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SECURITY AGENCY STUDY

Report to the Congress on the Need for,
and the Feasibility of,
Establishing a Security Agency
within the
Office of Nuclear Material Safety and Safeguards

EXECUTIVE SUMMARY

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Office of Nuclear Material Safety and Safeguards
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

AUG 19 1976

OFFICE OF THE
CHAIRMAN

The Honorable Nelson A. Rockefeller
The President of the Senate

The Honorable Carl Albert
The Speaker of the House

Dear Gentlemen:

The Energy Reorganization Act of 1974, which created the Nuclear Regulatory Commission, designated certain regulatory issues for the immediate attention of the new Commission. Section 204 of the Act was directed to the need for effective safeguards for nuclear facilities and material. It created within NRC an Office of Nuclear Material Safety and Safeguards, directed the office to assess "the need for and feasibility of establishing a security agency within the office for the performance of the safeguards functions" and directed the Commission to transmit the report to the Congress. I am pleased to submit herewith this assessment, the Security Agency Study.

The primary focus of the Security Agency Study was on the question of whether security forces should continue to be employed by individual licensees with reliance on local law enforcement personnel for emergency assistance or whether a Federal security force should be created within the NRC to perform security functions. While an assessment of the need for Federal security forces depended heavily on comparing the relative effectiveness that could be achieved by Federal and private guards, the choice was also weighed against a background of public policy issues and administrative considerations.

The Security Agency Study concludes that creation of a special security force within NRC would not result in a higher degree of guard force effectiveness than can be achieved through the use of private guards who have been properly trained and certified. Further, the Security Agency Study concludes than NRC can fulfill its responsibilities to assure adequate physical protection through stringently enforced regulations. The Study identifies means by which private guard forces can be upgraded through imposition by the NRC of new requirements under current authority and identifies actions for which new legislative authority might be required.

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The Security Agency Study is only one element of a comprehensive and multi-facet examination of safeguards issues. For example, NRC is now reviewing the safeguards systems of existing reactor and fuel cycle facilities. Also, we will soon publish the Safeguards Supplement to the Generic Environmental Impact Statement on the Wide-Scale Use of Mixed Oxide Fuel which will include a study of alternative safeguard measures and their cost-effectiveness. All of these studies will play a role in the development of NRC requirements in the safeguards area. The Commission intends to continue to work with all branches of government, industry, and the public in assuring a system able to provide effective and efficient safeguards to protect the public from the risks of theft or unauthorized diversion of special nuclear materials and of sabotage in the commercial nuclear industry.

Sincerely,

Marcus A. Rowden

Marcus A. Rowden
Chairman

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SECURITY AGENCY STUDY

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SECURITY AGENCY STUDY

EXECUTIVE SUMMARY

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EXECUTIVE SUMMARY

SECURITY AGENCY STUDY

INTRODUCTION

The Energy Reorganization Act of 1974, Public Law 93-438, established within the United States Nuclear Regulatory Commission an Office of Nuclear Material Safety and Safeguards. Section 204(b)(2)(C) of that Act directed the Director of the Office of Nuclear Material Safety and Safeguards to assess the need for and the feasibility of establishing a security agency within that office for the performance of safeguards functions. This requirement had its genesis in several earlier studies and in subsequent congressional hearings in which substantive questions about the adequacy of safeguards were raised, and in which it was suggested that the importance of the public interests involved might call for direct Federal involvement in security forces. This report presents the results of the assessment of the need for and feasibility of establishing a security agency within the Office of Nuclear Material Safety and Safeguards which the Congress mandated.

In consequence of the broad mandate of Section 204 of the Energy Reorganization Act, NRC has under review safeguards for all facilities and materials licensed under the Atomic Energy Act of 1954, as amended. These include materials control and accounting systems; contingency plans for coping with threats, thefts, and sabotage; and research into improved safeguards systems. The Security Agency Study (SAS) addresses one aspect of a multifaceted review of safeguards issues. Analysis of specific safeguards requirements, in terms of numbers of personnel, equipment, etc. is the province of other reviews of safeguards programs by NRC. The SAS examined, on an institutional basis, whether there is a need to create a NRC guard force in order to have the most effective means of maintaining security in the nuclear industry.

