



~~CONFIDENTIAL~~

~~CONFIDENTIAL~~

UNITED STATES  
ENERGY RESEARCH AND DEVELOPMENT ADMINISTRATION  
WASHINGTON, D.C. 20545

June 10, 1975



David D. Elliott, NSC, Wash., D.C.  
L. V. Gossick, NRC, Wash., D.C. ←  
ATTN: R. G. Page  
Dixy Lee Ray, St. Dept., Wash., D.C.  
ATTN: David Jenkins  
Donald R. Cotter, Dept. of Defense, Wash., D.C.  
ATTN: Lt. Col. J. R. C. Miller  
Charles N. VanDoren, ACDA, Wash., D.C.

FINAL DRAFT ANNUAL REPORT ON DOMESTIC NUCLEAR SAFEGUARDS

Reference: Memorandum Robert E. Tharp/Multiple Addressees, dated  
5/20/75, Same Subject

Enclosed is the final draft of an Annual Report to the National Security Council on the Status of Domestic Safeguards. Comments on the first draft (see reference) received at a June 4, 1975, meeting and afterwards have been incorporated.

We plan a final meeting on the attached report to identify final editorial changes and obtain concurrences. You or your representative are invited to attend, at 9:00 a.m., Friday, June 13, 1975, in Conference Room A2-1207, Century XXI, Germantown. Meanwhile, please feel free to contact me (973-5106), or William C. Bartels (973-5216) about the report.

The report is to be finalized and forwarded for signature on or about June 20, 1975.

Document Transmitted  
Hereby

~~CONFIDENTIAL~~  
NATIONAL SECURITY INFORMATION

*H. E. Lyon*

H. E. Lyon, Director  
Division of Safeguards and Security

Enclosure:

Dft. ltr. Seamans/Kissinger,  
dtd. 6/9/75, w/enclosure:  
Dft. Annual Report on Domestic  
Safeguards, dtd. 6/9/75 (C/NSI).

cc:

C. M. Kelley, FBI, Wash., D.C., w/encl.  
ATTN: W. Raymond Wannall, Asst. Dir.,  
Intelligence



9611200196 750610  
PDR MISC  
9611200196 PDR

When separated from enclosures, handle this document  
as

~~CONFIDENTIAL~~  
UNCLASSIFIED

(Insert proper classification)

THIS DOCUMENT HAS BEEN DECLASSIFIED UNDER  
THE PROVISIONS OF EO 12958, DATED 4/17/76  
By Authority of *EQ Ten Eyck 0776*  
(Declassification Authority/Number)

Date of Declassification *8/15/96*

~~CONFIDENTIAL~~

~~CONFIDENTIAL~~

6321

REL

Final Draft 6/9/75

~~CONFIDENTIAL~~  
~~CONFIDENTIAL~~  
~~CONFIDENTIAL~~

Honorable Henry A. Kissinger  
Assistant to the President  
for National Security Affairs

Dear Dr. Kissinger:

Enclosed is an annual report on the Status of Domestic Safeguards (Exhibit 1), forwarded in response to the request in NSDM-254, Domestic Safeguards, April 27, 1974. Effectiveness of the safeguards systems, program developments, and related recommendations are reported. This report includes the licensed and license-exempt sectors and has been coordinated with the Federal Bureau of Investigation, the Nuclear Regulatory Commission, and other agencies of concern.

In the 1960's domestic radical elements were considered a principal threat. In the 1970's a world-wide terrorist threat has developed.

In 1972 when the White House asked whether the AEC could protect SNM and nuclear facilities from such terrorism, the answer was qualified. The system was adequate for the nature of the program in the environment of the then current threats but seriously in need of upgrading for the foreseeable future program in the new threat environment. A review in 1973 and again in 1974 confirmed this need.

When separated from enclosures, handle this document  
as unclassified  
(Insert proper classification)

Document Transmitted  
Herewith  
NATIONAL SECURITY INFORMATION

~~CONFIDENTIAL~~ ~~CONFIDENTIAL~~

Some improvements have been made in the level of protection for nuclear materials in transit and at fixed sites, as well as in capability to respond to certain adversary actions. Work has begun on a well protected transportation system for ERDA nuclear materials and it will be fully operational in October 1976, and plans have been proposed for removing other deficiencies, identified in Exhibit 2, at ERDA facilities. Comprehensive amendments have strengthened regulations for protective measures required at licensed nuclear plants and the measures now required by these amendments were implemented at the required licensee sites during 1974; additional regulations have been published for comment but await promulgation. Improvements have been made in communication and training links with the Federal Bureau of Investigation and in ERDA capability to assist in responding to safeguards incidents involving unauthorized use or threats to use nuclear materials. A deliberate cycle of overall improvement is in progress and additional refinement is anticipated in the coming year.

