UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of	)
	)
SECURITY PERSONNEL QUALIFICATION TRAINING AND EQUIPMENT REQUIREMENTS -- 10 CFR Part 73	)

PETITION FOR RECONSIDERATION
OF ISSUANCE OF RULE

KMC, Inc. on behalf of itself and the utilities listed in Attachment A (hereinafter referred to as "Petitioners") hereby petitions the Nuclear Regulatory Commission to reconsider its decision to implement the "Security Personnel Qualification Training and Equipment Requirements" rule which is scheduled to become effective on October 23, 1978. The Petitioners are interested persons in that the utilities listed in Attachment A own nuclear power reactors which are either under construction or in operation (or both) and are subject to the requirements of 10 CFR Part 73.

The proposed rule change was published in the Federal Register on July 5, 1977, for public comment. On August 23, 1978, the rule was published in the Federal Register in final form with the effective date specified as October 23, 1978. Concurrent with the issuance of the final rule the Office of Nuclear Reactor Regulation of the Commission published NUREG-0219, "Nuclear Security Personnel for Power Plants" and the Office

of Standards Development of the Commission published a draft of NUREG-0464 (4 volumes), "Site Security Personnel Training Manual." These companion documents provide insight into how the Commission staff plans to interpret the Commission's new rule. KMC, Inc. as well as many of the utilities listed in Attachment A have previously commented on the documents published.

Although the Commission in its publication of the final rule took pains to delete the specified training requirements and allow flexibility for the licensees to specify and adopt its training to their site specific plans, the companion NUREG documents reinstated these objectionable practices in even greater detail. Previous experience has shown, particularly in the security area, that even though draft NUREG documents are labeled "guidance documents," inasmuch as they have been drafted by the staff they are accorded by the NRC staff reviewers as the force and effect of regulations with no interpretations or exceptions permitted.

Our major concern with the staff's present guard upgrade actions are their inconsistency with the need from a physical security viewpoint, to implement the suggested extensive training. A lack of perspective, in the form of excessive or unnecessary requirements, will make the implementation of truly beneficial requirements much more difficult. For example, at recent Commission meetings, it has been recognized that there are significant

legal impediments in the use of deadly force in protecting materials capable of being fashioned into a weapon, (e.g., "Role of Use of Deadly Force in Safeguarding Strategic Special Nuclear Material at Nuclear Fuel Cycle Facilities," Secy-78-350) let alone protecting a nuclear reactor facility against sabotage. With the Commission declining to seek any legislative authority to "legalize" the use of deadly force at nuclear facilities, it is incomprehensible that it would effectuate a rule requiring private guards at nuclear power reactors to be equipped and trained for the use of deadly force, particularly with offensive weaponry.

Our reasons for deferral of this rule are more fully discussed in Attachment B, Memorandum of Petitioners in Support of Petition for Reconsideration, and we respectfully request that the Commission defer implementation of the new rule as applied to nuclear reactors until such time as it can be made more consistent with other Commission actions, the perceived threat level, and the actual guard requirements and duties. The implementation should be delayed until the Commission has had time to more carefully review these implications, including those discussed in Attachment B.

Respectfully submitted,

KMC, Inc.

By Donald F. Knuth

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Dated: October 23, 1978

Attachment A

List of Participating Utilities

Arizona Public Service Company

Baltimore Gas and Electric Company

Carolina Power and Light Company

Commonwealth Edison Company

Duke Power Company

Duquesne Light Company

Florida Power and Light Company

Nebraska Public Power District

Northeast Utilities Service Company

Northern States Power Company

Omaha Public Power District

Portland General Electric Company

Public Service Electric and Gas Company

Rochester Gas and Electric Corporation

Sacramento Municipal Utility District

South Carolina Electric and Gas Company

Wisconsin Public Service Corporation

Yankee Atomic Electric Company

Attachment B

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of	)
	)
SECURITY PERSONNEL QUALIFICATION	)
TRAINING AND EQUIPMENT	)
REQUIREMENTS -- 10 CFR Part 73	)

