive material specified in Table 3-1 into the direct final rule and companion proposed rule implementing the firearms guidelines, the staff's preferred approach would be to include the list of designated classes of facilities and radioactive material specified in Table 3-1 as appropriate for section 161A. authority in a separate proposed and final rulemaking amending 10 CFR 73.18.

The agency's top priority in implementing this new authority from a security perspective should be to permit power reactor licensees and Category I fuel cycle facilities to take advantage of section 161A. authority as soon as possible. The fastest means to allow this to occur is through the use of a direct final rule and accompanying companion proposed rule. Expanding the scope of the *Federal Register* notices for the direct final rule and companion proposed rule to add additional classes of facilities and radioactive material would slow down the publication of those rules, because staff would need to devote additional time to preparing the regulatory analyses, environmental assessment, and the information collection burden analysis. Moreover, by expanding the scope of the enhanced weapons provisions beyond that of the October 26, 2006, proposed rule, the staff's view is that the NRC would be far more likely to receive significant adverse comments on the direct final rule and companion proposed rule, negating the opportunity of expeditiously implementing the guidelines through promulgation of a direct final rule.

RECOMMENDATIONS:

The staff recommends that the Commission authorize the staff to develop a separate proposed and final rulemaking amending 10 CFR 73.18 for the Commission's review. This rulemaking would expand the application of section 161A. authority to include the classes of facilities and radioactive material specified in Table 3-1. The staff also recommends the Commission not designate the transportation of any "other property" as appropriate for section 161A. authority.

Table 3-1
Proposed Application of Enhanced Weapons Authority and Preemption Authority

Enhanced Weapons and Preemption Authority	Preemption Authority Only	Neither
Reactor Facilities		
power reactors - operating and decommissioning - light water, heavy water, sodium, air, graphite, and helium cooling/moderation test reactors [Criteria 1 and 4] SNM production, breeder, and fast burner reactors [Criteria 1, 4, and 5]	research reactors [Criteria 1 and 2]	
Uranium Milling and Conversion Facilities		
UF_6 conversion UF_6 deconversion [Criteria 1 and 4]		milling
Uranium Enrichment Facilities		
gaseous diffusion technology gas centrifuge technology laser excitation technology [Criteria 4]	gaseous diffusion technology gas centrifuge technology laser excitation technology [Criteria 1, 2, and 3 only]	

Enhanced Weapons and Preemption Authority	Preemption Authority Only	Neither
Fuel Fabrication Facilities		
category I quantities of HEU, U^{233} SSNM category II quantities of HEU and U^{233} SNM [Criteria 1 and 5] category I quantities of Pu SSNM category II quantities of Pu SNM mixed oxide (MOX) [Criteria 1, 4, and 5]	category II quantities of LEU SNM category III quantities of SNM [Criteria 2]	
Waste Facilities		
independent spent fuel storage installation monitored retrievable storage installation spent fuel hot cells meeting 10 CFR 73.50 [Criteria 4] geologic repository operations area plutonium separation facilities [Criteria 4 and 5]		Low-level waste disposal
Byproduct Material Facilities		
		Irradiators (panoramic, teletherapy, and blood) manufactures and distributors well loggers radiographers radiopharmacies research facilities

Enhanced Weapons and Preemption Authority	Preemption Authority Only	Neither
Transportation Activities		
category I quantities of HEU and U^{233} SSNM category II quantities of HEU and U^{233} SNM [Criteria 1 and 5] category I quantities of Pu SSNM category II quantities of Pu SNM mixed oxide (MOX) spent nuclear fuel high-level radioactive waste [Criteria 1, 4, and 5]		low level waste depleted, natural, and low enriched UF_6 quantities of concern (RAMQC) category II quantities of LEU SNM category III quantities of SNM classified matter (no radioactive material present) other property

Glossary of Terms

HEU – high enriched uranium ($\geq$ 20 % weight enriched in U^{235})
LEU – low enriched uranium (< 20 % weight enriched in U^{235})
MOX – mixed oxide (uranium and plutonium)
MW(t) – megawatts thermal
Pu – plutonium
RAMQC – radioactive material quantities of concern
SNM – special nuclear material
SSNM – strategic special nuclear material
UF_6 – uranium hexafluoride

Screening Criteria

The following screening criteria are referenced for the various classes of facilities, radioactive material, and other property described in Table 3-1.

1. Preemption authority alone is appropriate for NRC-regulated facilities and activities for which the NRC requires by regulation or order the use of armed security personnel as part of a licensee's or certificate holder's protective strategy.

2. Preemption authority alone is appropriate for NRC-regulated facilities and activities for which the NRC has approved a security plan that requires the use of armed security personnel as part of a licensee's or certificate holder's protective strategy, even though the use of armed personnel is not otherwise required by regulation or order.

3. Preemption authority alone is appropriate for licensees and certificate holders where the potential exists for the theft of Secret-Restricted Data information, material, or components which could compromise proliferation-sensitive, high-efficiency uranium enrichment technology.

4. Enhanced weapons authority and preemption authority is appropriate for NRC-regulated facilities and activities for which a successful malevolent act results in radiological sabotage or a chemical release that could have a significant adverse effect on public health and safety or the common defense and security.

5. Enhanced weapons authority and preemption authority is appropriate for NRC-regulated facilities and activities for which a successful malevolent act results in the theft or diversion of SNM that could have an unacceptable likelihood of an adversary gaining sufficient SNM to successfully develop an improvised nuclear device or a nuclear weapon.