The three recommendations of the report are (1) to provide resources to remedy identified deficiencies in safeguards at ERDA facilities (2) to undertake the demonstration of plutonium recycle for safeguards and other reasons, and (3) to endorse the policy of direct ERDA research and development support to enable licensees to satisfy safeguards regulations.

We recognize the need to assess and balance the safeguards system

beyond the obvious measures currently identified and have under development a general systems approach which includes development of implementation procedures, equipment and facilities. Activities are being initiated and are expected to lead to routine reporting of future evaluations of the safeguards system in terms related to risk to the public.

Sincerely,

Robert C. Seamans, Jr.  
Administrator

Enclosures:

Exhibit 1 - Status of Domestic Safeguards

Exhibit 2 - Letter to OMB from ERDA with Exhibits, April 4, 1975

cc: w/encls.

W. A. Anders, Chairman, NRC

D. R. Cotter, Assistant to the Secretary of Defense (Atomic Energy)

C. M. Kelley, Dir., FBI

Attn: W. Raymond Wannali, Asst. Dir., Intelligence Div.

Concurrences:

Bartels/Schleiter McDowell Brenner Tharp Lyon Giller Starbird  
Romatoski Seamans Anders FBI

Controls SS 2848 & Admin. 05017535

Final Draft 6/9/75

Document Classified By

Exhibit 1

W.C. Daniels, Act. Asst. Dir.  
P&S, DSS/ERDA

## STATUS OF DOMESTIC SAFEGUARDS

### CONTENTS

#### INTRODUCTION

Reference  
Perspective  
Parity in Application  
Objective of Safeguards  
Acceptable Level of Protection

THIS DOCUMENT HAS BEEN DECLASSIFIED UNDER  
THE PROVISIONS OF EO 12958, DATED 4/17/95  
By Authority of EQ Ten Eyck 0776  
(Declassification Authority/Number)  
Date of Declassification 8/15/96

#### PROGRAM DEVELOPMENTS

Overview  
Program Structure  
Systematic Approach  
Improvements in Safeguards

Relating to Frequency of Attempt  
Relating to Preparation Activities  
Fixed Site - Relating to Unauthorized Access  
Fixed Site - Relating to Diversion of Material  
Fixed Site - Relating to Unauthorized Removal of Material  
In Transit - Relating to Access to Material  
In Transit - Relating to Removal of Material  
Relating to Other Means of Material Acquisition  
Relating to Utilization Activities  
Consequence Reduction

#### RECOMMENDATIONS

#### REFERENCES

#### ATTACHMENT 1

ATTACHMENT 2 (see p 6)

NATIONAL SECURITY  
INFORMATION

Unauthorized Disclosure Subject to  
Criminal Sanctions

THIS SHOULD BE NRC  
MEMO OF 4-5-75  
TO ARSENAL

SUBJECT TO GENERAL DECLASSIFICATION SCHEDULE OF  
EXECUTIVE ORDER 12958, DATED 4/17/95  
AT TWO YEAR INTERVALS  
DECLASSIFIED ON DEC. 31  
1977  
(next year)

## INTRODUCTION

### Reference

In response to the conclusions of the Domestic Safeguards Section of NSSM-120<sup>1</sup>, NSDM-254<sup>2</sup> requests an annual report on the effectiveness of the safeguards system, program developments, and related recommendations.

### Perspective

Safeguards requirements applied to nuclear materials differ in detail and in implementing mechanisms depending on the form, possession, and ownership of the material. Responsibilities for promulgation and enforcement of nuclear materials safeguards requirements and regulations have been delegated (Atomic Energy Act of 1954, as amended) to the Energy Research and Development Administration (ERDA), the Nuclear Regulatory Commission (NRC), and the Department of Defense (DOD). Implementation of safeguards and security requirements is the responsibility of the physical possessor of the nuclear material and the delegated federal agency.