The nuclear industry with which the Security Agency Study is concerned consists of a number of privately or publicly owned facilities. The companies and utilities operating these facilities are engaged in commercial activities, most of which are related to the production and use of nuclear material as fuel for the generation of electricity. There are private research and development organizations that are investigating new fuels, such as plutonium, for possible use in future generations of nuclear reactors. If plutonium is used in the future, there will be fuel fabrication plants for the manufacture of fuel for the reactors and reprocessing plants to recover plutonium and uranium from used fuel. At present, there are over 50 utility-owned nuclear reactors in operation producing electricity with uranium fuel. Estimates of future industry growth are made to give some perspective of the size and complexity of the nuclear industry to be protected by security forces. In addition, there are several privately owned plants producing fuel for the Navy's nuclear powered fleet.

All these operations have several things in common, all of which bear on the analysis of the issues in the Security Agency Study:

- They are either privately or publicly (in the case of some utilities) owned and operated and are not U.S. Government facilities.

- They are facilities which either must be protected against sabotage or contain nuclear materials that must be protected against theft and sabotage.

- They are subject to regulation by the U.S. Nuclear Regulatory Commission.

The Security Agency Study focuses on whether the NRC should take over operating responsibility for security forces in the nuclear industry. To answer this question, the Security Agency Study concentrated on an assessment of the quality of guard force personnel that could be expected from a private guard force subject to stringent NRC regulatory requirements as compared to a Federal guard force created to serve the same function.

CONCLUSIONS

PRINCIPAL CONCLUSION

Need for, and Feasibility of, an NRC Security Agency to Assume Operating Responsibility for Security Forces to Protect the Nuclear Industry

The study has found that creation of a Federal guard force for maintaining security in the nuclear industry would not result in a higher degree of guard force effectiveness than can be achieved by the use of private guards, properly qualified, trained and certified (by NRC). Analysis of the existing regulatory structure indicates that NRC can fulfill its responsibilities to assure adequate physical protection of licensed facilities and materials through stringently enforced regulations. Certain legislative changes or clarification of existing law (discussed below) may be desirable. Creation of a security agency within NRC having operational responsibility for security forces would require enactment of enabling legislation.

SUPPORTIVE CONCLUSIONS

Physical Protection System for Fuel Cycle Facilities and Reactors

Design of adequate fixed site security systems should take proper account of several factors: (a) barriers and detection systems are more predictable and reliable in performance than guards, whether private or Federal; (b) a number of guard force problems, such as maintaining alertness and motivation are not readily solvable; and (c) it is difficult to develop high-performance reaction forces than can be depended upon to arrive at a site with full capabilities within a few minutes of an alarm.

Effectiveness of Private Versus Federal Guards at Fuel Cycle Facilities and Reactors

Guard effectiveness depends upon personal qualities and actions that can be prescribed by regulations and policies essentially independent of the guard's Federal or private status. For example, regulations equally applicable to Federal or private guards can specify physical and mental requirements, training, weaponry, and duties. Questions concerning use of deadly force, and behavior in hostage situations are important policy issues and are equally difficult to resolve for either Federal or private guards. In sum, the Security Agency Study concludes that based on effectiveness criteria there is no clear overall advantage of one option (Federal or private) over the other at either reactors or fuel cycle facilities.

Fixed Site Reaction Forces for Fuel Cycle Facilities and Reactors

State and local law enforcement agencies currently have varying capacities to respond in a timely fashion to security emergencies at nuclear facilities. There seems to be no industry-wide mechanism by which either a licensee or NRC can assure that substantial forces will arrive at a site within a few minutes of an alarm. But development of Federal reaction forces presents other problems, including cost and the necessity for complex and unprecedented legislation. Therefore, it appears necessary to base security plans on the premise that onsite protection systems and security personnel must have a high probability of providing protection for a period of time until reinforcements can arrive at the scene. NRC can assure that reaction forces play their assigned role in protecting facilities by taking steps to:

- Require that licensee facilities demonstrate that reaction forces designated in security plans are indeed capable of complementing the onsite protection system, and that the combination of these internal and external elements provide a high probability of successful defense for an extended period of time; and,

- Provide assistance to the licensee, in the event local law enforcement agencies are unable to assure a reliable response capability, in making appropriate and specific arrangements with Federal agencies for reaction forces sufficient to meet the standards of the preceding paragraph.

