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NRDC STATEMENT
BEFORE THE
SUBCOMMITTEE ON ENERGY AND THE ENVIRONMENT
OF THE
COMMITTEE ON INTERIOR AND INSULAR AFFAIRS
U.S. HOUSE OF REPRESENTATIVES
FEBRUARY 27, 1976

ARTHUR R. TAMPLIN
THOMAS B. COCHRAN

WITNESSES:

Dr. Arthur Tamplin is a bio-physicist formerly with the AEC's Lawrence Radiation Laboratory and co-author of Poisoned Power: The Case Against Nuclear Power Plants.

Dr. Thomas Cochran is a nuclear physicist and the author of The Liquid Metal Fast Breeder Reactor: An Environmental and Economic Critique.

Both are members of the staff of the Washington, D.C. office of the Natural Resources Defense Council.

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Arthur R. Tamplin
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We were requested to present an overview of safeguards as applied to the domestic nuclear industry. We shall make two points in this presentation:

1. Existing domestic safeguards are totally inadequate. We believe that the situation existing today is critical and have petitioned the NRC to take far-reaching action immediately.

2. The development of an adequate system of domestic safeguards for a large civilian plutonium industry will most likely prove to be an impossibility. Moreover, in trying to develop and sustain such a safeguards system we will be forced to accept major alterations in our open society and its institutions. We have grave doubt that a plutonium fueled economy is compatible with civil liberties as we know them today.

During 1973 and 1974 a number of reports were published that were highly critical of existing domestic safeguards. Prominent

among these were two GAO reports, the report of the Ford Energy Policy Project by Willrich and Taylor, and the AEC's Special Safeguards Study known as the Rosenbaum Report.^{1-4/}

Prodded by these reports the AEC modified its safeguard regulations in 1974. However, the Rosenbaum Report, published after the regulations were changed, concluded with the following:

"Even though safeguard regulations have just been revised and strengthened, we feel that [the] new regulations are inadequate and that immediate steps should be taken to greatly strengthen the protection of special nuclear materials. We hope that this paper will contribute in a positive way to the speedy implementation of such steps."

In an expression of its concern, the U.S. Congress, in the Energy Reorganization Act of 1974, mandated that the newly created Nuclear Regulatory Commission undertake a one year study of safeguards. This study, called the Security Agency Study, is nearing completion.

1/ U.S. General Accounting Office, Improvements Needed in the Program for the Protection of Special Nuclear Material (November 7, 1973)

2/ U.S. General Accounting Office, Protecting Special Nuclear Material in Transit: Improvements Made and Existing Problems (April 12, 1974)

3/ Willrich and Taylor, Nuclear Theft: Risks and Safeguards (1974)

4/ U.S. Atomic Energy Commission, Special Safeguards Study ("Rosenbaum Report") (April 29, 1974)

Late last year, after undergoing classification review, the reports of numerous NRC safeguards consultants were made public. These reports were critical of existing domestic safeguards and have served to heighten our concern over existing domestic safeguards. These reports and other information have convinced us that the possibility that plutonium or other similar materials now held by companies under NRC licenses might be stolen and fabricated into a nuclear bomb is real. Terrorist activity and other forms of anti-social violence are an almost daily occurrence. In an age of organized crime, of terrorists bombings, the risks of nuclear theft, blackmail and terrorism cannot be dismissed. From 1969 through 1975 there were 99 reported threats and acts of violence directed against licensed nuclear facilities in the U.S., ^{5/} 76 threats and acts of violence directed against unlicensed nuclear facilities, and 28 threats and acts of violence involving nuclear materials. ^{6/}

The present situation is dangerous and requires urgent action by the Commission. Numerous private facilities around the country

^{5/} Letter to James M. Cubie, Public Citizen, dated January 19, 1976, from John G. Davis, U.S. Nuclear Regulatory Commission.

^{6/} Letter to James M. Cubie, Public Citizen, dated January 26, from H.E. Lyon, U.S. Energy Research and Development Administration.

are licensed to, and do, possess and ship plutonium and other nuclear bomb materials. This material can be stolen and fabricated into a nuclear weapon with skills and equipment which can be bought. And the incentive to resort to nuclear violence appears to exist.