ERDA is responsible for promulgation and enforcement of requirements and funding of protective measures relating to material in the possession of ERDA contractors operating government-owned or government-leased plants, except for certain demonstration power reactors and high-level waste storage facilities. Protection of the material is generally graded according to the potential



~~CONFIDENTIAL~~

hazard which could result from willful misuse of that particular type material. All classified materials are additionally protected from the viewpoint of their information content.

NRC is responsible for promulgation and enforcement of regulations for licensed facilities and materials. These facilities are:

- o privately owned facilities containing either government-owned or privately-owned material;
- o certain DOD-owned facilities and material (other than that covered by paragraph 91.b. of the Atomic Energy Act of 1954, as amended);
- o certain ERDA facilities (as noted above);
- o certain other government-owned facilities containing government-owned or privately-owned material; and
- o state-owned facilities.

DOD is responsible for promulgation and enforcement of requirements and funding of protective measures for all material covered under paragraph 91.b. of the Atomic Energy Act of 1954, as amended in its possession. This material is principally in the form of weapons, and military reactor fuels.

#### Parity in Application

ERDA and NRC are required to consult and coordinate (Energy Reorganization

204.(b)(2).(B)

~~CONFIDENTIAL~~

~~CONFIDENTIAL~~

The intent is §

Act of 1974) on aspects of nuclear materials safeguards, to assure parity in the results of protection afforded similar nuclear material under their respective jurisdictions.

The basis for this parity is that, lacking parity, an adversary may preferentially choose the weaker system to assault; consequently, extra resources used on the stronger system may not be effectively allocated.

Objective of Safeguards

The general objective of nuclear materials safeguards is to prevent successful malevolent acts involving nuclear materials and facilities. The degree to which the general safeguards objective is met is measured in terms of protection of the public against risk of death, injury and property damage potentially arising from these acts. This objective can be met through an in-depth approach consisting of reducing the frequency of attempts to produce these societal consequences, reducing the likelihood of adversary success when an attempt is made, and reducing the consequences of a successful act.

Acceptable Level of Protection

The question of acceptable risk, or level of protection, should be answered in terms of the preservation of the basic freedoms of our society and in terms of allocation of national resources. The preservation of individual freedoms is considered in terms of acceptability of specific mechanisms proposed for

~~CONFIDENTIAL~~



the safeguards system, if there are possible impacts due to such mechanisms with respect to individual freedoms and overall societal benefits. Examples of this type of question are raised by the legal, political, and social implications of the Federal Guard Force concept, more heavily armed guards, or greater proliferation of guards, personnel clearance versus right-to-work, and possibly "no knock" entry search and recovery. The NRC is currently conducting a security agency study as mandated by the Energy Reorganization Act which includes consideration of this type of question.

National resources utilized for safeguards can be divided into a number of categories according to the source and application of the resources, namely: federal resources for implementation, for R&D, and for overall program administration; and private resources for implementation by the nuclear industry. No matter the origin of resources, expenditure of these resources on nuclear safeguards precludes their use for some other benefit to society. Thus, the reduction of risk arising from malevolent acts involving nuclear materials should be balanced, in the largest context, in terms of the benefits provided against all other benefits which could potentially be obtained from these resources.

## PROGRAM DEVELOPMENTS

### Overview

The safeguards systems must continue to evolve with the changing

~~CONFIDENTIAL~~

technological, social, and political environment. There are changes in nuclear activities, for example, that introduce changes in safeguards. Growth is anticipated in uranium enrichment; fuel fabrication and reprocessing including plutonium recycle; high temperature gas-cooled and breeder reactors; radioactive storage areas and transportation of nuclear materials. Major efforts are underway to develop and implement improved systems for the entire nuclear cycle.

In most instances the current domestic safeguards requirements, regulations and practices are deemed effective for present conditions; in others the deficiencies have been identified and are under management review. However, assessments of systems effectiveness are continually being made and measures to further strengthen safeguards are under continuing development in order to ensure the future effectiveness.

An iterative procedure for evaluation and improvement of safeguards as described under Program Structure is being refined and used (ERDA) in approaching the safeguards problem and its solution. In addition, results of preliminary evaluations of the current system have already led to some implementation actions. A major upgrading has begun on safeguards operations including material control and accounting systems and physical protection. Protection for material in transit, and capabilities for threat evaluation and response to attack are each being upgraded. Regulations governing licensed facilities have been strengthened and improvements have been made in ERDA operations within available resources. Additional improvements

~~CONFIDENTIAL~~

~~CONFIDENTIAL~~

which have been identified as needed for the ERDA system are described in Exhibit 2 of Attachment 1. <sup>information on</sup> Additional detail of significant events in the NRC safeguards program for special nuclear material and related facilities for the year 1974 is contained in Attachment 2.