Physical Protection System for Transportation

With regard to shipping containers and transportation vehicles, the private sector can provide a level of security equivalent to that provided by the ERDA system which is responsible for transport of government-owned special nuclear material. Equivalent security can be provided by the private sector using drivers, guards and operating techniques under stringent standards now being established by NRC. Reliable and effective communications can be provided by a system such as the ERDA communication system if commercial carriers are required to use it.

Effectiveness of Private Versus Federal Escorts for Transportation

As with guards at fixed sites, appropriately qualified private escorts, who satisfy stringent NRC regulations, can provide the same practical degree of effectiveness as would be expected of a Federal force created specifically for the escort mission. However, disparate gun laws in the various states have the effect of restricting arms possessed by private and Federal transportation escorts. Possible remedies are legislation authorizing private guards to bear necessary weapons in protecting specified kinds of NRC-licensed materials or legislation authorizing the use of Federal guards with appropriate authority to bear the necessary weapons to protect privately owned nuclear material. If the latter course were chosen, expansion of the existing ERDA transportation guard force would be a more appropriate means of protecting vulnerable shipments of strategic special nuclear materials than establishment of an NRC security force.

Reaction Forces for Transportation

Difficulties in furnishing effective reaction forces in transportation security are even more pronounced than those associated with reaction forces for fixed sites. Shipments must travel across many police jurisdictions. Assuring that all relevant local law enforcement agencies can provide appropriate support may present practical difficulties. Local reaction force support capabilities could be enhanced through a more effective and reliable communications system, through training programs instituted to increase the knowledge and capabilities of State and local law enforcement agencies; and through model contingency plans prepared by the NRC Office of Nuclear Material Safety and Safeguards. Contingency plans could, in some cases, provide for Federal assistance. This would constitute an additional deterrent to those who might seek to steal nuclear materials in transit.

In view of the practical difficulties involved in establishing and maintaining dedicated reaction forces capable of responding to incidents involving shipments, safeguards systems should place appropriate reliance on invulnerability of vehicles and containers and on guard forces accompanying shipments.

SECURITY FORCE ISSUES

Analysis of the existing safeguards structure indicates that while the system is rationally designed and workable, it may be necessary to periodically upgrade protective measures in some instances. The question addressed herein, however, is whether establishment of NRC (or other Federal) security forces, as distinguished from any upgrading of the existing requirements by regulation, would result in more effective performance of safeguards functions.

In order to answer this question, the Security Agency Study considered several factors to be of importance. These factors, which are elaborated below, were:

- The comparative effectiveness of private versus Federal guards--measured both by intrinsic guard qualities like fitness and motivation and by external factors beyond the control of individual guards (Federal or private)--such as policies determining weapons use or reaction to hostage threats;

- The role of reaction forces in the overall safeguards system, and whether a major or minor role should be assigned to these forces; and

- Administrative considerations and public policy issues, such as precedent, costs, and equitable distribution of the burden of protecting the public against threats to private industry by third parties.

1. The Comparative Effectiveness of Private Versus Federal Guards

Relative Performance of Private and Federal Guards

On the basis of studies submitted to the Security Agency Study by contractors and consultants, 16 criteria or characteristics were selected as a basis for comparing the relative effectiveness of upgraded private guard forces and a hypothetical Federal force. Criteria selected for comparing relative effectiveness of guard forces include: use of deadly force, arrest powers, general security knowledge, local security knowledge, mental fitness, physical fitness, alertness, motivation, weapons, lack of vulnerability, deterrent image, liaison with offsite reaction forces, chain of command and controllability during crisis, compatibility in normal operations, adherence to requirements and stability of the labor force.

With the exception of criteria relating to a) adherence to requirements, b) chain of command and controllability in crisis, and c) compatibility in normal operations, the Security Agency Study concludes that there is no significant difference between the probable performance of hypothetical

While these arguments suggest properly qualified private guards may be, overall, more effective than Federal guards in protecting commercial nuclear facilities, the staff judges that there is no clear overall advantage of one option (private or Federal) over the other. Therefore, the staff concludes that, based on effectiveness criteria, there is no need at this time to create a Federal force for protecting fixed sites. Similarly, appropriately qualified private escorts for protection of special nuclear materials in transit can provide the same practical degree of effectiveness as would be expected of a Federal force created specifically for the escort mission. If, on the other hand, private guards do not receive authorization to bear necessary weapons and Federal guards do, then expansion of the existing ERDA transportation guard force would be a more appropriate means of providing protection for strategic special nuclear material in transit than establishment of an NRC security force.

