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Nuclear weapons

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BRIEFING TO GILPATRIC COMMITTEE BY WILLIAM J.  
HOWARD, DECEMBER 1, 1964

SANITIZED  
E.O. 12958, Sec. 3.5  
NLJ 90-278  
By ijg, NARA Date 9-16-96

~~TOP SECRET~~

PAL CODE MANAGEMENT

PAL codes for specific weapons in NATO are selected from a code manual by the PAL code management team attached to USCINCEUR headquarters. In selecting any one code, one-half of the digits are selected by one two-man team and the other half of the digits are selected by another two-man team. These teams are designated as "A" and "B" teams and personnel are never interchanged between teams.

The selection of codes is made from PAL code Master Lists [redacted] Separate lists are produced for the "A" and "B" portions of the code. [redacted]

[redacted]

Different codes can be provided for each base, geographical area, component command or other subdivision of command as deemed appropriate.

When the enabling of weapons is authorized, the code words will be transmitted to the weapon sites. [redacted]

[redacted]

Encoding of weapons is accomplished by two two-man teams known again as "A" and "B" teams. Each team is responsible for insertion of one-half of the weapon combination and is not permitted to know the other half. There is a requirement that neither team be given access to either code word. The security provided to [redacted] code words is equivalent to that provided the weapons release authenticator code words.

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EXCLUDED FROM AUTOMATIC  
RECORDING; DOD DIR 5200.10  
DOES NOT APPLY

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TRANSMISSION OF ATOMIC INFORMATION OUTSIDE THE U. S.


Communication of atomic information to a foreign country or to a regional organization is governed by the Atomic Energy Act of 1954, as amended. The act requires that:

- a. There be an Agreement for Cooperation.
- b. The President determine that the proposed communication of Restricted Data "will not constitute an unreasonable risk to the common defense and security."

The Joint Atomic Information Exchange Group (JAIEG) was established as a centralized authority for release of atomic information to other nations or regional defense organizations.

There are Agreements for Cooperation under the Atomic Energy Act with ten nations and NATO.

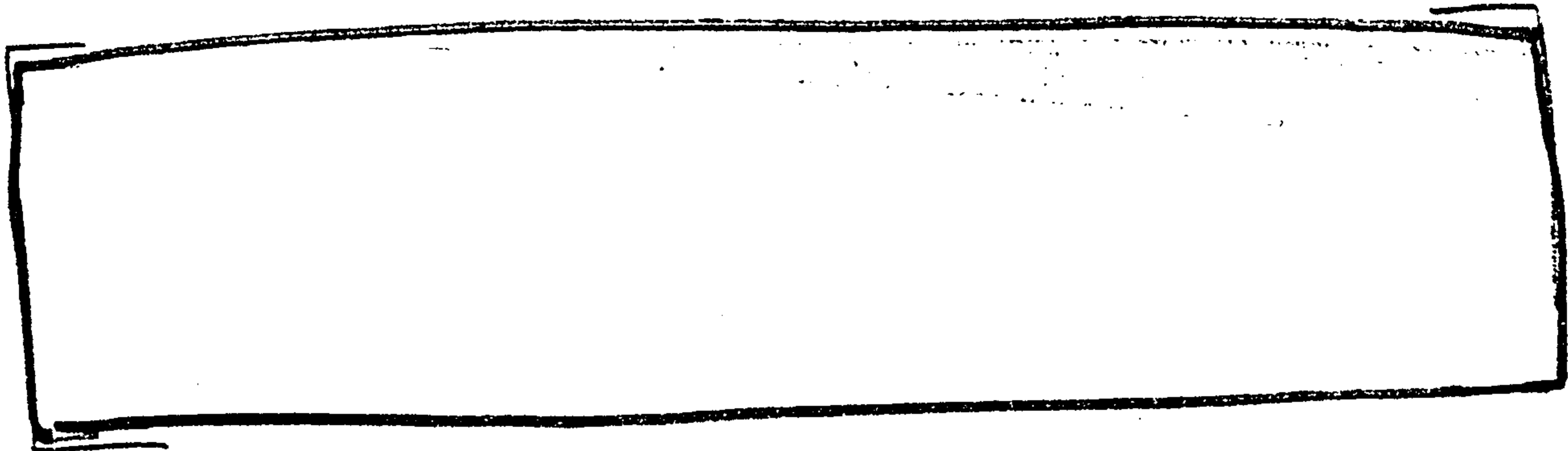
Transmission of weapon design information is permitted only under the agreement with the U. K.

 requires that the DoD submit to the President, for approval in principle, proposed programs of cooperation with other nations. This includes any program which will involve communication of Restricted Data, transfer of delivery vehicles utilizing atomic weapons, or dispersal of atomic weapons. Presidential approval of such submittals will be restricted to approval in principle, reserving for future action authorization for dispersal of specific weapons.