In late January of this year, we obtained two internal NRC documents. The material in these documents precipitated our decision to petition the NRC for emergency safeguards action. One document is a memorandum which reveals that at least some members of the NRC staff are deeply concerned that nuclear bomb materials now held by private companies under NRC licenses may not be adequately protected from theft. A second document, a preliminary version of the Executive Summary of the NRC's Security Agency Study, suggests additional reasons for concern that plutonium and highly enriched uranium in circulation today might be stolen. We would like to submit both of these documents for the record.

In the memorandum, dated January 19, 1976, Carl H. Builder, Director of the NRC's Division of Dafeguards, concedes that he is "not in a position to judge current safeguards [against nuclear theft] as adequate or inadequate." The Builder memorandum goes much further, however. It states:

"I am concerned that some or even many of our currently licensed facilities may not have safeguards which are adequate against the lowest levels of design threat we are considering in GESMO" (which are "for an internal [employee] threat, one person and, for an external threat, three persons").

In short, the head of the NRC's safeguards program is stating that he doubts that the safeguards employed at some or even many licensed facilities are adequate to prevent plutonium or similar materials from being stolen even when only small efforts are involved, such as a theft attempt by one employee or three armed intruders. This small threat of 1 to 3 individuals must be compared with the credible threat or more prudently the maximum credible threat. These threats are discussed in the other NRC document, the Draft Executive Summary of the Security Agency Study:

"Congressional concern for adequate safeguards was heightened as a result of a special safeguards study done for the Atomic Energy Commission in 1974. That study, by David Rosenbaum and others, . . . expressed concern about the adequacy of protection afforded SNM by the private industrial security systems of licensees. One aspect of concern was the level of threat to facilities and SNM. The authors postulated a maximum credible threat consisting of 15 highly trained men, three of whom might be "insiders", employed by the licensee target firm.

* * *

"To estimate the credible threat, the office of Nuclear Materials Safety and Safeguards researched 19 relevant studies and conducted 9 interviews with

individuals and groups of professional analysts from the FBI, the intelligence community, the Department of Defense and State and local law enforcement agencies.

"What emerged from this was a consensus estimate that an external threat group will probably number about 6-8 persons and very likely not exceed 12 persons.

. . . .

"[A] credible internal threat, for safeguards purposes, is estimated to consist of 2-3 persons in collusion."

Given threats of this size, it must be seriously questioned whether any of the facilities which are licensed to possess and transport plutonium and highly enriched uranium are adequately safeguarded. Present regulations require two guards armed with pistols. These two guards could be confronted by 6 to 15 commandoes armed with automatic weapons, grenades and bazookas. Moreover, one or both of the guards could be part of the attacking force.

Besides inadequate numbers of guards relative to the threat, the Executive Summary of the Security Agency Study and the various consultant reports point out other serious problems. For example, one of the consultant reports, that of the U.S. Marshals Service, begins with this statement: 7/

"'The image of security is all that's wanted.' This quotation from a study entitled Private Security and the Public Interest effectively illustrates one problem with guard forces employed by the private sector of the nuclear industry throughout the United States: too often the image has little substance behind it."

7/ U.S. Marshals Service, Security of Special Nuclear Materials (October, 1975).

We conclude that this is no idle statement, because the Marshals' report also states:

"[T]he writers of this report have only considered private guards in nuclear facilities. The generalizations are based upon research, extensive discussions with private security executives, and actual on-site observation of guards at selected nuclear facilities."

Another consultant, Mr. Charles Brennan, former Assistant Director of the FBI for Domestic Intelligence, recently stated: 8/

"The safeguards are a joke. The companies involved are interested mostly in saving money. They're doing only the bare minimum of security required by the Nuclear Regulatory Commission."

These conclusions by Brennan and the U.S. Marshals are borne out by the revelation this week 9/ that the workers handling bomb-grade uranium in a plant in Erwin, Tennessee, worked under an "honor system", and were not searched when leaving the working areas where the uranium was kept.

8/ U.S. News and World Report, February 16, 1976, p. 50.

9/ John F. Fialka, Washington Star, February 24, 1976, p. 1. Based on a report by Barbara Newman, National Public Radio.