Hostage Threats

Two hostage situations are of major concern in the design of safeguards systems. The first might arise if criminals invade a facility, gaining control of the plant and perhaps operating personnel, and threaten to cause release of radioactive materials or other damage unless announced demands are met. A second type of hostage situation involves threats against hostages as a means of gaining access to a nuclear facility, to extort material, or to escape with stolen material.

To minimize the likelihood that use of hostages could lead to a successful unauthorized entry or removal of nuclear materials, an expression of policy on hostages by NRC may be desirable, and such policy should give consideration to the merits of flexibility and discretion. In any event, such policy considerations would apply equally to Federal and private guard forces.

Rules Governing Use of Deadly Force

Armed guards are necessary to prevent theft of strategically important special nuclear material (SSNM) and to prevent malicious actions at nuclear facilities that could result in the release of radioactive materials into the environment. Guards may be more willing to use whatever force is the minimum needed if they have, and understand that they have, authority to use it to protect SSNM and nuclear facilities.

There are no general Federal statutes governing the use of force; liability is governed by State law. In general, the use of force is legally justifiable when such force is immediately necessary for the purpose of protecting oneself or other persons against the use of force by another person. Further, use of force may be justifiable when an individual believes that such force is immediately necessary to prevent or terminate an unlawful entry or carrying away of property, though this is not the rule in all States. The degree of force that may be used is that which is reasonably necessary, and no more. These general rules apply to Federal, State, and local law enforcement officers, and private guards. The major difference between

Federal, State, and local officers, on the one hand, and private guards on the other, lies in the authority to arrest, and consequently in the power to use force to effect an arrest. If a private guard uses force to make an arrest, and no felony has in fact been committed, that use of force is not permissible; in contrast, the peace officer may use force if he reasonably believed a felony to have been committed. As a practical matter, however, the use of deadly force is permissible, by peace officers or private guards, in virtually every case in which an attempt to steal safeguarded materials or to sabotage facilities involves actual or threatened violence against security personnel.

The Security Agency Study concludes that authority governing use of deadly force should be clarified and that such clarification can be as readily accomplished for private as for Federal guards.

Possession and Transportation of Certain Types of Weapons

Federal legislation is required to authorize private guards to possess and use automatic weapons such as the M-16 rifle for protection of privately-owned nuclear facilities and materials. NRC could not require licensees to arm and instruct their security forces in a manner that contravenes State or local law. If greater firepower than that presently authorized for private guards is recommended, special legislation would be needed to permit such arms. Authority for Federal guards to bear similar arms would presumably be delineated in the legislation creating a Federal guard force.

Possession and transport of weapons across jurisdictional boundaries is regulated by Federal, State, and local law. However, disparate gun laws in the various States have the effect of restricting arms possessed by private and Federal transportation escorts. Possible remedies are legislation authorizing private guards to bear necessary weapons in protecting specified kinds of NRC-licensed materials or legislation authorizing the use of Federal guards with appropriate authority to bear the necessary weapons to protect privately owned nuclear material.

2. Role of Reaction Forces in the Overall Safeguards System

Under NRC regulations, responsibility for providing reaction forces to neutralize immediate threats at nuclear sites or in transport of SSNM is presumed to reside in local law enforcement agencies. Assuring a high level of assistance from reaction forces in the critical early stages of an attack introduces the greatest uncertainty in the design of a safeguards system. The plant security plan should be based on the premise that onsite protection systems and security personnel must have a high probability of providing protection for a period of time, while reinforcements get to the scene.

In searching for the most viable option for improving reaction forces, the Security Agency Study considered two reaction force concepts: "dedicated" and "non-dedicated" forces. As used herein, "dedicated" reaction forces means forces assigned a major role in containing and defeating attacks, with no competing mission or assignment. Several ways in which dedicated reaction forces might be established were examined, among them State and local police forces, or teams from the Department of Defense, the U.S. Marshals Service, the FBI, ERDA or NRC. The Study concluded that while such arrangements could be effected in principle, all would involve unsatisfactory and undesirable distortions of the primary missions of these agencies and would require Congressional authorization.