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RADIOGRAPHY



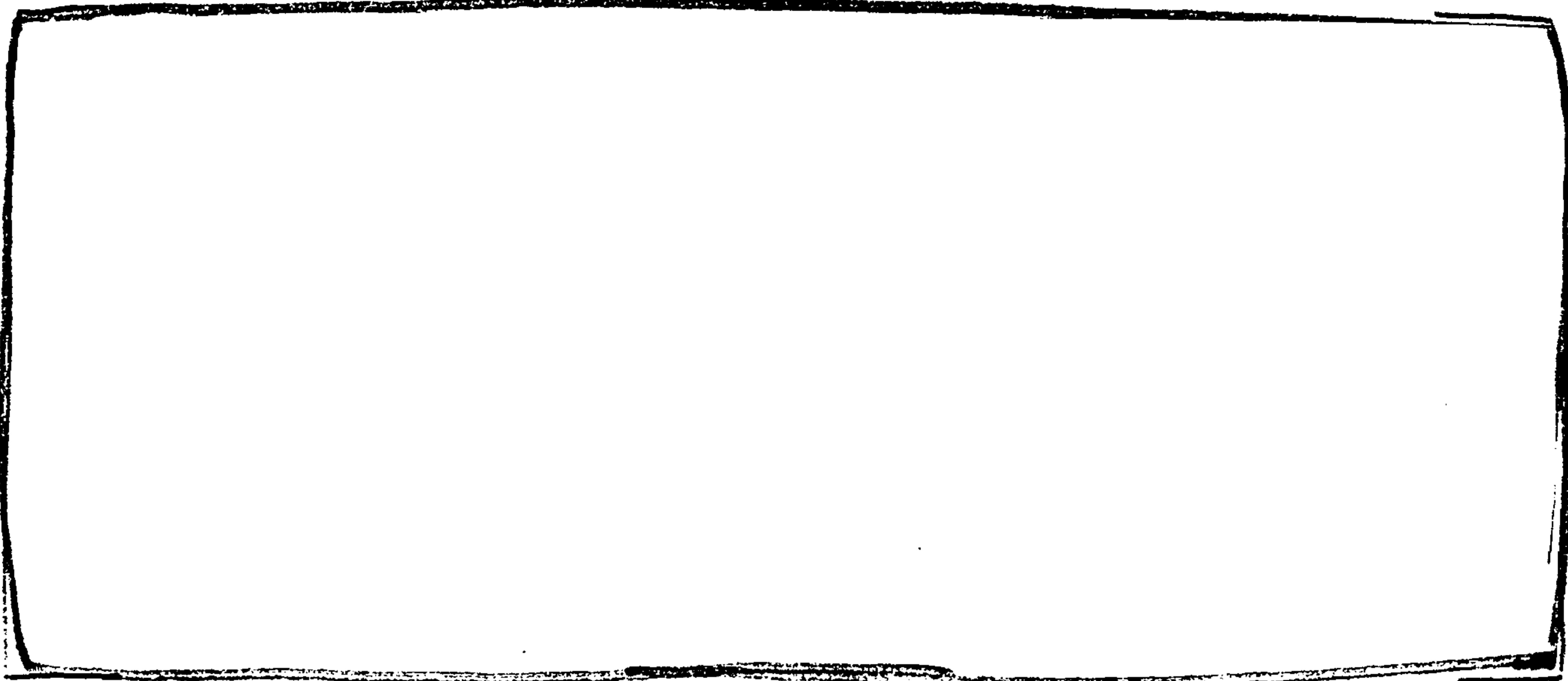
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DOES NOT APPLY



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DESTRUCTION AND EVACUATION OF U. S. NUCLEAR WEAPONS



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REGRADING: DOD DIR 5200.10  
DOES NOT APPLY

NATO SPECIAL AMMUNITION STORAGE PROGRAM

The concept of control of nuclear weapons in NATO is that SACEUR, in his international capacity, will assure positive control over the use of US nuclear weapons made available to this program. A fast and dependable communication system between SACEUR Headquarters and the US custodial units at the Special Ammunition Storage Sites located on operational bases is an absolute requirement.

