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MILITARY APPLICATIONS OF NUCLEAR TECHNOLOGY

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HEARINGS

BEFORE THE

SUBCOMMITTEE ON MILITARY APPLICATIONS

OF THE

JOINT COMMITTEE ON ATOMIC ENERGY

CONGRESS OF THE UNITED STATES

NINETY-THIRD CONGRESS

FIRST SESSION

ON

THE CONSIDERATION OF MILITARY APPLICATIONS OF
NUCLEAR TECHNOLOGY

MAY 22 and JUNE 29, 1973

PART 2

Printed for the use of the Joint Committee on Atomic Energy

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[NOTE. This hearing was held in executive session. Classified security information was presented during the executive session. The hearing record was then reviewed and specified items designated by the AEC as being classified information were deleted prior to publication.]

MILITARY APPLICATIONS OF NUCLEAR TECHNOLOGY

TUESDAY, MAY 22, 1973

CONGRESS OF THE UNITED STATES,
SUBCOMMITTEE ON MILITARY APPLICATIONS
OF THE JOINT COMMITTEE ON ATOMIC ENERGY,
Washington, D.C.

The Subcommittee on Military Applications met at 10 a.m., pursuant to call, in room H-403, the Capitol, Hon. Stuart Symington (chairman of the subcommittee) presiding.

Present: Senator Symington; and Representatives Hosmer and Roncalio of the subcommittee; and Representatives Hansen and Lujan of the Joint Committee.

Also present: Edward J. Bauser, executive director; George F. Murphy, Jr., deputy director; and Col. Seymour Shwiller (USAF, Ret.), technical consultant.

OPENING STATEMENT OF CHAIRMAN SYMINGTON

Senator SYMINGTON. The hearing will come to order.

Before we start, I want to say that I think it is most unfortunate that the rules of the Joint Committee do not permit a member of the Armed Services Committee of either the Senate or the House to appear at these executive hearings, let alone, members of the committee staff.

Based on my examination to date, I want the record to show that I think this lack of coordination between the committees and the Joint Committee has cost the American taxpayer at least quite a few billion dollars.

Now, Dr. Walske, exactly what is your title?

STATEMENT OF DR. CARL WALSKE, CHAIRMAN, MILITARY LIAISON COMMITTEE TO ATOMIC ENERGY COMMISSION, AND ASSISTANT TO SECRETARY OF DEFENSE FOR ATOMIC ENERGY, ACCOMPANIED BY MAJ. GEN. FRANK A. CAMM, BRIG. GEN. DONALD KEITH, U.S. ARMY; BRIG. GEN. J. R. BRICKEL, U.S. AIR FORCE; COL. LYNWOOD LENNON, U.S. AIR FORCE; AND MAJ. GEN. EDWARD B. GILLER (USAF RET.)

Dr. WALSKE. I have two, sir. Chairman of the Military Liaison Committee to the Atomic Energy Commission, which is a statutory position under the Atomic Energy Act; and, secondly, assistant to the Secretary of Defense for Atomic Energy.

WEAPONS STOCKPILE

Senator SYMINGTON. There are today in the U.S. nuclear weapons stockpile some 26 types of nuclear warheads and a Heinz' mixture of more than 57 different versions of modifications, alterations, and yields of these 26 types. The total number of warheads is some tens of thousands. The nuclear weapons stockpile peaked at [deleted] in 1967, dropped to a low of about [deleted] in 1970 and has been increasing since that time.

We are told that AEC is prepared to fabricate an additional [deleted] weapons between fiscal year 1974 and fiscal year 1980 and about [deleted] weapons after that time, for a total of about [deleted]. This does not include any Trident warheads. We have not been told how many of the almost [deleted] weapons now in existence will be retired.

Today, we would like to examine the status of the weapons in stockpile and to explore the decisionmaking processes that project the need for new weapons and the kinds and numbers of new weapons.

Dr. Walske, the Chairman of the Military Liaison Committee and Assistant to the Secretary of Defense for Atomic Energy Matters, is the principal witness. Please introduce who is with you, Dr. Walske, and then we will proceed.

Dr. WALSKE. You already know General Camm.

On my right, I have Brig. Gen. Don Keith from the Office of the Chief of Staff of the Army, Office for Research and Development, who is, I should add, an experienced artillery officer and who is in that office in R. & D. responsible for the delivery systems which deliver nuclear warheads which include both artillery and missile systems.

On my left is the Deputy from my office, that is, the Deputy Assistant to the Secretary of Defense for Atomic Energy, Brig. Gen. Jim Brickel, who is an experienced Air Force pilot and combat officer.

These two gentlemen can give you, when appropriate, a little more technical military flavor.

Senator SYMINGTON. I have quite a few questions here. I will make them as short as possible and I hope you will make your answers as short as possible so that we can get on with it. Any time you wish to pass a question to one of the two gentlemen with you, you may do so at your convenience.

Dr. WALSKE. All right, Mr. Chairman.

Senator SYMINGTON. General, do you report to the Secretary of the Army or to the Secretary of Defense or to Dr. Foster?

General KEITH. My immediate boss is General Gribble, the Army's Chief of Research and Development. I am the Director of Development in his office.

Senator SYMINGTON. Whom does he report to?

General KEITH. He reports to the Chief of Staff.