A more viable conceptual approach to reaction forces appears to be one in which such forces are assigned a supplemental role in the protection of facilities and materials in transit. At fixed sites increased reliance must be placed on detection and barrier systems and onsite guards. In the case of SSNM in transit, less reliance would be placed on reaction forces in favor of more dependence on the design features of vehicles and containers and the guards escorting the system.

There appears to be no satisfactory means of establishing reaction forces dedicated to the specific mission of nuclear industry security. At the same time, however, it is clear that local law enforcement agencies can provide adequate reaction teams given sufficient time. This leads to the conclusion that the most viable reaction force concept is one in which primary reliance is placed on security at a fixed site and within a convoy. The level of protection afforded by onsite detection systems, barriers, and guards can be geared to the capacity of available offsite reaction forces.

3. Public Policy and Administrative Considerations

Administrative Implications for NRC

If NRC were given direct operating responsibility for security forces in the nuclear industry, a severe organizational imbalance would result within NRC. At present the approximately 2,250-person NRC staff is primarily concerned with regulating the private nuclear industry to insure public safety in a complex high-technology industry. For a nuclear industry consisting of about 150 reactors and 10 fuel cycle facilities--which could develop within the next ten years or so--a guard force of approximately 6,000 could be required, with perhaps 1,000 administrative support personnel. Administration of a security force of this size within the existing organization would change the overall character of NRC. If a security force were established solely to provide protection of material in transit, less than 500 persons would be required and the organizational impact upon the NRC would be significantly less. However, for the foreseeable future, it would appear to be more appropriate for a Federal transportation security force to be derived from an expansion of the existing ERDA transportation system than from a new NRC security agency.

Administrative Implications for Plant Management

The presence of Federal guards at commercial nuclear facilities would create administrative complications for the management of the facility. Both normal operating activities and emergency situations may be complicated by the uncertainty as to whether the plant management or the Federal guards are in charge in any specific situation. A detailed discussion of these implications is presented in the earlier discussion of guard force effectiveness (p. 6 et seq.).

Liability

There does not appear to be a clear advantage either to Federal or private guards from the standpoint of liability to suit. In theory, a Federal guard might be more inclined than a private guard to use his best judgment in deciding whether to use deadly force against an intruder, since the Federal guard is more likely to be immune from liability. It can also be argued that the possibility of liability in the event of a mistaken judgment might make private guards more cautious about using deadly force in a particular situation.

Legally, there are more questions surrounding a Federal guard's civil liability than there are for private guard's liability. In Bivens v. Six Unknown Agents, 403 U.S. 388 (1971), a divided court held that an allegation of violation of the Fourth Amendment by a Federal officer was a valid claim that could be tried in a Federal Court (without diversity jurisdiction) against the official personally for tort damages. The question of whether sovereign immunity was available was not answered. Questions of civil liability are easier to resolve under the present system where private guards are used, simply because the traditional employer-employee doctrines of agency law generally apply to such questions, and the law as to responsibility in tort is well settled.

Cost

The Security Agency Study did not attempt a quantitative comparison of cost between Federal and private guards as they might be upgraded through NRC regulation. As a first approximation, however, the cost of guards of a specified effectiveness is independent of whether guards are private or Federal employees; a specified level of quality implies an equivalent level of training, equipment, and personal attributes.

An enforcement program to assure that private guards, upgraded through stringent regulations, maintain their qualification could result in increased NRC costs through increased inspection requirements. For example, doubling the inspection rate could require increasing the number of field enforcement personnel and related travel and program support costs. Such additional costs would be about one million dollars annually assuming the current number of reactor sites, fuel cycle facility sites and SSNM shipments remain unchanged. Assuming 100 reactor sites, 10 fuel cycle

sites and 200 shipments of SSNM requiring protection (a typical projection for 1985), the total cost to NRC of such a program of increased inspection of the commercial nuclear industry would be about four million dollars per annum. Other incidental costs associated with developing an upgraded guard force such as regulatory changes, development and distribution of a training syllabus, a security operating manual and training evaluations have not been quantified but are expected to be relatively small and within projected staff resource capabilities.