US nuclear weapons will remain in the custody of US forces until the order is received from SACEUR to release them to the designated non-US NATO force commander. At an operational site, the US nuclear weapons are stored in what is called a Special Ammunition Storage area. This is a high security area and access is controlled by US guards. External security is provided by the non-US host country. Emergency response forces also are furnished by the host country. These include a Sabotage Alert Team, a Back-up Alert Force and an Emergency Reserve Force. Aircraft loaded with nuclear weapons are maintained in QRA areas. The host nation is responsible for security in these areas. US personnel in the QRA area are the Alert Duty Officer (ADO) and one custodial agent for each aircraft.

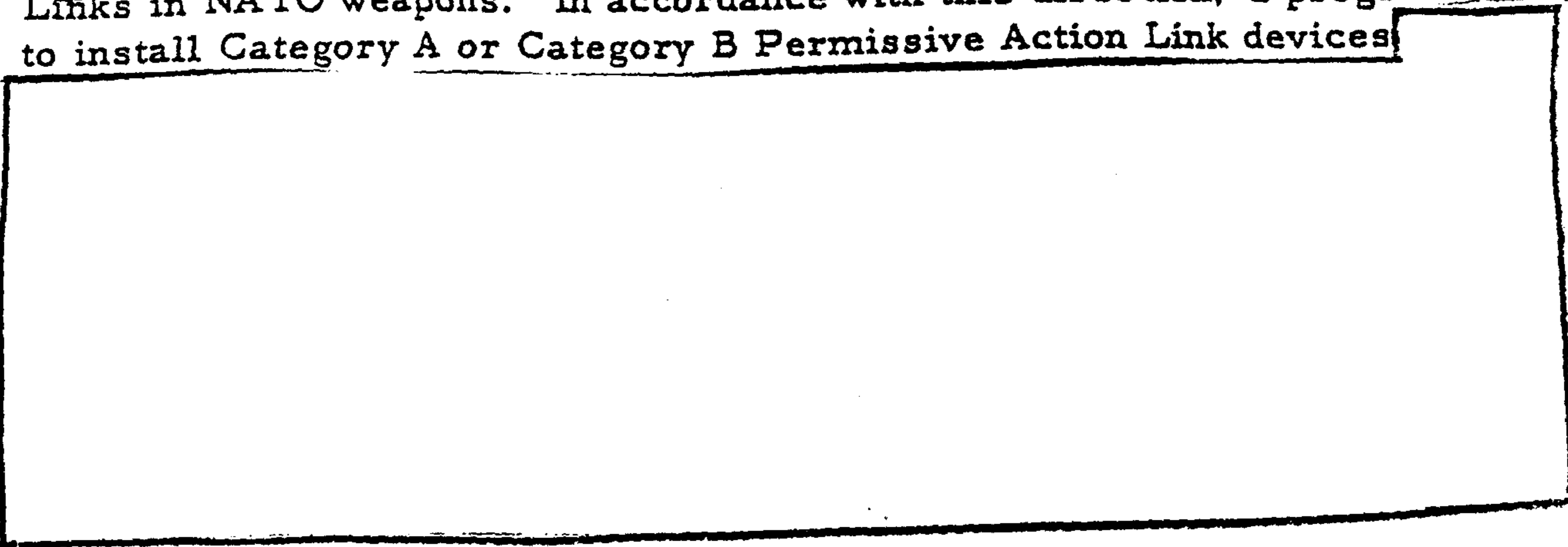
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PAL PROGRAM

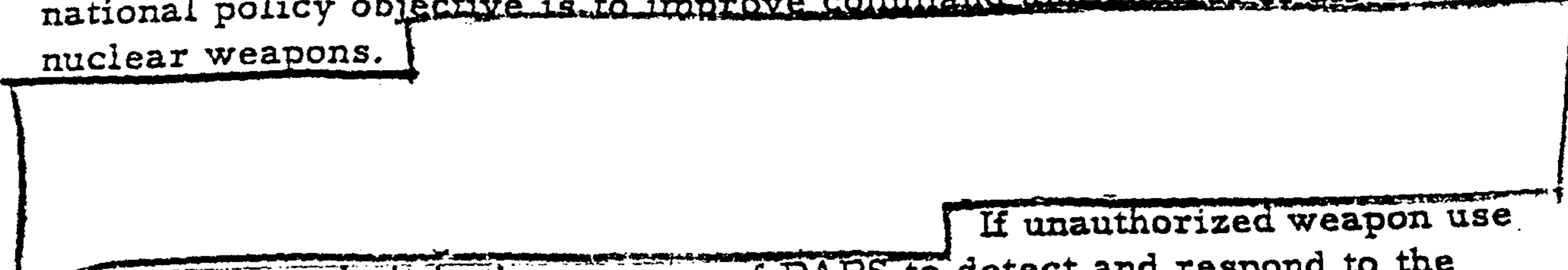
In  the President directed installation of Permissive Action Links in NATO weapons. In accordance with this direction, a program to install Category A or Category B Permissive Action Link devices

12958  
611 (a)



As stated by the Deputy Secretary of Defense about a year ago, the PAL national policy objective is to improve command and control of all US nuclear weapons.

