129889

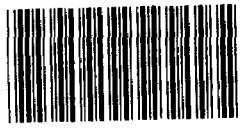
UNITED STATES GENERAL ACCOUNTING OFFICE

WASHINGTON, D.C. 20548

FOR RELEASE ON DELIVERY

EXPECTED AT 9:30 A.M.

MAY 15, 1986



STATEMENT OF

KEITH O. FULTZ

ASSOCIATE DIRECTOR

RESOURCES, COMMUNITY, AND ECONOMIC

DEVELOPMENT DIVISION

BEFORE THE

SUBCOMMITTEE ON ENERGY CONSERVATION AND POWER

HOUSE COMMITTEE ON ENERGY AND COMMERCE

Mr. Chairman and Members of the Subcommittee:

We appreciate the opportunity to discuss our report on the Department of Energy's (DOE's) control over nuclear technology exports that you are releasing today.[1] At the request of this Subcommittee and Senator Proxmire, we reviewed DOE's administration of the nuclear export controls required by the Atomic Energy Act and the Nuclear Non-Proliferation Act.

Specifically, we reviewed DOE's regulatory procedures in three areas

(1) granting specific authorizations for assistance involving countries that present proliferation risks,

---

[1]Nuclear Nonproliferation: DOE Has Insufficient Control Over Nuclear Technology Exports, GAO/RCED-86-144, dated May 1, 1986.

035431

(2) identifying assistance involving sensitive nuclear technology, and

(3) granting a general authorization permitting the export of assistance involving publicly available information without specific DOE review and approval.

Before I discuss these areas further, let me provide some perspective on the subject of nuclear export controls.

CONTROLS OVER NUCLEAR EXPORTS

The production of nuclear weapons requires "special nuclear material"--enriched uranium or plutonium--to build a nuclear explosive device. Controlling this capability, however, is complicated by the widespread use of commercial nuclear power, which employs facilities and engineering concepts similar to those required in a weapons program. To ensure that commercial U.S. nuclear assistance is not used to develop nuclear weapons, controls over nuclear exports were established by the Atomic Energy Act and the Nuclear Non-Proliferation Act. These acts place primary responsibility for controlling nuclear exports with the Nuclear Regulatory Commission (NRC) and DOE. NRC regulates the export of reactors and other nuclear facilities, major equipment for such facilities, and nuclear materials, such as reactor fuel. It cannot license these exports unless recipient countries meet the nonproliferation standards established in the legislation.

DOE regulates those export activities categorized as nuclear technology including such things as engineering and design services, nuclear equipment not controlled by NRC, and technology

provided to foreign nuclear programs through overseas licensees of U.S. firms. The Secretary of Energy can authorize such an export only upon determining that it would not be detrimental to U.S. interests and with the specific approval of the State Department. To ease the administrative burden of reviewing authorization requests, DOE permits, under a general authorization, the export of information and technology that is not significant, from a proliferation standpoint, to the production of special nuclear material. Otherwise, a specific authorization by the Secretary is required.

In addition, the Non-Proliferation Act created a special category of nuclear technology called sensitive nuclear technology (SNT). This category includes information that is important to the design, construction, operation, or maintenance of enrichment, reprocessing, or heavy water production facilities. These sensitive civilian nuclear facilities provide the most direct link to nuclear weapons proliferation. Unlike other nuclear technology, SNT may be exported only if the recipient country agrees to conditions regarding its use.

I would now like to briefly summarize our findings on the three areas reviewed. The first concerns:

SPECIFIC AUTHORIZATIONS

Equipment and materials licensed for export by NRC must meet strict standards established by the Non-Proliferation Act. Two such standards require that the receiving country accept international safeguards on its nuclear facilities and enter into a cooperative agreement with the United States before NRC can license an export. Although that act did not establish standards

for exports controlled by DOE, it directed the agency to quickly establish any necessary standards.

Technology exports subject to DOE approval, however, can have as much significance for proliferation as NRC-licensed material and equipment exports because such efforts can provide countries with the knowledge and expertise essential to designing, constructing, and operating nuclear facilities.

Rather than adopting nonproliferation standards for making specific authorization determinations, DOE weighs six factors in making export decisions. Four factors are similar to NRC standards. The other two address the availability of technology from other sources and U.S. political, economic, and security interests. DOE believes that the flexibility allowed by weighing these six factors enables it to help the United States influence foreign nuclear programs and may lead countries to accept nonproliferation controls.