Senator SYMINGTON. Do you have a viewgraph here that you can refresh our memory by showing the distribution of nuclear weapons around the world?

Dr. WALSKE. Yes, we have.

(Viewgraph shown.)

Senator SYMINGTON. Will you please read off, the numbers?

Dr. WALSKE. Starting from left to right, the number [deleted] is the number actually in the 50 States. The [deleted] are in [deleted]. The [deleted] is in Europe.

Down at the bottom of the chart, the Navy afloat has [deleted]. Coming over to the right side, and starting at the top, there are [deleted] in [deleted] in [deleted] for a total in the Pacific of [deleted].

Senator SYMINGTON. The total amounts to what?

Dr. WALSKE. [Deleted.]

Senator SYMINGTON. That is everything in the stockpile.

How many additional do you plan to make for the Trident? Do you know that offhand?

TRIDENT GOVERNED BY SALT AGREEMENT

Dr. WALSKE. There is a question of whether or not there will be additions or replacements. In the case of the Trident, it is governed by the SALT agreement. If it turns out to be replacements, actually we may end up with a net of [deleted] warheads if we load it with [deleted] than an average of [deleted] RV's per missile which looks likely at the moment.

Senator SYMINGTON. Will you file what kind of weapons there are in the following categories: free-fall bomb; glide bomb; air-to-surface missile; air-to-air missile; surface- or ship-to-surface missile; surface- or ship-to-air missile; artillery; demolition charge; depth bomb; torpedo; underwater rocket; and underwater-to-surface missiles?

Dr. WALSKE. Would you like that read into the record?

Senator SYMINGTON. Just file it for the record.

Dr. WALSKE. Yes, sir.

[The information supplied follows:]

As of April 30, 1973, the stockpile contained the following types and numbers of nuclear weapons/warheads:

<i>Description</i>	<i>Amount</i>
Free-fall bombs-----	[Deleted]
Glide bombs-----	[Deleted]
Air-to-surface missiles-----	[Deleted]
Surface-to-surface missiles-----	[Deleted]
Surface-to-air missiles-----	[Deleted]
Tube artillery-----	[Deleted]
Atomic demolition munitions-----	[Deleted]
Depth bombs-----	[Deleted]
ASW torpedoes-----	[Deleted]
Underwater-to-surface missiles-----	[Deleted]

TOTAL BOMB TONNAGE IN EUROPE IN WORLD WAR II

Senator SYMINGTON. During World War II we had a total drop in Europe of 1,400,000 tons of TNT. In the Far East, a total of 646,000 tons of TNT, or a total somewhere of between 2 million and 2,100,000 tons in all of World War II that were dropped in all theaters by the U.S. Navy and Air Force.

We understand that the total equivalent in tonnage that we have abroad is [deleted] tons of all types. The grand total stockpile—abroad, with the fleet, and in this country—is several billion tons.

In other words, all that we dropped in World War II is around one twenty-fifth of 1 percent of what we have available in case there is another war and nuclear weapons are used in a general fashion.

Would you have someone on your staff check those figures for the record to be sure they are correct?

Dr. WALSKE. Yes, sir. The numbers are essentially correct.

Senator SYMINGTON. How many weapons, other than ICBM missiles, are normally on an alert status?

Dr. WALSKE. I have figures here.

As of May 21, 1973, we had [deleted] individual weapons on alert. I can give you a breakdown, if you want, of the different systems.

Senator SYMINGTON. Will you supply them for the record?

Dr. WALSKE. Yes, sir.

[The information later supplied follows:]

As of May 21, 1973, the alert weapons were as follows:

System	Plan	Actual
Titan.....		
Minuteman.....		
Polaris ¹		
Poseidon ¹		
Pershing.....		
B-52.....		
FB111.....		
F4.....		[Deleted.]
F111.....		
A6.....		
A7.....		
F100.....		
F4.....		
F104.....		
Pershing.....		

¹ Projected [deleted] Polaris and Poseidon by end 1973.

² [Deleted.]

³ [Deleted.]

HOW MANY WEAPONS IN RESERVE

Senator SYMINGTON. What is the Joint Chiefs of Staff "weapons reserve" and how many weapons are in this category?

Dr. WALSKE. The reserve is a small proportion of the stockpile. These are weapons that are not allocated to one of the commanders in chief, one of the unified or specified commands, which are held by the JCS for future allocation in time of crisis.

Senator SYMINGTON. Does the figure stay fairly constant around [deleted] or does it vary? And if so, how much?

Dr. WALSKE. I will have to see how much it varied, but it is generally small like that as a percentage of the stockpile. I don't know how much it varies.

Senator SYMINGTON. Will you file it for the record?

Dr. WALSKE. Yes, sir.

[The information later supplied follows:]

[Classified matter deleted.]

Senator SYMINGTON. How are weapons transferred and transported from the AEC custody to DOD custody?

Dr. WALSKE. In terms of physically how, they are transported the same way that they would be either within the AEC or within the DOD, with proper guards and security.

The transfer occurs on the authority of the President and is accompanied with proper receipting as the custody changes from the AEC to the DOD.

WEAPONS TRANSFER

Senator SYMINGTON. Will you file for the record a typical illustration of a transfer?

Dr. WALSKE. Yes, sir.