---

### Program Structure

Figure 1 is a schematic diagram of the six elements of the safeguards program illustrating the four major areas of safeguards operations (systems evaluation and policy development (III); safeguards approval and inspection (IV); facility and transport safeguards implementation (V); and interagency activities (VI)). Figure 1 also shows the interaction of the safeguards research and development program (II) with other safeguards activities. The broad blue lines symbolize the ongoing operational activities and the narrow red lines symbolize information transmission for safeguards system modifications.

The environment of safeguards is continually changing. Changes occur in perceived threats, political climate, available resources, technical capabilities of potential adversaries, and in the distribution of target materials in government and private industry. A changing environment makes it imperative that there be a periodic review of the current and potential status of the safeguards system accompanied by identification of any necessary modifications. The modifications may range from implementation of new measurement procedures to redirection of

~~CONFIDENTIAL~~

6



resources to reflect perceived changes in the likelihood of attempt. The Figure illustrates this iterative nature of safeguards system improvement in the four major areas of safeguards operations.

### Systematic Approach

The objective of safeguards was stated in terms of maintaining an acceptable level of risk to the public. A systematic approach is being implemented to assure that this objective will be met. This includes not only knowing that enough has been done for certain specific problems, such as facility perimeter systems or transportation safeguards, but knowing that resources have been allocated to provide a system balanced in terms of overall risk to the public. Risk to the public, or societal risk, is a function of the frequency with which willful acts against the public involving nuclear materials will be attempted; the likelihood that an adversary will succeed in completing his act in the presence of the safeguards system; and the consequences to the public if his act is successful.

This approach commences with an examination of all different possible events an adversary could perpetrate involving nuclear material or nuclear facilities which could produce consequences and is directed toward identification of safeguards mechanisms which provide adequate protection against these events.

The sequence of adversary actions which must be completed to perpetrate

Subsystem Reference	Safeguards Sub-objective	Adversary Action	Adversary Mode
1	Reduce Frequency of Attempt		
2	Reduce Probability of Sequence Completion	Preparation Activities	
3a	" "	Unauthorized Access - Fixed Site	Force Stealth Deceit
3b	" "	" "	
3c	" "	" "	
4	" "	Diversion	
5a	" "	Unauthorized Removal - Fixed Site	Force Stealth Deceit
5b	" "	" "	
5c	" "	" "	
6a	" "	Unauthorized Access - In Transit	Force Stealth Deceit
6b	" "	" "	
6c	" "	" "	
7	" "	Unauthorized Removal - In Transit	
8	" "	Smuggling of Material	
9	" "	Black Market Acquisition	
10	" "	Manipulation, Damage or Destruction of Equipment or Material - Fixed Site	
11	" "	External Penetration - Fixed Site	
12	" "	External Penetration - In Transit	
13	" "	Post Possession Material Preparation	
14	" "	Delivery to Event Location	
15	Reduce Consequences		

Table 1. Subsystems of Safeguards in Terms of Sub-objectives of the Safeguards Program and the Adversary Actions to be Countered.



an event in turn implies a structure of subsystems within the safeguards system. The subsystems of safeguards are the collections of all activities directed toward: the interruption of the individual adversary actions; or reducing the frequency of attempt; or reducing the resulting consequences. A set of subsystems is given in Table 1. The improvements and status of the safeguards system are organized below according to the program structure discussed earlier and the safeguards subsystems listed in Table 1.

### Improvements in Safeguards

#### 1. Relating to Frequency of Attempt

Public statements have been made which communicate the existence and strengths of safeguards efforts thereby deterring potential adversary actions. Recently amended Reward Statutes provide additional deterrence.

#### 2. Relating to Preparation Activities

The FBI, for domestic origin threats, and the CIA, for foreign threats, are the principal agencies involved in detection of an adversary preparation activity. In the past year improved communication links have been established between ERDA and FBI to permit more rapid emergency exchange of messages, drawings, and other written information. Training courses on nuclear matters have been presented to the FBI by ERDA to familiarize FBI agents with nuclear terminology, technology, instrumentation, and other information which will assist them in identification of adversary preparation activities. Continuing communication is

~~CONFIDENTIAL~~

being maintained with the CIA to insure that Agency's awareness of ERDA's intelligence needs in the area of nuclear threats. Liaison between the NRC and both the FBI and the CIA is intended to be implemented in the future. Particular attention is to be given to the topic of response to communicated threats.