12958  
611 (a)



If unauthorized weapon use were attempted, it is the purpose of PAPS to detect and respond to the attempt in such a way as to disable the nuclear weapon.

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~~FORMERLY RESTRICTED DATA~~  
Handle as Restricted Data in Foreign Dissemination  
Section 1.44b, Atomic Energy Act, 1954

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DCES NOT APPLY



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## SAFETY PHILOSOPHY

A fundamental principle in providing nuclear safety is the incorporation of various design features into the nuclear warheads involved and also into the weapon system or delivery vehicle to satisfy the basic safety standards. Examples of such design features   
 which prevent the normal functioning of a nuclear weapon until and unless it has passed through its normal intended firing environment; removable components which are used to provide breaks in fuzing and firing circuits; thermal fuses which are used to prevent certain actions from occurring in the event of a fire environment. In the delivery portion of the system, examples are in-flight operable bomb rack locks, locked and guarded launch control switches and safing plugs.

Command and control procedures and techniques are used to supplement the mechanical safety features. In a broad sense, all of the devices, techniques and procedures which enhance the safety, security and the positive command and control of nuclear weapons are controls in that they insure against an incident or accident and unauthorized use. Examples are: (a) MINUTEMAN Launch Enable System, (b) control of critical keys in the POLARIS system, (c) positive control of airborne alert flights, (d) two-man rule, and (e) the PAL as utilized in NATO.

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DOES NOT APPLY



UNCLASSIFIED

DEVELOPMENT AND PROCESSING OF SAFETY RULES

The purpose of Safety Rules is to assure that nuclear weapon systems incorporate the maximum safety consistent with operational requirements. The four safety standards are:

- a. There will be positive measures to prevent weapons involved in accidents or incidents or jettisoned weapons from producing a nuclear yield.
- b. There will be positive measures to prevent deliberate arming, launching, firing or releasing except upon execution of emergency war orders or when directed by competent authority.
- c. There will be positive measures to prevent inadvertent arming, launching, firing or releasing.
- d. There will be positive measures to insure adequate security.

The service safety groups study the systems and recommend proposed safety rules. On the basis of these recommendations, the military departments formulate the Safety Rules which are approved by the JCS and Secretary of Defense. In all cases, the Safety Rules are coordinated with the AEC.

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DISPERSAL

The following chart depicts the stockpile allocations approved for End FY 64 and proposed FY 65 -- together with the actual dispersals that were in effect on 1 November 1964.

NUCLEAR WEAPON STOCKPILE

<u>Dispersals as of 1 Nov 64</u>	<u>Allocations:</u>	<u>Approved End FY 64</u>	<u>Proposed FY 65</u>
		12958	
		6.1(a)	

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~~FORMERLY RESTRICTED DATA~~

Handled in accordance with Atomic Energy Act, Section 1.4(b), Atomic Energy Act, 1954

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Nuclear Weapons Stockpile Information  
Category 7

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Topics to be Discussed with the Gilpatric Committee - US Dispersal

*Jack Lawrence Boyles*

- ✓ 1. Dispersal of nuclear weapons
- ✓ 2. DoD Safety Standards
- ✓ 3. Development and Processing of Safety Rules
- ✓ 4. Safety Philosophy
- ✓ 5. NSAM 160
- ✓ 6. Status of PAL Program as directed by
- ✓ 7. PAL Objective
- ✓ 8. PAL R&D
- ✓ 9. Security and Custody
  - ✓ a. NATO Special Ammunition Storage Program
    - ✓ 1. SAS Sites
    - ✓ 2. QRA Sites
    - 3. Evacuation and destruction of weapons
    - 4. Radiography
    - 5. PAL Code Management
- ✓ 10. Information Control
  - a. NSAM 197
  - ✓ b. Statutory Determinations
  - ✓ c. Bilateral Agreements
  - d. JAIEG
  - e. NSAM 294

Briefing to the Gilpatric Committee by William J. Howard. Topics include: dispersal of nuclear weapons; safety standards; safety rules; safety philosophy; status of PAL (Permissive Action Links) Program; NATO ammunition storage program; radiography; evacuation and destruction of weapons. Department Of State, 1 Dec. 1964. U.S. Declassified Documents Online, [tinyurl.galegroup.com/tinyurl/4PgPK2](https://tinyurl.galegroup.com/tinyurl/4PgPK2). Accessed 19 Feb. 2017.