Senator SYMINGTON. How it is done, who did it, how long it took, where, and so forth.

Dr. WALSKE. Yes, sir.

[The information later supplied follows:]

All weapons are transferred in accordance with AEC/DOD memorandum of understanding for the transfer of atomic weapons, dated March 4, 1962, and the stockpile agreement between AEC and DOD (No. AT (29-2)-1222) dated March 20, 1967. Further detailed instructions are amplified in the joint AEC/DOD technical publications No. 45-51 (series).

Senator SYMINGTON. How are weapons in Defense Department custody transferred from storage to units in the United States and overseas?

Dr. WALSKE. The process is exactly similar. There are the same standards of security and guards are maintained and at the destination, when a warhead is turned over to a receiving unit, there is a proper receipting for it and a formal change of custody to a custodian at the receiving center.

Senator SYMINGTON. What security and accident prevention actions are employed during transportation?

Dr. WALSKE. During transportation, in terms of accident, one alerts the explosive ordinance disposal people who are in a position to respond to an accident.

In terms of security, there are guards with the weapons as they are moved. There are communications so that additional guards, reinforcements, can be called up if necessary.

Senator SYMINGTON. Will you give a little more detail for the record on that, and express your satisfaction or dissatisfaction with the safeguards.

Dr. WALSKE. Yes.

[The information subsequently supplied follows:]

All people involved are trained in all aspects of their responsibilities. For transport by land, routes are swept by radio-equipped vehicles to reduce the possibility of involvement with traffic obstructions or other hazards. Firefighting equipment is prescribed and available. Procedures are established for obtaining security support enroute. Communications requirements are established for intra-convoy voice radio communications between all vehicles of a convoy and between the convoy and a control center. I feel that the provisions and safeguards are adequate.

Senator SYMINGTON. Are the PAL's locked on weapons in transit?

Dr. WALSKE. [Deleted.]

Senator SYMINGTON. I am very sensitive, particularly sensitive is a better way to put it on this matter, because we were told a couple of years ago that the PAL system was all over the world and we found out that was not correct.

Will you give us a little more description for the record on that?

Dr. WALSKE. Yes.

[The information later supplied follows:]

[Classified matter deleted.]

Senator SYMINGTON. Could you briefly describe the DOD human reliability program for military personnel?

HUMAN RELIABILITY PROGRAM

Dr. WALSKE. This is a program in which individuals who have access to nuclear weapons, and individuals who have responsibilities in the nuclear release process, are kept under a special type of scrutiny to see as well as we can that they have no aberrations in their behavior, that they have no personal problems which could make them subject to blackmail.

The responsibility for this surveillance is primarily in the supervisor of each such person. It is traditionally the responsibility of medical officers who are assigned to the units.

Records are kept in a formal way identifying such people so that each commander and each medical officer who is from a responsible position knows very clearly which of his personnel must be kept under this type of surveillance.

Senator SYMINGTON. I think that is very important because I have had letters from people who have written that they would not obey orders if ordered to fire, and so forth, and gave the reasons why.

I hope you check that carefully. I am sure you agree with me it is very important.

Dr. WALSKE. Yes, sir.

Senator SYMINGTON. What percentage of nominees for positions associated with nuclear weapons are rejected because of the human reliability program criteria?

Dr. WALSKE. For calendar year 1972, in all the services, there were in the program 119,492 people. There was a screening of people, influx that is, into the program, of about 66,000 people.

PERCENTAGE DISQUALIFIED UNDER HUMAN RELIABILITY PROGRAM IN CALENDAR YEAR 1972

In that year, there were a total of 3,647 disqualifications, which would be approximately 3 percent.

Senator SYMINGTON. Is there a human reliability program for DOD civilians?

Dr. WALSKE. Yes; there is, for those civilians who have similar access to nuclear weapons.

Senator SYMINGTON. Will you file for the record how many of these have been rejected for the use of drugs?

Dr. WALSKE. We have that information here. I just mentioned that 3,647 had been disqualified. The total disqualified in calendar 1972 for drug abuse was 748, which turns out to be 20.5 percent of the disqualifications.

Senator SYMINGTON. Congressman Hansen and I were in Europe [deleted]. We had a sergeant who gave us the drug story on a nuclear base there. It was most disturbing.

Also, former Secretary of the Army Froehle, for whom I developed great admiration, on his last appearance before the committee said that they still had serious problems in the Army.

RACE AND DRUG PROBLEMS

I singled out the race problem and drug problem as the two which were the most challenging.

Do you know if the AEC and its contractors have a program comparable to the human reliability program?

Dr. WALSKE. May I refer that to General Camm?

General CAMM. We have one that is being developed. It is not as fully developed as that, but it will be soon.

Senator SYMINGTON. I think that is also very important. We have such incredible secrecy around here to the point where I personally feel it is unnecessary and unconstructive. I remember 20 years ago, in 1953, the first year I came to the Senate, the tremendous effort to classify the B-52. Senator Jackson and I were criticized for having said something publicly about it. Senator Jackson got a picture of it being towed from the Boeing plant to an airfield, with hundreds of spectators watching, some of whom had cameras. When considering weapons, it is vital that the contractor and his people know everything about what is planned, otherwise, he is in the dark with respect to maximum production at minimum cost.

General Camm, will you file for the record exactly where the program is with respect to the contractors?