MEMORANDUM OF PETITIONERS
IN SUPPORT OF
PETITION FOR RECONSIDERATION

Background

On July 5, 1977, the Commission published in the Federal Register, 42 Fed. Reg. 34310, a proposed rule setting forth requirements for selecting, equipping, and training guard personnel to protect special nuclear materials and facilities. As published, the proposed regulations contained many detailed requirements particularly in the area of guard training. On August 23, 1978, the Commission published, in 43 Fed. Reg. 37421, the final rule with an effective date of October 23, 1978. The final rule was extensively revised and now contains performance oriented objectives rather than the extensive detailed requirements. Coincident with publication of the rule, "guidance documents" were also published which provided further interpretations. This petition relates only to the rule as it pertains to nuclear power plants.

Nuclear Power Plant Requirements to Protect Against Sabotage

As related to protection of nuclear power plants from acts of sabotage, all of the Commission's five major offices (as well as other staff offices) have varying and overlapping spheres of influence. Although the Commission has explicitly stated its recognition that the potential consequences of sabotage to a nuclear reactor are less than the extreme consequences which could be associated with the successful diversion and ultimate detonation of an illicit nuclear explosive device, there has been little recognition of this in the promulgation of security related regulations. Rather, the approach appears to be a "maximum effort" attitude; that is, a regulation developed for protecting significant amounts of special nuclear materials is also automatically made effective for protecting nuclear power plants from sabotage.

One example of such methods of regulation is the Contingency Planning Rule which was developed under the guidance of the Office of Nuclear Materials Safety and Safeguards to develop the response matrix of federal, state and local officials mainly for theft of significant amounts of special nuclear materials. This same regulation was applied to nuclear power plants, even though the Commission's regulation of 10 CFR Part 73.55 was being used as a basis for requiring contingency planning. For example, both

NUREG-0207, "Interim Format and Content for a Physical Security Plan for Nuclear Power Plants," and NUREG-0220, "Interim Acceptance Criteria for a Physical Security Plan for Nuclear Power Plants," draft March, 1977, were being used by the staff as bases for requiring applicants to develop responses to contingencies. A statement in NUREG-0207 which the staff required licensees to implement in order to meet 10 CFR Part 73.55 states in part:

> "8.2 Assignment of Responsibilities
>
> For each of the security contingencies delineated below:
>
> a) State the objective(s) to be reached in response to the contingency.
>
> b) Describe the general decisions and actions to be taken in response to the contingency. This description should clearly show how the plant security organization assesses the contingency, localizes it within the plant, and neutralizes it.
>
> c) Discuss situational factors and criteria that affect the making of each decision and the taking of each action.
>
> d) Describe the types of data that are needed to make each decision and take each action.
>
> e) For each decision and action, designate a member, post or unit, of the facility organization that has responsibility for performing that duty. This designation of responsibilities should clearly show how sufficient forces are brought to bear in a timely manner to neutralize the contingency, and how responding off-site forces are coordinated on arrival.

> f) Describe the nature, size, and timing of law enforcement response (if they are notified), and the role that they play in neutralizing the contingency."

It is apparent that similar treatment is planned to be accorded the implementation of the new Security Personnel Qualification Training and Equipment Requirements -- 10 CFR Part 73. Companion "guidance" documents have been issued by both the Office of Nuclear Reactor Regulation (NUREG-0219) and the Office of Standards Development (NUREG-0464). "Nuclear Security Personnel for Power Plants," NUREG-0219, July, 1978, contains NRR interpretations of the revised rule. That document states in part:

> "The applicant and licensee training and qualification plans will outline the process by which guard, watchmen, armed response persons and other members of the security organization will be selected, trained, equipped and qualified. This plan should contain:
>
> 1. Job descriptions for all security positions.
>
> 2. Duties defined for all positions.
>
> 3. Critical tasks defined for all duties.
>
> 4. Skills, knowledge and abilities defined for all critical tasks.
>
> 5. Performance objectives stated for all critical tasks.
>
> 6. Training and qualification plans to train and test to appropriate performance objectives.