Traditional Law Enforcement Relationships

Traditionally, the exercise of Federal police power has extended only to the prevention or investigation of Federal crimes, including crimes against Federal government property. For the Federal government to undertake the protection of privately owned facilities from acts that might not involve the violation of any Federal law would represent an intrusion into areas heretofore reserved to the States.

Civil Liberties

The possible impact on civil liberties that would result from creation of a Federal guard force within NRC was one of the factors considered. The study concentrated on the possible effects on two groups: the guards themselves, and other employees and visitors with whom the guards come into contact while performing their duties. The broader question of the impact on civil liberties of an overall safeguards program, including guard forces, and of the effects on the public if a failure to assure safeguards occurred, will be analyzed in detail in the Safeguards Supplement to the Generic Environmental Statement on the Wide-Scale Use of Recycle Plutonium in Mixed-Oxide Fuel in Light Water Cooled Reactors. The Security Agency Study was limited to what differences, if any, might exist between the civil liberties impacts of Federal and private guard forces.

The implementation of a safeguards program will have civil liberties implications for both the general public and the guards. The impact a particular measure has on civil liberties is dependent on the level of intrusion into the rights of free speech, association, privacy; the reasonableness of searches and other actions; the frequency with which the measure is employed; and the circumstances giving rise to the measure.

The civil liberties impacts on the general public of security forces, whether Federal or private forces are involved, are likely to fall into two categories: The "chilling effect," if any, that the existence of such forces may have on the public's perception of its rights of privacy, speech, association and others and its freedom to exercise them; and the intrusions, if any, that might result from countermeasures employed to deal with a failure of safeguards systems. In the extreme case of the loss of special nuclear material to malevolent action, the effort to recover that material would undoubtedly enlist the aid of Federal, State and local law enforcement personnel, rather than onsite guard forces alone. Thus, the civil liberties impacts of such an occurrence would probably be the same,

whether nuclear facilities and materials were guarded by Federal or private guard forces. In neither case, therefore, would there appear to be a difference between Federal and private forces in terms of their effects on civil liberties.

Civil liberties of guards may be affected by measures such as pre-employment background investigations, psychological tests, surveillance and physical security measures such as searches. While the need for a particular measure must be clearly established and procedural safeguards must be incorporated in order to minimize any adverse impact, any requirement that a measure be a part of the security program at nuclear facilities and for the transportation of SSNM, would be equally applicable to a guard whether the guard be Federal or private.

Civil liberties of other employees and visitors might be affected by actions taken, and measures employed, by guards--such as searches, detention and use of force. The impact of these measures on civil liberties is dependent on the reasonableness and appropriateness of tactics, and the propriety of the level of force used.

Therefore the crucial question is whether upgraded private guards and hypothetical Federal guards possess different capacities for judgment and for exercising discipline in performing their duties. The Security Agency Study analysis on guard force effectiveness concluded that upgraded private guards, if given the same level of screening, training and supervision, would possess the same discipline and judgment capacity as that of hypothetical Federal guards.

The Security Agency Study concluded that the issue of civil liberties is independent of the Federal or private character of the guard force and that civil liberties concerns should not control the decision whether to select Federal or private guards to safeguard SSNM. This conclusion is supported by The Conference on the Impact of Intensified Nuclear Safeguards on Civil Liberties, held in October 1975 at Stanford University at the request of the Nuclear Regulatory Commission. It concluded that guard force actions would have far greater impact on civil liberties than the private or Federal character of the guard force. In addition, a study conducted for the Commission by the law firm of Wilmer, Cutler and Pickering of Washington, D.C., concluded that the impact on civil liberties resulting from the creation of a Federal guard force would not be different in kind from those that would be created by any guard force: private, State or Federal.

Feasibility of Establishing an NRC Security Agency Under Present Law

It would not be feasible to use NRC employees for security guards since the Commission is authorized by Section 161k, Atomic Energy Act of 1954, as amended, to arm its employees only while in the discharge of their "official duties." The legislative history indicates that the "official duties"

QUESTIONS AND ANSWERS ABOUT THE SECURITY AGENCY STUDY

1. Does the Study's recommendation against creation of a security force within NRC mean that existing safeguards systems are adequate?