General CAMM. Yes, sir.

[The information subsequently supplied follows:]

U.S. ATOMIC ENERGY COMMISSION PERSONNEL ASSURANCE PROGRAM

The AEC Personnel Assurance Program is an integral part of the AEC nuclear explosive safety program. The program is set forth in AEC Manual Chapter 0560, "Prevention of Accidental or Unauthorized Detonations."

The purpose of the program is to provide management guidance in the selection of employees for assignment to critical duties. For the purpose of the program, critical duties are defined as those duties which require an AEC contractor employee to perform work which affords both technical knowledge of and access to nuclear explosives sufficient to enable the employee to cause a detonation, either high explosive or nuclear.

The objective of the program is to insure that only those employees who possess the emotional and mental stability and the physical capability necessary to perform critical duties, without causing an inadvertent or unauthorized detonation either high explosive or nuclear, are so assigned.

To be certified for assignment to critical duties, an AEC or AEC contractor employee must:

1. Possess a valid AEC "Q" clearance.
2. Express a willingness to work with nuclear explosives.
3. Undergo a medical evaluation of suitability.
4. Be interviewed. (The interview includes a briefing on the importance of the assignment and the nature and objective of the program.)
5. Complete required training courses.
6. Have a complete review made of his personnel and clearance investigative files.

For continued certification, the employee is subject to:

1. Continuous day-to-day observation by supervisory personnel.
2. Undergoing an annual evaluation of suitability.

During the past year, the average numbers of AEC and AEC contractor employees certified for assignment to critical duties were 106 and 895, respectively.

Senator SYMINGTON. Dr. Walske, do you have any data on the number of Department of Defense military or civilian personnel removed from nuclear positions under the human reliability program—I will stretch this because of what I said before just on drugs—because of marital problems, gambling, drinking, drugs, and so forth.

Will you give us a list of that?

Dr. WALSKE. You would like the breakdown by cause?

Senator SYMINGTON. Yes, sir.

[The information later supplied follows:]

BREAKDOWN OF PROBLEMS ENCOUNTERED IN HUMAN RELIABILITY PROGRAM

Since statistical records for the Human Reliability Program are not standardized between the Services, the following data differ in format and reporting period.

[In percent]

	Report period		
	Army, March 1972– February 1973	Navy, April 1972– March 1973	Air Force, January 1972– December 1972
Medical.....	5.2		4.0
Alcohol abuse.....	3.3	4.0	
Drug abuse.....	39.0	35.6	12.0
Duty performance.....	11.9	6.2	
Motivation, maturity, responsibility.....	34.5	18.8	
Involvement with civil authorities.....	1.5		
Financial or family irresponsibility.....	1.7	2.5	
Desertion of AWOL.....	1.2		
Mental instability.....		10.7	
Disciplinary.....		14.4	24.0
Character and behavior disorders.....			37.0
Neurotic tendencies.....			24.0
Other.....	1.7	7.8	
Total disqualified.....	537	708	2,402

NUCLEAR WEAPONS SAFETY RULES

Senator SYMINGTON. Could you describe briefly how nuclear weapons systems safety rules are written, approved, enforced and changed?

Dr. WALSKE. Nuclear weapons systems safety rules are prepared by the interested Service under the centralized control and supervision of OSD and with the coordination of the AEC. The Service conducts an initial safety study early in the development of a system. This study identifies system safety deficiencies and provides guidance for further development required to meet safety standards during the entire stockpile-to-target sequence. On the group conducting this study, as well as the studies described below, there are representatives of DOD and AEC in addition to those of the interested Services. Next a preoperational safety study is conducted about 90 days prior to the system becoming operational. This study considers the actual equipment, manuals, and procedures of the system affecting nuclear safety. The study includes proposed safety rules.

Proposed safety rules are processed through the Service staff, DNA and the Joint Staff prior to being forwarded to OSD. There they are reviewed by the ATSD(AE) and after coordination with the AEC are forwarded to the Secretary or Deputy Secretary of Defense for

his approval. When operational necessity requires, there is a procedure for interim approval of safety rules. This allows only operations not involving flying nuclear weapons aboard delivery aircraft in peacetime.

After a system becomes operational, operational reviews are conducted. The first of these occurs 1 year after the system becomes operational and more are held throughout the life of the system. The purpose of the operational review is to reexamine the adequacy of safety features and safety rules. Special safety reviews are conducted when an unsafe condition is revealed or system modifications affecting nuclear safety are required.

Safety rules for each system are provided to the JCAE upon approval or when they are changed.

Senator SYMINGTON. Are you satisfied with the way it is set up?

Dr. WALSKE. I am a participant in it, in that I am the Secretary of Defense's principal adviser, so I suppose I am a little prejudiced, but I think we have a good system.

Senator SYMINGTON. I understand you plan to leave in the not too distant future; is that correct?

Dr. WALSKE. June 1, yes, sir.

Senator SYMINGTON. Well, you will be missed. Who is going to take your place?

Dr. WALSKE. There is no successor identified as of now.

Representative HOSMER. I think Dr. Walske has been there about eight years. He thinks it is about time he moves on. We will still have him to "kick around."