> The objective of the lesson plans in the training manual is to assist instructors in their preparation of lectures, demonstrations, field training, and examinations. The objective of the study guide material is to assist students in understanding what they are expected to learn and what they must do to prepare for a lesson, demonstration, or field exercise. The study also should be able to use the manual for self-determination of his progress and understanding of the information that he has been given.

1.2 Training Manual Scope

> The Security Personnel Training Manual identifies what it is that security personnel need to know to provide physical protection of nuclear materials and facilities as required by 10 CFR Part 73. Training material covers basic background and legal information, equipment used by security officers, duties and responsibilities of security officers, security skills, tactical training, and weapons training and qualification. Additional material is provided for annual refresher training and requalification."

Prior experience in the staff usage of NUREG documents, particularly in the security area, has shown these documents to be accorded much greater status than guidance documents. In fact, they have frequently been accorded the force and effect of regulations, with licensees expected to document any justification from any planned deviations. Escalation due to staff interpretations to meet the published "guidance" documents which are in addition to regulatory requirements will require a commitment of resources and talent well beyond any perceived benefit. In comparison to documents relating to the training required

This document gives guidance on the preparation of this training and qualification plan and contains three parts:

1. An introduction to and brief explanation of job analysis and performance objectives.

2. A statement of the information that should be submitted in response to the requirements and the NRR review procedures.

3. A sample qualification submittal."

In addition "Site Security Personnel Training Manual," NUREG-0464 (4 volumes), July, 1978, contains the Office of Standards Development interpretations to be made of the revised rules. That document reads in part:

"1.1 Training Manual Objective

The objective of the Security Personnel Training Manual is to furnish information and reference material that can be used to train and qualify security personnel to protect special nuclear materials and nuclear facilities against theft and sabotage as required by 10 CFR Part 73. Specific objectives of the training manual are to provide training material that expands on the criteria in Appendix B to 10 CFR Part 73, and to provide guidance for developing courses of instruction for security personnel. Course material is presented in a format that is consistent with regulatory requirements such that it can be readily adapted to the preparation of training programs. Personnel completing the training programs should be capable and qualified to execute the duties prescribed for them. The lesson plans and study guides contained in the manual can assist them in achieving this capability.

of personnel for safety reasons, these documents place unnecessary emphasis on security with the overall sense of balance and perspective being lost.

Use of Deadly Force

Protection of nuclear power plants against acts of sabotage require guard response forces to respect applicable state and local laws. This is presumably true since there are no preemptive federal laws which make it a federal offense to trespass on nuclear power plants or attempt acts of sabotage. As indicated in a document (Secy 78-350) released in a recent Commission meeting, the Commission staff recommended against seeking legislative authority as recommended by the GAO 1/ which would clearly empower guard forces to use deadly force to protect special nuclear materials. Although that issue related to protecting special nuclear material from diversion, the Commission has also clearly recognized that the potential consequences from diversion could be more severe than sabotage of a nuclear power plant. In fact, the Commission in the statement of consideration of 10 CFR Part 73 stated:

1/ GAO report EMD-77-40 which recommended:

> "Seek, as appropriate, Federal and/or State legislative authority to allow guards at NRC licensed facilities to use firearms to prevent thefts of SNM if such action is the minimum amount of force necessary to prevent the theft."

> "On the basis of intelligence and other relevant information available to the NRC there are no known groups in this country having the combination of motivation, skill, and resources to attack either a fuel facility or a nuclear power reactor. In addition, studies have indicated that the generic characteristics (i.e., the 'defense-in-depth' concept of reactor plant design) of commercial power reactors make the releasing of radioactivity by acts of sabotage difficult. Furthermore, the potential consequences of a reactor sabotage are judged to be less than the extreme consequences which could be associated with the successful detonation of an illicit nuclear explosive device."