From 1980 through 1985, DOE authorized 47 exports largely on the basis of political and economic considerations, rather than nonproliferation factors. The weight given by DOE to economic and political factors raises concerns as to whether DOE is providing the level of nonproliferation assurances desired by the Congress when it passed the Non-Proliferation Act. In some cases DOE's weighting of economic and political considerations has led it to authorize assistance to countries that did not meet DOE's own nonproliferation-related factors. DOE has also authorized exports that would not meet the statutorily-mandated standards for NRC-licensed equipment and material exports.

Finally, the lack of definitive criteria has apparently led to arbitrary authorization decisions. For example, in 1980 DOE denied an export to Argentina, yet it allowed the same export 1 year later without any change in the country's nonproliferation assurances.

We believe that now, after 8 years of experience with this act, DOE should be able to develop more objective criteria that will allow flexibility while better meeting established nonproliferation goals.

The next area I will discuss is:

SENSITIVE NUCLEAR TECHNOLOGY

As I mentioned earlier, Mr. Chairman, the Non-Proliferation Act established additional export requirements for SNT assistance. The Secretary of Energy must specifically authorize all exports of SNT, regardless of whether the export is being proposed by a private firm or by a DOE office under its technical information exchange program with a foreign country.

Until 1983, DOE did not have procedures for determining when an export involved the transfer of SNT. On 11 occasions from 1980 to 1983, the Secretary approved the export of equipment and information related to sensitive facilities. These exports included such things as lasers for uranium enrichment research and DOE assistance to foreign reprocessing efforts. For eight of these cases, however, DOE did not review the proposed export to determine if it contained SNT.

Since 1983, there have been 12 proposed exports of nuclear technology or equipment to sensitive nuclear facilities. DOE made

SNT determinations on each of these proposals and did not allow the export in four cases. In the other eight cases, DOE determined that SNT was not involved. DOE made these determinations, however, on the basis of factors that are not included in the Non-Proliferation Act. For example, in 1983 it determined that information on reprocessing to be transferred to the United Kingdom was not SNT because that country already possessed reprocessing capabilities. The act, however, limits the determination of SNT to its importance to sensitive facilities, not to recipient countries.

While the SNT decisionmaking process is regulated by the Assistant Secretary for Defense Programs, DOE's SNT determinations appear to be heavily influenced by officials within the Office of the Assistant Secretary for Nuclear Energy. We found three instances--two of which involved technical exchange activities--where DOE's SNT determinations appeared to be greatly influenced by this office. In one case, for example, DOE regulatory staff had tentatively concluded that a proposed technical exchange activity with Japan contained SNT because it applied to reprocessing and involved unpublished information. Officials from the nuclear energy office disagreed, contending that the information to be exchanged involved safety and economics, and that it would eventually be published and, therefore, become publicly available. A DOE review committee ultimately decided that no SNT was involved. However, its reasons for this determination generally paralleled the nuclear energy staff's position, and it did not address the regulatory staff's concerns.

The third area we examined concerned:

GENERAL AUTHORIZATIONS

DOE's regulations contain a general authorization to export information that is publicly available. Because these exports do not require advance review, DOE does not know how many have occurred. However, we identified seven reports that were exported under the general authorization provision that provided information related to sensitive nuclear facilities. Although these reports were based on publicly available information, they contained new analyses that were not publicly available. We concluded that DOE should have reviewed them and then either approved or disapproved their export.

NEED TO STRENGTHEN GENERAL ADMINISTRATION OF EXPORT REGULATIONS

In addition to the problems I have just mentioned, Mr. Chairman, we found a number of other problems that limit effective administration of DOE's export control regulations. These problems related to the lack of (1) clarity on what types of export activities require specific authorization, (2) requirements that persons report when authorized activities have been completed, and (3) public disclosure of information on authorized exports.

RECOMMENDATIONS

To correct the problems identified in our review, we recommended that the Secretary of Energy

(1) establish objective nonproliferation standards on which to base specific authorization decisions and to describe how

political and economic factors will be weighed as part of the authorization process,

(2) develop criteria consistent with the Non-Proliferation Act for identifying sensitive nuclear technology,

(3) limit general authorization of information exports to those that are readily available to the public, and

(4) make several improvements related to the administrative problems we identified.

We understand DOE is currently revising its export regulations. Although we have not reviewed the proposed revisions, we understand a number of actions we recommended are being addressed.

In closing, I would like to emphasize our recommendation that DOE establish objective nonproliferation standards. We made a similar recommendation in 1980, but DOE did not act on it. If DOE rejects our current recommendation, we believe Congress should consider whether the difference between DOE's and NRC's approaches to nonproliferation decisions--especially the weight given to economic and political considerations by DOE--adequately achieves the objectives of the Non-Proliferation Act.

- - - -

Mr. Chairman, this concludes my summary of our report. We will be pleased to respond to any questions you may have.