Senator SYMINGTON. It is now 10:30, gentlemen. These questions have been prepared by the staff, primarily Colonel Shwiler, and there are a lot of them. It is an excellent job of staff work. They run about 75 questions all told. I don't want to dominate the proceedings. Any time anyone wants to interrupt and ask a question, please do so.

With that premise and agreement, I will proceed with the questions, if that is all right with the committee.

Who is responsible for developing security procedures for stored weapons and weapons on alert?

Dr. WALSKE. Security procedures must, first of all, be in accordance with the Department of Defense directive which is issued by the Secretary of Defense. We can provide that for the record, if you would like.

Senator SYMINGTON. Would you do that?

Dr. WALSKE. Yes, sir.

WHO DEVELOPS SECURITY PROCEDURES

[The information later supplied follows:]
DOD Directive 5210.41 follows:

August 14, 1968
NUMBER 5210.41



ASD(A)

Department of Defense Directive

SUBJECT Security Criteria and Standards for
Protecting Nuclear Weapons

- References:
- (a) DoD Directive 5200.1, "Safeguarding Official Information in the Interests of the Defense of the United States", July 10, 1968
 - (b) DoD Directive 5210.2, "Access to and Dissemination of Restricted Data", August 19, 1967
 - (c) DoD Directive 5210.8, "Policy on Investigation and Clearance of DoD Personnel for Access to Classified Defense Information", February 15, 1962
 - (d) DoD Directive 5210.42, "Reliability of Personnel Assigned to Duties Involving Nuclear Weapons and Nuclear Weapons Systems", December 8, 1962
 - (e) DoD Directive 5210.41, "Criteria and Standards for Safeguarding Atomic Weapons", December 8, 1962 (hereby cancelled).

I. PURPOSE

This Directive supplements the provisions of references (a), (b), and (c) by establishing minimum security criteria and standards for protecting United States nuclear weapons.

II. CANCELLATION

Reference (e) is hereby superseded and cancelled.

III. APPLICABILITY AND SCOPE

- A. This Directive applies to all Components and Unified and Specified Commands of the Department of Defense having responsibility for the protection of United States nuclear weapons. This Directive sets forth minimum security criteria and standards. Whenever there are differences between the minimum security criteria and standards set forth herein and those in other approved directives, regulations, or instructions, the more stringent security criteria and standards shall apply.

Continuation of III.

- B. The protection required for complete nuclear weapons shall be applied equally to nuclear warheads and nuclear components of a weapon.
- C. This Directive does not abrogate nor abridge the authority or responsibility of a commander during emergencies to deviate from the criteria and standards set forth herein.

IV. DEFINITIONS

- A. Definitions in the "Glossary of Military Field of Atomic Energy," (Technical Manual) AEC-DASA TP 4-1/TM 39-4-1/SWOP 4-1/T. O. 11N-4-1, dated August 1964, ^{1/} and publications which supersede it apply.
- B. Specifically for the purpose of this Directive, the following definitions shall apply:
 1. Technical Knowledge: That knowledge, however obtained, required to cause a nuclear detonation.
 2. Access: Physical proximity to a nuclear weapon in such a manner as to allow the opportunity to cause a nuclear detonation.
 3. Critical Position: One in which the incumbent has: (a) technical knowledge of nuclear weapons, and (b) access to complete nuclear weapons.
 4. Limited Position: One in which the incumbent could acquire both 3.(a) and 3.(b), above.
 5. Controlled Position: One in which the incumbent is performing duties physically associated with nuclear weapons, but does not require technical knowledge of, or access to nuclear weapons.
 6. Exclusion Area: Any designated area containing one or more nuclear weapons.
 7. Limited Area: The designated area surrounding one or more Exclusion Areas.
 8. Security Force: Those personnel whose primary duties are to protect nuclear weapons.
 9. Security Alert Team (SAT): Two or more Security Force members who form the initial reinforcing element responding to alarms, emergencies, or irregularities.

^{1/} Available on a need-to-know basis from the Director, Defense Atomic Support Agency, Attn: OALG, Washington, D. C. 20305.

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10. Backup Alert Force (BAF): That element of a Security Force designated to reinforce the Security Alert Team.
11. Reserve Force (RF): Designated personnel capable of responding in support of on-duty Security Force personnel.
12. Augmentation Reserve Force (ARF): Additional military personnel (or units) other than those assigned to a specific Security or Reserve Force, trained and capable of augmenting a Security and Reserve Force as required.
13. Classes I and II Land Areas: Land areas on which nuclear weapons are located are categorized as:
 - a. Class I - Areas other than the Continental United States, Alaska and Hawaii.
 - b. Class II - The Continental United States, Alaska and Hawaii.

V. POLICY

- A. Nuclear weapons require special protection because of their political and military importance, their destructiveness, and the attendant consequences of an unauthorized nuclear detonation.
- B. The protection afforded nuclear weapons must counterbalance the risks and threats inherent in their environment. In providing essential protection, accurate assessment must be made of all relevant factors, such as: (1) the location of the weapons; (2) the configuration in which they are maintained; (3) the nature and capabilities of potentially hostile forces; and (4) the reliability and capabilities of personnel responsible for the protection of nuclear weapons. Physical security measures, such as barriers, clear zones, lights, and intrusion detection alarm systems can only be considered as adjuncts to protective forces.
- C. Current and possible future threats, national policy, and the resulting need for effective operational flexibility and minimum reaction time often require weapon systems to be on alert and nuclear weapons to be stored in the vicinity of their delivery systems. Outside of the United States, nuclear weapons are generally more vulnerable than those located in

Continuation of V.C.

the United States. Thus, the minimum security criteria and standards applied to nuclear weapons outside the United States shall be more stringent than those applied in the United States. Furthermore, whenever there are indications of an increase in the threat to, or vulnerability of nuclear weapons in a particular situation, the degree of protection shall be appropriately increased.