Among other problems identified in the Executive Summary and consultant reports are the following:

1. recruiting, clearing, training and equipping sufficient guard personnel;
2. acquiring the necessary legal authority to permit guards to obtain the necessary weapons and to transport them across state lines;
3. acquiring the necessary legal authority to permit guards to use force or deadly force in their duties (such authority could be justified only if guards were well-qualified and trained);
4. establishing adequate communications and other protective systems during the phase of transportation of special nuclear materials; and
5. establishing reaction forces capable of responding quickly with adequate assistance during an attempted theft.

Obviously, these and other problems cannot be solved either quickly or easily. And this is why we have urged the NRC to consider such measures as making the security of the nuclear bomb material in presently licensed facilities the responsibility of the U.S. Marshals Service and halting all transportation of this material except that essential for national defense.

Subsequent to filing our petition, we requested and were granted on February 13 a meeting with the NRC safeguards staff. This meeting was open to the public. Shortly thereafter we were

requested by the NRC staff not to release the transcripts of that meeting because the staff felt that a discussion of evaluation criteria, used by the staff to determine whether safeguards were adequate, should not be made public. However, before we had an opportunity to make a response to the request, the Commission determined, independently, that NRC would release the transcripts. These transcripts reveal that the situation is actually worse than the Builder memorandum suggested. We would like to submit pages 48 - 64 of this transcript for the record.

The transcript, on pages 48-50, discloses, contrary to the consultants' opinions, that the NRC staff considers two guards armed with pistols and shotguns are adequate. They indicated that they felt these two guards could effectively overcome two aggressors and withstand up to ten aggressors long enough for assistance to arrive. Furthermore, they indicated that they felt the aggressors would only be armed with small weapons (e.g., pistols). We were asked if we had evidence that they would be armed otherwise. Dr. Cochran indicated that Patty Hearst was certainly much better armed.

On pages 61-64 of the transcript, it is demonstrated that the situation is even worse relative to the transportation phase..

This was also a conclusion of the various consultant reports. A Mr. Page of the NRC staff suggested with regard to the transportation sector that the easily jammed citizen band radio provided a very effective communication system for safeguards purposes in areas of the country where radio-telephone communication with the police is impossible.

We submit that anyone who reads the total transcript of that meeting will end up with a well-chilled spine. The meeting only confirmed and reinforced our conclusion that the existing safeguards system is totally inadequate and the situation is critical and immediate remedial actions are necessary.

However, we hasten to add that while requesting these emergency actions to rectify the critical extant situation, we do not mean to imply that an adequate and socially acceptable system of safeguards is possible for the proposed plutonium economy of the future. We doubt that such a safeguards system is possible and believe that the spread of nuclear technology throughout the world will lead to the steady spread of nuclear arms first to nation-states but then to subnational groups such as separatist factions, terrorist organizations, blackmailers and even fanatical individuals. This process is already underway. One only needs to cite India's recent joining of the club of nuclear nations.

Israel is known to possess some 50 kg of plutonium extracted from a nuclear reactor. South Korea has announced that it would build atomic bombs if necessary, and we are uneasy about the nuclear technology being acquired by Brazil. International safeguards are nothing more than a paper deterrent. No sanctions have been imposed on India. We have supplied enriched uranium to France so that France could use its small indigenous enrichment capability for the construction of nuclear weapons.

But, as you know, the plans are to extract plutonium from the spent reactor fuel and use the plutonium as fuel. The plutonium presently in the civilian sector of society is for research and development of the plutonium economy of the future. If the proposed plans materialize, there will be thousands of tons of plutonium in the private sectors of society and hundreds of tons in the transportation networks of the world. When this happens plutonium will be stolen or diverted for direct use in atomic bombs or for sale in a black market. We shall then move into an era where it will be next to impossible to prevent terrorists and other subnational groups from becoming armed with atomic bombs. It is important to recognize that nuclear reactors and fuel cycle facilities can also represent attractive targets for sabotage. The results of such terrorism or sabotage could be disastrous --

an atomic bomb explosion in a major metropolitan center or a major accident in a nuclear reactor.