3. Fixed Site - Relating to Unauthorized Access

a. and b. By Force or By Stealth

ERDA:

The facilities are twenty years old or older. Their physical protection is designed for threats which were conceivable during a period of domestic tranquility or possibly during the domestic radicalism associated with an unpopular limited war. More recently, a world-wide threat of violence has developed with capabilities for sudden attacks in the interests of subnational groups in other countries, these attacks are better planned and more resourceful than attacks anticipated when the ERDA physical protection system was brought to its present level of effectiveness. ERDA guard forces have been reduced and weakened by a series of prior economy and policy measures; fencing and lighting have deteriorated with age. Security technology which has made rapid strides in recent years, has not received any broad ERDA application in recent years.

~~CONFIDENTIAL~~

~~CONFIDENTIAL~~

Extensive analysis of physical protection safeguards deficiencies was performed relative to proposed stronger physical protection requirements and those deficiencies have been explicitly identified and documented in a task force report for seventeen major ERDA facilities.<sup>3</sup> All corrections which can be made with existing resources have been or are being made. Funding in the FY 1976 Congressional Budget completes this upgrading for all Naval Reactors and some Reactor Research and Development facilities. Funds to correct the remaining deficiencies for prevention of access by force or stealth were requested in the Safeguards FY 1976 Amendment. Currently the physical protection deficiencies remain and the proposed stronger requirements have not been issued. In this state of affairs, the probability of loss of nuclear weapons and nuclear explosive devices has been reduced by promulgation of instructions to shoot to kill if this level of force is necessary to prevent such loss to an adversary.

NRC:

In November 1973 the Atomic Energy Commission published comprehensive amendments to its regulations to strengthen the protection of nuclear

~~CONFIDENTIAL~~

[REDACTED]

plants against industrial sabotage and to strengthen the protection of SNM against theft. During 1974 the protection measures called for by these requirements were implemented at the 23 licensee sites which are authorized to possess more than two kilograms of Pu or U-233 or five kilograms of U-235 contained in uranium enriched to 20% or more in the U-235 isotope. In addition, the protection plans for 52 nuclear reactor units were reviewed and approved.

In November 1974, the Commission published new proposed amendments for physical security at nuclear power reactors.

c. By Deceit

ERDA:

The control of unauthorized access by deceit at ERDA facilities is achieved by a clearance procedure, by security guard verification of badge access for cleared employees and by random package search authorization.

NRC:

The November 1973 regulation amendment provided for badge access control to licensee sites. All packages and individuals are searched on entering and exiting a protected area and all vehicles are searched on exit.

[REDACTED]

~~CONFIDENTIAL~~

4. Fixed Site - Relating to Diversion of Material

ERDA:

Diversion of material is prevented in large part by limitation of access to material by potential adversaries through a clearance procedure and further through limitation of access to sensitive areas such as storage vaults. In addition, materials control and accountancy techniques are also used. Recent studies are available which provide information concerning deficiencies in this latter area.<sup>3</sup> Funds for correction of some deficiencies were requested in the FY 1975 Supplemental and the FY 1976 Amendment but were not allocated.

NRC:

Commission requirements for the control and accounting of special nuclear material at licensed plants were revised in November 1973 to provide greater sensitivity and timeliness for detecting the theft or diversion of material. Quality specifications were prescribed for performing plant material balances on the basis of measurements. These upgraded requirements were implemented during 1974 at the 30 facilities which were authorized to possess more than one effective kilogram of SNM in unsealed form. In October 1974 the Commission issued amendments to further strengthen its regulations for control and accounting of SNM.

~~CONFIDENTIAL~~

CONFIDENTIAL

5. Fixed Site - Relating to Unauthorized Removal of Material

a. By Force

The protection measures which were discussed in Section 3 above and which are intended to deny forced access also protect against forced removal. Such measures include intrusion alarms, guards and barriers.

ERDA:

Each FBI office has prepared contingency plans, in coordination with the local ERDA facility, to be used in responding to any emergency involving a nuclear threat. The plans provide for a coordinated response by Federal, State, and local agencies in the particular area. In some cases these contingency plans have been field tested.