The Security Agency Study was conducted as one part of a wide ranging review of the entire safeguards program and did not attempt any determination of the adequacy of the present safeguards system, nor did it attempt to determine whether there is a need now or in the future to increase the size and/or capabilities of security forces. The role of security forces in the safeguards system will be decided in other forums. In consequence of the broad mandate of Section 204 of the Energy Reorganization Act, NRC has under review safeguards for all facilities and materials licensed under the Atomic Energy Act of 1954, as amended. These include materials control and accounting systems; contingency plans for coping with threats, thefts, and sabotage; and research into improved safeguards system.

2. What is the nature of the nuclear industry that would be affected directly by the creation of an NRC security agency to provide security protection?

The nuclear industry with which the Security Agency Study is concerned consists of a number of privately or publicly owned facilities. The companies and utilities operating these facilities are engaged in commercial activities, most of which are related to the production and use of nuclear material as fuel for the generation of electricity. There are private research and development organizations that are investigating new fuels, such as plutonium for possible use in future generations of nuclear reactors. If plutonium is used in the future, there will be fuel fabrication plants for the manufacture of fuel for the reactors and reprocessing plants to recover plutonium and uranium from used fuel. At present, there are 58 utility owned nuclear reactors in operation producing electricity with uranium fuel. In addition, there are several privately owned plants producing fuel for the Navy's nuclear powered fleet.

These different operations have several things in common, all of which bear on the analysis of the issues in the Security Agency Study:

- They are either privately or publicly (in the case of some utilities) owned and operated and are not U.S. Government facilities.

- They are facilities which either must be protected against sabotage or contain nuclear materials that must be protected against theft and sabotage.

- They are subject to regulation by the U. S. Nuclear Regulatory Commission.

3. *Section 204 of the Energy Reorganization Act asks NRC to consider the need for establishing a security agency within the Nuclear Regulatory Commission. Did the Security Agency Study consider whether a security agency within some other Federal agency would be appropriate?*

The Security Agency Study focuses on whether the NRC should take over operating responsibility for security forces. The result of this Study's assessment is that most factors militating against creation of a security agency within NRC are also applicable to the creation of such an agency elsewhere within the Federal government.

4. *What criteria were used by the Security Agency Study to determine whether or not there is a need for creation of a security agency within NRC (or some other Federal agency)?*

A security agency as such should only be established within NRC if it were shown that a Federal security force would be the most effective method of maintaining nuclear security and, further, if it were shown that the NRC would be the most effective location for control of such a force.

No need exists for the Federal government to assume operational responsibility for security forces; accordingly, there is no need from that standpoint to create a security agency within the Nuclear Regulatory Commission. Analysis of the existing regulatory structure indicates that NRC can fulfill its responsibilities to assure adequate physical protection of licensed facilities and materials through appropriate regulations, stringently enforced, and through an increased role for NRC in functions related to the qualification, training, and certification of private guard forces.

5. *On what basis did the Security Agency Study make a comparison of private and federal guards?*

a. The comparative effectiveness of private versus Federal guards was measured both by intrinsic guard qualities like fitness and motivation and by external factors beyond the control of individual guards (Federal or private), such as policies determining weapons use or reaction to hostage threats. On the basis of studies submitted to the Security Agency Study by contractors and consultants, 16 criteria or

characteristics were selected as a basis for comparing the relative effectiveness of upgraded private guard forces and a hypothetical federal force. Criteria selected for comparing relative effectiveness of guard forces include: use of deadly force, arrest powers, general security knowledge, local security knowledge, mental fitness, physical fitness, alertness, motivation, weapons, lack of vulnerability, deterrent, image, liaison with offsite reaction forces, chain of command and controllability during crisis, compatibility in normal operations, adherence to requirements and stability of the labor force.

b. The role of reaction forces in the overall safeguards system was considered along with the responsibilities that should be assigned these forces. The Security Agency Study considered two reaction force concepts: "dedicated" and "non-dedicated" forces. As used in the study, "dedicated" reaction forces refer to forces assigned a primary role in containing and defeating attacks, with no competing mission or assignment.

c. Public policy issues and administrative considerations were examined, such as precedent, tradition, costs, and equitable distribution of the burden of protecting the public against threats to private industry by third parties.

6. Would a Federal guard force have greater authority than a private guard to use deadly force in carrying out his duties?