VI. CRITERIA AND STANDARDS

- A. General: The criteria and standards provided herein are an extension of the provisions of references (a) and (b).
1. In planning the security system for nuclear weapons, priority of efforts and resources shall be given to the protection of nuclear weapons themselves. Such security shall be in depth, commensurate with the threat to, or vulnerability of the weapons, space limitations, and environmental factors.
 2. All Exclusion and Limited Areas shall be designated as restricted areas under the provisions of Section 21, Internal Security Act of 1950 (50 U.S.C. 797).
- B. Selection and Use of Personnel: Personnel associated with and directly influencing the security of nuclear weapons can be classified as command and supervisory, operational, security, support and maintenance personnel. Other established policies and directives (such as reference (d) above) prescribe the selection and security clearance criteria for many of these people. This subsection applies primarily to personnel to be assigned to, or in, Critical, Limited, or Controlled Positions as defined in IV.B., above.
1. Department of Defense activities shall insure that all positions categorized as Critical, Limited, or Controlled Positions shall be so designated.
 2. Background investigations shall be utilized in screening personnel for duty in Critical and Limited Positions.
 3. All individuals scheduled for assignment to Critical Positions must be qualified by training and experience for the duties which they are to perform and have their background investigation satisfactorily completed prior to assignment in the positions they are to occupy.

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4. All individuals to be assigned to Limited Positions must be qualified by training or experience for the duties which they are to perform. As a minimum, a favorable National Agency Check shall be completed and request for a complete background investigation shall be initiated prior to assignment. Upon assignment, the activities of such persons shall be so restricted as to deny access to nuclear weapons until the investigation and evaluation procedures have been completed.
5. Department of Defense activities shall insure that all personnel assigned to Critical, Limited, or Controlled Positions are under a human/personnel reliability program in accordance with the provisions of reference (d).
6. Personnel security clearances for persons occupying Controlled Positions shall be based on the classification of the information which they require or may acquire in the performance of assigned duties.

C. Forces:

1. The number of personnel assigned to a Security Force, Reserve Force or Augmentation Reserve Force, their equipment and utilization are determined by many factors, such as: the geographic area in which the nuclear weapons are located, the dispersion of Exclusion Areas, size of the area that must be protected, and the ease or difficulty in maintaining surveillance over Limited and/or Exclusion Areas. Manning of these forces shall be as follows:
 - a. Under normal conditions, a Security Force on duty shall be manned to preclude unauthorized access.
 - b. Under emergency conditions, a Security and Reserve Force in Class I land areas, as defined by this Directive, shall be manned to reasonably assure that the nuclear weapons can be protected for that length of time required for emergency evacuation or destruction, if authorized, to be accomplished by other designated personnel, or the Augmentation Reserve Force to arrive on the scene.

Continuation of VI.C.1.

- c. Under emergency conditions a Security and Reserve Force in Class II land areas, as defined by this Directive, shall be manned to reasonably assure that the nuclear weapons can be protected for that length of time required for the Augmentation Reserve Force to arrive on the scene.
 - d. In Class I land areas, Augmentation Reserve Forces shall be designated or provided in accordance with guidelines established by the appropriate Unified or Specified Command. In Class II land areas, they need not be pre-designated; however, emergency plans of the Services and DASA, as applicable, shall provide for such forces.
2. Reaction times for the following team and forces shall be specified by the appropriate Unified or Specified Command, Service, or DASA, but in any event shall be:
- a. Security Alert Team (SAT). Less than that required for a person or hostile group to gain unauthorized access.
 - b. Backup Alert Force (BAF). In sufficient time to re-inforce the SAT, but in all cases not more than twice the reaction time stipulated for the SAT.
 - c. Reserve Force (RF).
 - (1) In Class I land areas, one hour or less.
 - (2) In Class II land areas, based on V.B., above.
 - d. Augmentation Reserve Forces (ARF's).
 - (1) In Class I land areas, as established by the responsible Unified and Specified Commanders, but shall be within four hours.
 - (2) In Class II land areas, as required by established plans and dependent upon the conditions described in V.B., above.

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3. The minimum number of training exercises for the team and forces shall be as follows:
 - a. SAT's and BAF's. In Classes I and II land areas, as required to maintain proficiency, but at least once a week.
 - b. RF's. In Class I land areas, in conjunction with emergency evacuation/destruction exercises. In Class II land areas, as frequently as required to assure proficiency, but at least once every 60 days.
 - c. ARF's. In Class I land areas, semi-annually in conjunction with an emergency evacuation or destruction exercise. In Class II land areas, at the direction of the responsible commander.
4. As a minimum, Security, Reserve, and Augmentation Reserve Forces shall be equipped with: the type of transportation which shall assure effective utilization and minimum reaction time; the type of arms required for the environment in which employed; and, primary and alternate communication systems.
5. Security, Reserve, and Augmentation Reserve Forces personnel shall be armed and shall use the degree of force necessary to protect the nuclear weapons. ✓
6. Personnel having custody of U.S. nuclear weapons shall be armed and shall use the degree of force necessary to prevent the loss of custody of the nuclear weapons.
7. When warranted by emergency conditions, the primary efforts of Security, Reserve, and Augmentation Reserve Forces shall be directed to protecting areas in which nuclear weapons are located, to assure that authorized emergency evacuation or destruction can be accomplished.