NRC:

NRC regulations which became effective in 1974 require that licensees establish liaison with local law enforcement authorities. In developing security plans, licensees must take into account the probable size and response time of the local law enforcement assistance. The NRC is commencing a concerted effort to develop stronger liaison with the FBI and other appropriate agencies in an attempt to develop pertinent contingency plans.

b. By Stealth

ERDA:

The vulnerability in ERDA facilities due to the lack of SNM door-

CONFIDENTIAL



way monitors has been identified and documented.

NRC:

Regulations and accompanying guides have been issued on detection of SNM removal by stealth. Individuals within a material access area must be observed to assure that SNM is not being diverted. All individuals, packages, or vehicles are to be searched for concealed SNM before exiting from a material access area.

c. By Deceit

ERDA:

Employee clearances and access controls reduce the risk of deceit. Materials custodians monitor plant operations. Duplicate record systems, local and central, and shipper-receiver measurements also reduce the risk of deceit. ERDA has begun research and plans to demonstrate major improvements in the timeliness and completeness of accountability measures for nuclear materials while they are in materials processing operations.

NRC:

Legal authority has been obtained for requiring that access to SNM be limited to employees with clearances (PL 93-377). Methods of implementation are under study. Requirements for control and accounting of SNM were revised to provide greater sensitivity and timeliness for detecting theft or diversion.

~~CONFIDENTIAL~~

6. In Transit - Relating to Access to Material

a., b., and c. By Force, By Stealth, or By Deceit

ERDA:

The one item which was funded in the FY 1975 Supplemental was for protection of material in transit. As a result by October 1976, there will be major improvement in protection given to all ERDA highway shipments of strategic SNM. They will be made in vehicles specially designed to impede forced access to the cargo or movement of the vehicle. Weapons assembly shipments are transported by such vehicles at the present time. Additional funds to include the remaining ERDA shipments have been requested. Further, all shipments now must be accompanied by a minimum of two armed ERDA couriers. Improvements to the existing SECOM communication system between the transit vehicles and a central control are also being implemented.

NRC:

During 1974 new rules for protection of SNM in transit were applied to all licensees and transportation companies which are authorized to protect transport shipments of more than 2000 grams of Pu or U-233 or more than 5000 grams of U-235 contained in uranium enriched to 20% or more in the U-235 isotope. These rules provide for: improved control of material in transit; two armed escorts to accompany land shipments; and use of specially designed motor vehicles (if such are not available, a separate escort vehicle with at least two armed guards must be used).

~~CONFIDENTIAL~~

7. In Transit - Relating to Removal of Material

ERDA:

The improved control of access to material in transit is coordinated with the improved communication facilities and the FBI contingency plans in cooperation with local and state law enforcement authorities.

The design response time is two hours against an armed attack.

NRC:

All land vehicles (highway and rail) are required to be equipped with radiotelephone. Calls must be made at predetermined intervals normally not to exceed two hours; and if calls are not received when planned, the licensee or his agent must immediately notify an appropriate law enforcement authority and the NRC. These plans have been reviewed and approved by the NRC.

8. and 9. Relating to Other Means of Material Acquisition

Liaison is to be established between ERDA and the Treasury Department and thereby to Interpol in order to acquire another intelligence source, in addition to the FBI and CIA, relating to possible black market operations or smuggling operations. The NRC plans to establish similar liaison.

10. thru 14. Relating to Utilization Activities

Safeguards activities relating to adversary utilization activities are

~~CONFIDENTIAL~~

those related to recovery or degradation of material given that the adversary has gained control of the material. Extensive effort has gone into the development of portable detection instruments for use with hand-carried, helicopter or truck search efforts. This development has largely been completed and some detection capability now exists. Resources have been requested to achieve a modest quick response search capability. This effort is a part of the Nuclear Emergency Search Team (NEST) Program which has demonstrated capability for departure to the site of the emergency within two hours of an alert. Staff and equipment are located at Las Vegas, Nevada; Los Alamos, New Mexico; and Livermore, California.

Support has been provided to the FBI recovery activities in the form of four briefcase detectors capable of detecting the presence of SNM in certain situations. An agent from each FBI office where the detectors have been deployed has been given detailed operating instructions at the Los Alamos Scientific Laboratory.