In general, the use of force is legally justifiable when such force is immediately necessary for the purpose of protecting oneself or others against the use of force by another person. The degree of force that may be used is limited to that which is reasonably necessary. This is the general rule in all States and is applicable to private guards, Federal law enforcement officials, state and local police. The difference between private guards and Federal, State and local law enforcement officials lies in the difference in the authority to arrest, not in differences in the rules governing the use of deadly force. A Federal, State or local law enforcement official may effect an arrest when it is reasonable to believe a felony has taken place or is about to take place; private citizens, including private guards, may effect an arrest only if such a felony has been in fact committed. Law enforcement officials do have broader arrest authority and if the use of deadly force is justifiable in the arrest, then law enforcement officials have a broader basis for the use of deadly force only to that extent.

7. The Security Agency Study concluded that lack of uniformity among State laws has the effect of restricting arms possessed by transportation escorts.

a. Can private escorts currently carry weapons across State and local jurisdictional boundaries?

Yes. However, it does require the escorts to comply with the differing gun laws of all States whose jurisdictional boundaries the escorts would cross. Such compliance is a substantial administrative burden.

b. What could be done to eliminate the need for private escorts to comply with the differing gun laws of many States?

Federal legislation could grant private guards who escort SSNM shipments authority to carry weapons across State boundaries. An alternative would be for the States to pass uniform legislation granting such authority.

c. If greater firepower such as automatic weapons were needed by guards who escort shipments of SSNM, would private guards possess authority to carry these weapons?

Private escorts would not have authority to carry automatic weapons across State boundaries. Federal legislation would be required to provide private escorts that authority. Moreover, legislation would be required to provide Federal escorts authority to carry automatic weapons while protecting privately owned nuclear facilities and privately owned nuclear material.

8. a. Are Federal escorts currently available who could carry weapons across State and local boundaries in escorting shipments of privately owned SSNM?

There is now no Federal guard force that has authority to provide armed escorts for shipments of privately owned SSNM.

b. What could be done to provide Federal escorts authority to provide armed escorts for shipments of privately owned SSNM across State boundaries?

Federal legislation would be required to grant authority to escort privately owned SSNM and to carry weapons while performing the escort function.

9. Wouldn't it be possible to assign military forces or other Federal law enforcement agencies, such as the U. S. Marshals Service, the mission of providing forces dedicated to immediate response to assist the plant security forces or to provide protection for material in transit?

Several ways in which dedicated reaction forces might be established within the Department of Defense, the U. S. Marshals Service, the FBI, ERDA or

NRC were examined. In the end, it was concluded that while such arrangements could be effected in principle, all would involve unsatisfactory and undesirable distortions of the primary missions of these agencies and would require congressional authorization.

The Posse Comitatus Act, 18 USC 1385, prohibits the use of the Armed Forces for civil law enforcement, which would include protection of private property, unless expressly authorized by the Constitution or by statute.

With appropriate legislative authority to provide physical protection of SSNM in transit, NRC could utilize the services of armed Federal escorts for materials in transit from some other Federal agency such as the U. S. Marshals Service (USMS) or the Energy Research and Development Administration under the Economy Act of 1932.

10. If a security agency were established within NRC to provide security forces to protect facilities and materials and escort strategic special nuclear material in transit, what would be the approximate size of the agency?

If NRC were given direct operating responsibility for security forces in a nuclear industry consisting of 150 reactors and 10 fuel cycle facilities which could develop within the next ten years or so, a guard force of approximately 6,000 could be required, with perhaps 1,000 administrative support personnel. If a security force were established solely to provide protection for material in transit, less than 500 personnel would be required.

11. Would the presence of Federal guards at nuclear facilities adversely affect the ability of plant managers to carry out their responsibilities?

The presence of Federal guards at commercial nuclear facilities could possibly create administrative complications for the management of the facility. Both normal operating activities and emergency situations may be complicated by the uncertainty as to whether the plant management or the Federal guards are in charge in any specific situation.

12. Don't safeguards measures established to protect the nuclear industry have a significant impact on civil liberties?

Establishment of safeguards measures may or may not have significant impacts upon civil liberties. The Security Agency Study did not attempt to identify the safeguards measures needed to protect nuclear facilities or shipments of SSNM. The broader questions of civil liberties impacts of implementing safeguards measures, or the effect on the public if these measures failed, were not addressed since they are to be presented in the GESMO Safeguards Supplement.