At a very minimum to provide adequate safeguards the facilities and the transportation sector that handle strategic quantities of special nuclear materials should be secure against the maximum credible threat. To provide the necessary level of protection these facilities would have to be turned into armed camps and transport would be by armed convoy. We do not believe the trivial economic advantage of plutonium recycle, if an advantage exists at all, is worth turning our utilities and their support facilities into a series of armed camps.

But more importantly, the proposed response by the industry and the NRC to the threat of nuclear terrorism goes far beyond simply providing more physical security. The nature of the proposed safeguards is a drastic increase in police powers and a concomitant decrease in civil liberties and personal privacy. We have brought a paper with us that discusses the expanded police powers and their civil liberties implications. We would like to submit it for the record. It is:

Russel W. Ayres, "Policing Plutonium: The Civil Liberties Fallout," Harvard Civil Liberties Law Review, Vol. 10, 1975, pp. 369-443.

We would like to highlight just a few of the civil liberty, privacy and right-to-work issues that are covered in this paper. First, the safeguards program contemplates security clearances for the employees of the nuclear industry. At best, such clearances infringe upon the privacy of the individual being cleared and his family and friends; at worse they are instruments of suppression and reprisal. In addition to these security clearances, it is also proposed that the employees be given yearly psychological profile tests. Such tests are as insidious as security clearances and a recent report of the Congressional Committee on Government Operations recommended: 10/

"It is the recommendation of the committee that the use of polygraphs and similar devices be discontinued by all Government agencies for all purposes.

Even if the committee adopted the position of some agencies that the polygraph is useful solely as a secondary investigative technique and that the results of a polygraph examination alone are never considered conclusive, the committee finds that the inherent chilling affect upon individuals subjected to such examinations clearly outweighs any purported benefit to the investigative function of the agency."

The safeguards plans also call for intelligence gathering to determine potential terrorists and terrorist groups and it

10/ Committee on Government Operations, "The Use of Polygraphs and Similar Devices by Federal Agencies," House Report No. 94-795, January 28, 1976, p. 46.

was reported that the Texas State Police were collecting dossiers on anti-nuclear individuals and groups in that state, supposedly for this reason. Such intimidation has a stifling effect on dissent and debate which are essential in a free society. How much governmental investigation into the private lives of its citizens can a free society tolerate? The actions of the Texas State Police and the recent congressional investigations concerning Watergate and the CIA, FBI, and IRS demonstrate that, even at their present level, these investigative powers are abused.

Because of the threat posed by stolen plutonium, recovery operations can be expected to be severe and involve no-knock search, search without warrant, area search, and detention and interrogation without warrant. In the presence of a nuclear blackmail threat, martial law seems likely.

All of this must inevitably be put under the direction and control of a central agency which would maintain close liaison with State and local law enforcement agencies and those of foreign nations. The FBI has just suspended its plans for a regional computer center whose purpose was to expedite the exchange of information among state and local law enforcement agencies. The reason given was that this would be close to the creation of a federal police force. This central agency would be a federal police force and one with expanded powers.

While today we can contemplate putting checks and restraints on federal investigative agencies, banning polygraphs and holding firm against a federal police force, it is important to realize that in the presence of nuclear blackmail and terrorism these restraints would have to be removed and these breaches of our civil liberties would become essential.

In summary, our reservations regarding the effectiveness of future safeguards stem from the unprecedented and ultimately unworkable demands that will be placed on any future safeguards system and the people working within it. This system would have to operate on a vast, worldwide basis, yet there is no reason to believe that international cooperation on the scale required is possible. It would have to protect against both theft and sabotage both at fixed sites and in interstate and international transportation. It would have to be essentially infallible, maintaining what Alvin Weinberg, former director of the Oak Ridge Laboratory, has called "unaccustomed vigilance" and "meticulous attention to detail." And it would have to do so for long periods and in the face of -- not a machine -- but a determined, intelligent and well-financed opposition. Yet we know that our human institutions and those who act within them are far from infallible.

Moreover, it should be noted here that those who claim that safeguards can be devised which will keep the risk acceptably low never tell us how large a risk they think is acceptable. They concede that the risk cannot be reduced to zero but do not tell us to what it can be reduced. We urge you to ask these people, the NRC among them, how many successful nuclear thefts, how many credible nuclear blackmail threats, how large a plutonium black market, and how many illicit nuclear explosions per decade are acceptable.