D. Two-Man Concept:

1. During any operation which may afford access, a minimum of two (2) authorized personnel, each capable of detecting incorrect or unauthorized procedures with respect to the task to be performed and familiar with applicable

Continuation of VI.D.

safety and security requirements shall be present. Two (2) authorized personnel shall be considered to be present when they are in a physical position from which they can positively detect incorrect or unauthorized procedures with respect to the task and/or operation being performed.

2. When application of the two-man concept is required, it shall be constantly enforced by the personnel who make up the team, both while they are accomplishing the task or operation assigned and until they leave the area which permits access.
3. The Security Force shall assure that no lone individual is permitted in a Limited and/or Exclusion Area unless access as defined by this Directive is further controlled by: the use of intrusion detection alarm systems which meet the minimum requirements of VI.I.2., below; Security Force personnel; or, a combination thereof.
4. The only exceptions to the above are, or shall be, those specifically set forth in approved nuclear weapons-systems safety rules.

E. Entry and Access Control:

1. Entry control to Limited and/or Exclusion Areas shall be formalized and maintained in order to assure positive identification of personnel prior to admission. As a minimum, the following shall be used: a controlled badge system; formal entry control rosters; a visitor escort system; and a duress system. In Limited and/or Exclusion Areas where a badge exchange system is in effect, and the Limited and/or Exclusion Area badge contains a photograph and sufficient information to allow positive identification of the bearer, it shall suffice as a formal entry control roster.
2. Access as defined by this Directive shall be restricted to authorized personnel, and the number of persons permitted such access shall be kept to a minimum.
3. When service or construction projects in a Limited and/or Exclusion Area require the presence of personnel who do not meet minimum clearance requirements for entry, such personnel shall be kept under constant surveillance by supplementary personnel from the Security Force or specially designated personnel. Movements in the Limited or Exclusion Areas shall be limited to those necessary for the performance of assigned tasks.

F. Physical Barriers:

1. Physical barriers shall clearly delineate the zone of protection associated with Limited and/or Exclusion Areas and provide a positive means of denying or impeding entry thereto. These barriers may be walls or fences on land, or decks and bulkheads aboard ships. Where permanent physical barriers are considered impractical, because of the temporary nature of the Limited and Exclusion Areas or for other reasons, such as the space limitations aboard a submarine or aircraft, their absence shall be compensated for by temporary physical barriers, additional guards or patrols, controls, or other security measures. At facilities where nuclear weapons are located on land, the following minimum requirements shall be met in:
 - a. Class I land areas, two barriers.
 - b. Class II land areas, one barrier.
2. The degree of obstruction assured by a permanent physical barrier shall be comparable to that provided by a chain link fence, using No. 9 gauge wire; with mesh openings not larger than 2 inches per side; which is 8 feet high (including an 18 inch, 45° outrigger strung with three strands of No. 12 gauge barbed wire, spaced 6 inches apart), with metal posts and structural members located within it and firmly anchored in the ground; that is, taut and reaches to within 2 inches of firm ground and sufficiently below soft surfaces to compensate for shifting soil; with culverts or equivalents under it secured with welded bar grills; and, constructed in an area where the topography does not defeat its purpose.
3. Permanent physical barriers in Class I land areas shall be separated not less than 15 feet or more than 150 feet.
4. Entry control gates or doors (pedestrian and vehicle) shall be structurally comparable to their associated barrier(s) and designed so that the traffic through them shall be under the positive control of the Security Force.

Continuation of VI.

G. Clear Zones:

1. Ideally, clear zones are free of all obstruction, topographical features, and vegetation which may offer concealment of an intruder.
2. Clear zones shall be established and maintained on both sides of and between permanent physical barriers located in Classes I and II land areas. As a minimum, they shall extend 30 feet on both sides of the physical barriers. Whenever this is not practical, such as when serious erosion problems would result, or local laws prohibit clearing, compensating security measures shall be employed.

H. Lights:

1. Security lighting shall be provided for permanent Limited and/or Exclusion Areas in Classes I and II land areas in such a manner as to discourage, and facilitate the detection of, attempts of unauthorized approach to or entry into such areas. Such lighting shall be under the control of the Security Force. Where such lighting installation is impractical, such as immediately adjacent to runways, its absence shall be compensated for by additional guard posts, patrols, controls, or other security measures.
2. Lighting shall be positioned within the protected area, on, above, or near permanent physical barriers, entry control gates, and areas or structures where weapons are located in such a manner as to provide adequate illumination of the weapons and the immediate area surrounding them.
3. Perimeter-type lighting at permanent sites in Class I land areas shall be positioned to enable the detection of persons 30 feet outside the perimeter physical barrier.
4. A protected alternate source of power shall be provided for all such security lighting.