The contingency plans of each FBI office include consideration of potential situations where control of the SNM may have passed to the adversary and recovery is required. The problem of recovery when stolen material has passed beyond the national boundaries is addressed through international police cooperation (Interpol) and diplomatic channels. Pertinent ERDA capabilities are being coordinated for assessment of nuclear explosive devices information contained in

~~CONFIDENTIAL~~

communicated threats. These capabilities include the technical assessment of design feasibility by experts and aggregation of information relating to possibility of diversion from the SNM internal control systems.

.15. Consequence Reduction

Studies and plans for coordination with the Office of Preparedness have been initiated.

RECOMMENDATIONS

The National Security Council may wish to support the ERDA recommendation to OMB that funds be allocated to implement corrective actions for a number of deficiencies in the government-facility sector which have been identified and documented.<sup>3</sup> Funds for such actions were requested by AEC in a FY 1975 Supplemental but were granted only to the extent that they applied to correction of transportation deficiencies. Other deficiencies remain and funds for correction are being requested in a proposed amendment to the FY 1976 Congressional Budget. These corrections do not require any additional R&D; all requisite technical capability has been developed. Only funds for implementation are lacking.

The closely related ERDA responsibilities for development of nuclear energy and nuclear safeguards have a reinforcing effect on ERDA

[REDACTED]

priorities for early and adequate demonstration of the closely related plutonium fuel cycles for either light water or breeder reactors. ERDA identifies a need for actual demonstration of recycle plutonium full reactor cores in a limited number of commercial reactors, as well as the construction and operation of commercial-scale reprocessing and fuel fabrication facilities. Such operations appear to be the only realistic means of achieving the necessary thorough understanding, based on operating experience, of safeguards and the other important aspects of plutonium recycle. If this were done, the Nuclear Regulatory Commission could then have the benefit of actual operating experience in developing its final licensing criteria and standards for all aspects of plutonium recycle. The best mechanism for accomplishing ERDA responsibilities for nuclear energy and nuclear safeguards seems to be an ERDA-industry cooperative demonstration project in licensed plants. Accordingly, it is recommended that the President endorse this concept.

There are analogous needs in ongoing fuel cycle operations now licensed by the Nuclear Regulatory Commission. In some cases nuclear fuel cycle licensees experience a need for research and development assistance of a generic nature in order to comply with requirements related to safeguards as established by the Nuclear Regulatory Commission and published in the Code of Federal

[REDACTED]



~~CONFIDENTIAL~~

Regulations. ERDA has in the past performed such research and development both to facilitate compliance and to improve safeguards effectiveness generally. Since such effort by ERDA could be deemed an indirect subsidy to the nuclear power industry (ERDA developing solutions required by licensees so that they can comply with NRC safeguards regulations), it is considered desirable to have the endorsement of the President in order for such ERDA research and development work to continue. Accordingly, it is recommended that the President endorse the concept of direct ERDA research and development effort, primarily to enable licensees to satisfy safeguards requirements established by the Nuclear Regulatory Commission.

#### REFERENCES

1. NSSM-120 Domestic Safeguards, DSS, AEC submitted February 15, 1974.
2. NSDM-254 Domestic Safeguards, NSC to Chairman, AEC, April 27, 1974.
3. Letter to OMB from ERDA with Exhibits, April 4, 1975 (Exhibit 2).

~~CONFIDENTIAL~~

FROM: <b>Safeguards &amp; Security (H.E. Lyon)</b>		DATE OF DOCUMENT: <b>6/10/75</b>		DATE RECEIVED: <b>6/10/75</b>		NO: <b>6321</b>	
TO: <b>Gen. Gossick Attn: R.G. Page</b>		MEMO		REPORT <b>X</b>		OTHER	
ORIG.		CC		OTHER			
ACTION NECESSARY <input type="checkbox"/>		CONCURRENCE <input type="checkbox"/>		DATE ANSWERED			
NO ACTION NECESSARY <input type="checkbox"/>		COMMENT		BY			
FILE CODE		DATE		RECEIVED BY		DATE	
REFERRED TO		DATE		RECEIVED BY		DATE	
Page		6/10					
Annual Report on Domestic Nuclear Safeguards							
Final Draft:							
ENCLOSURES							
REMARKS							

U.S. NUCLEAR REGULATORY COMMISSION MAIL CONTROL FORM FORM NRC 3785 (175)

200049