In view of the fact that nuclear power plants present less of a perceived danger than diversion of SNM, one can understand why the Commission has not sought legislative authority for guards to use deadly force at nuclear power plants. It is, however, incomprehensible why the Commission would require extensive paramilitary training in the use of deadly force when at the same time consistently avoiding the posture of condoning the use of such force. The Commissioners have recognized the legal pitfalls of licensees' use of deadly force in a Commission meeting of May 17, 1978, when the following exchange occurred:

> "COMMISSIONER GILINSKY: You mentioned that this was the same rule that applied in reactors. Why would this ever come up in a reactor?
>
> MR. FONNER: Why would what ever come up?
>
> COMMISSIONER GILINSKY: The whole notion of shooting somebody going over the fence?
>
> MR. FONNER: It wouldn't. That's one of the reasons why the situation in power reactors was deliberately taken out of this paper. When the paper came around once, it was ambiguous on that point. And when the ambiguity was pointed out, it was decided to clearly separate the two and indicate that the two --

MR. CASE: We required the same thing, to interpose yourself between a guy -- correct me if I'm wrong-- whom you think is going to commit sabotage, and use force against the force that he displays. So I don't see the force as being different at all.

COMMISSIONER GILINSKY: Well it is if somebody is running away.

MR. FONNER: The scenario is not the same.

MR. CASE: It may be different scenarios but the issue is there, the same between the two kinds of acts. We have the same question and state law is not -- at least in a couple of states, as I understand it, it is not clear that under state law a person has the right to get out in front and interpose himself. Is that right?

MR. FONNER: No, sir. May I address this issue?

COMMISSIONER GILINSKY: I wish you would.

MR. FONNER: Okay, thank you. As Mr. Case alluded, two licensees, Arkansas Power & Light and Niagara Mohawk, in their security plans which were submitted for review under the Physical Security for Protection for Reactors, made statements when talking about guard force response, that state law imposed a duty to retreat."

The essense of the Commission's discussion contained in some 47 pages of transcript was summarized by Chairman Hendrie as follows:

"CHAIRMAN HENDRIE: What had seemed to me was, that the provisions that have been worked out and laid out in the regulations, the fact that you dodge, get in between, meet force with force as necessary, including deadly force --

MR. FONNER: That they are clearly authorized to do everywhere.

> CHAIRMAN HENDRIE: -- was about as good as we are likely to do. And it seems to me to try to go beyond that and try to get some sort of statutory authority on how licensee guards should go around shooting people willy-nilly was not a thing they were likely to want to do, or made much sense. On the other hand, a reasonable comfort with the provisions that we have now written down, rests on them working as straightforwardly and simply as they seem to be. You know, principle number one, the guard shall interpose himself. But now it turns out that that is encumbered, apparently, or possibly with all kinds of complications. If the person he is interposing himself against, has produced a weapon and gives an indication of using deadly force, the guard may not impose himself. He may be required to retreat, if he can do this safely."

It is thus recognized that some states have an explicit "duty to retreat" statute, which is derived from common law, that may require guards to avoid the use of deadly force if their life or other lives are not in immediate danger. Under these conditions, utilization of high powered semi-automatic weapons, or the use of any other sophisticated offensive weapons, or the use of offensive military tactics to attack potential saboteurs may be contrary to state and local law. Hence, we question the requirement for tactics training and qualification training on sophisticated weapons without clear federal (NRC) direction enabling such employment.

Perceived Threat Level of Sabotage

The Commission in its statement of considerations for 10 CFR Part 73.55 has explicitly recognized that the threat of sabotage to a nuclear power plant is less than that possible from illicit use of diverted special nuclear material. That statement reads in part:

> "Furthermore, the potential consequences of a reactor sabotage are judged to be less than the extreme consequences which could be associated with the successful detonation of an illicit nuclear explosive device."

Studies sponsored by the Commission have evaluated the susceptibility and consequences of acts of sabotage against nuclear power plants. In an unclassified publication by Sandia Laboratories for the NRC, "Safety and Security of Nuclear Power Reactors to Acts of Sabotage," SAND75-0504, March, 1976, summary results of an extensive study were described. That document states in part:

> "4.2 Susceptibility of Nuclear Plants to Sabotage
>
> Acts of willful destruction occur in many industries. They may be caused by disgruntled employees during periods of discordant labor relations, by fanatics of extremists during periods of civil unrest, or by mentally deranged individuals. Such acts have rarely occurred at nuclear power plants. The sequences developed by the adversary teams and the systematic presentation of plant failure modes described by the fault trees jointly demonstrate that there is negligible chance that acts of willful destruction would result in significant release of radioactive materials.

Sabotage which might endanger the public could only be carried out by knowledgeable, capable personnel having a high degree of technical competence. Such an attack would require thorough planning in order to mount an effort coordinated to bypass the plant security system and to disable or destroy elements of several plant systems in the multiple plant defenses against a radioactive release.

4.3 Consequences

The elapsed time between the initiation of a sabotage-induced failure sequence and the actual release of radioactive materials varies considerably. For many credible sequences, such as long-term transient incidents, sufficient time is available after initiation for a plant damage control team to nullify or mitigate the consequences of the attack.

The Reactor Safety Study developed methods to predict the magnitude of the radioactivity released and the public consequences occurring from random equipment failure and human error for various accident sequences. All sabotage options that have been identified lead to plant failure sequences that were included in the Safety Study. Therefore, sabotage cannot create consequences greater than those considered by the Safety Study.
Many factors influence the consequences: the sabotage option chosen, the operating status of the engineered safety features, the containment failure mode, the time and space variation of the wind and meteorological conditions, the site population distribution, and the extent of emergency response by on-site and off-site personnel. Control of all these factors is well beyond the capabilities of a credible sabotage operation. Evaluation of the probable consequences arising from the sequences developed by the adversary teams yielded values that are a small fraction of the maximum consequences considered by the Reactor Safety Study."

It must be remembered these studies preceded the security upgrade required at nuclear power plants as dictated by 10 CFR Part 73.55, February 24, 1977; hence, the susceptibility is now even less.

In view of the dissimilarity of the potential consequences of sabotaging a nuclear power plant (less potential consequences) with the possible consequence of diversion of significant amounts of special nuclear materials, we conclude to specify the required level of protection to be the same to be arbitrary and capricious. It is not reasonable to specify the same required level of performance to protect these different types of facilities.

Cost of Guard Training

Calculating the cost of providing the requisite level of guard training is not entirely possible at this time and will not be until NRC has reviewed and approved a proposed plan; however, portions can be estimated. Estimates for equipping and providing initial guard training could range between $150,000 and $300,000 for a single unit site. Continued yearly costs for equipment maintenance and requalification training are as difficult to estimate but would be in the vicinity of $100,000 per year. Unfortunately, the monetary costs are not the only burden imposed on industry by this upgraded rule. The burden of time, talent and resources that are being dedicated to maintaining a basically non-productive work force also

takes its toll in motivation and morale of those persons responsible to safely maintain and operate the nuclear facilities. The continued draining of resources to continuously upgrade security to meet undefined threats needs to be reversed.

Conclusion

We strongly urge that the Commission defer implementation of the guard upgrade rule as applied to nuclear reactors until such time as it can be made more consistent with other Commission actions, the perceived threat level, and the actual guard requirements and duties. In addition the staff's "guidance" documents (NUREG-0219 and NUREG-464) should be reissued to be consistent with the Commission's rule.

Respectfully submitted,

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