I. Intrusion Detection Alarm (IDA) Systems:

1. The paramount purpose of such systems shall be to provide useful and practical assistance to a Security Force. As a minimum, intrusion detection alarm systems shall be used on all nuclear weapon storage structures in permanent sites

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located in Classes I and II land areas. Compensating entry control measures shall be applied to temporary weapon storage areas and to structures not equipped with IDA systems which meet the minimum requirements of paragraph VI.I.2., below.

2. Such systems shall be dependable, easy to maintain in their operational environment, adequately protected against tampering, and fail-safe (i.e., fail in the alarm mode); have low false-alarm rates; and, be equipped with a protected alternate source of power.
3. Data shall be maintained relative to alarms, false alarms, tests, malfunctions and servicing/maintenance to allow for continuous evaluation of installed systems.

J. Security of Weapon Storage Structures:

The physical security features of permanent weapon storage structures in Classes I and II land areas shall be comparable to those set forth in DASA Nuclear Weapons Storage Facilities Manual (SFM series). ^{1/}

K. Security Aboard U.S. Navy Ships:

1. U.S. Navy ships shall be treated as Class II land areas.
2. All requirements of this Directive shall be complied with aboard U.S. Navy ships, except for paragraphs VI.G. thru VI.J., above.

L. Transportation:

1. The objective of the security requirements set forth below is to provide an adequate degree of protection for nuclear weapons being logistically moved, deployed or dispersed between Limited Areas. The requirements below shall be applied to authorized military and commercial vehicles.
2. The number of Security Force personnel and/or couriers employed shall be based upon the particular type and means of shipment. In addition, the conditions under which the shipment is made shall be considered. As a minimum, couriers and Security Force personnel used during transportation shall:

^{1/} Available on a need-to-know basis from the Director, Defense Atomic Support Agency, ATTN: OALG, Washington, D. C. 20305.

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- a. Be sufficient in number to provide adequate relief in order that fatigue shall not diminish their effectiveness. In addition, whenever weapons are transported by motor vehicles or rail freight off-base in Class I land areas, the personnel shall be in sufficient number so that authorized emergency destruction can be accomplished.
 - b. Be armed, qualified and selected in accordance with the provisions of VI.B., above.
 - c. Establish a Limited Area around the weapon carrier whenever it is stopped, parked or docked prior to reaching its destination where the weapons are scheduled for off-loading. (The designated receivers shall establish the same area around the vehicle prior to scheduled off-loading).
 - d. Assure compliance with VI.D. and VI.E.2., above.
3. Emergency plans and procedures shall be formulated and made known in detail to all shipment security personnel and others concerned. Such plans shall include communications systems, necessary liaison with local government and law enforcement agencies, and action to be taken in the event of accident, unusual delay enroute, attempted or actual removal/damage of shipment, emergency destruction, or other incidents affecting successful completion of the mission.
4. In addition to the above, the following minimum requirements are applicable to the several means of shipment indicated.
- a. Transport Aircraft: The appropriate Military Service or Agency shall insure continuous protection of nuclear weapons for the trip. The security responsibility during the movement shall be vested in the courier, whose responsibility in this matter shall be subordinate to the authority of the aircraft commander only in circumstances where the aircraft commander rules that flight safety requirements are paramount. The commander of any enroute base or station at which the aircraft lands shall provide the security required to protect the nuclear weapons. However, the courier shall retain his assigned responsibilities at such bases.

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- b. Combat Type Military Aircraft: When such U.S. military aircraft are used for logistic movement, deployment, or dispersal of nuclear weapons, compliance with applicable nuclear weapon systems safety rules shall be assured. When single-place aircraft are used for such operations and surveillance of the weapon during the flight is not practicable, combat operational security procedures shall be applied from take-off to landing.
- c. Motor Vehicles: When space permits, an armed guard in addition to the driver shall ride in the cab of each motor vehicle carrying or towing a weapon. Such a vehicle, or a convoy of such vehicles, shall be preceded by and followed by at least one security vehicle. Each security vehicle shall contain one armed guard in addition to the driver. To the extent practicable, a vehicle not a part of the convoy shall not be permitted to intervene between elements of the convoy. Each security vehicle in the convoy shall be equipped with a two-way radio for intra-convoy communication. Communications also shall be maintained with designated communications facilities.
- d. Rail Freight: Less-than-carload shipments of weapons shall be moved as carload shipments. If boxcars are used, all doors except the door used for loading shall be fastened on the inside and sealed on the outside. After loading, the loading door shall be locked and sealed on the outside. No less than three security guards shall accompany single car shipments. When multiple-car shipments are made, the cars carrying the weapons shall be kept together. A sufficient number of guards shall be assigned to multiple-car shipments to insure that all cars in the shipment are under observation when stopped. Arrangements shall be made to have the cars accommodating the guards placed in the train so that they adjoin the car or cars containing the classified shipment, except when buffer cars are specified by Service Regulations. Communications shall be maintained with designated communications facilities.
- e. Ships: Waterborne shipment of nuclear weapons shall be made only aboard ships of U.S. registry and preferably by military or Military Sea Transportation Service (MSTS) Ships. When such weapons are

Continuation of VI.L.4.

transported by other than U.S. Navy Commissioned ships, that is, MSTs or other U.S. registry ships, the appropriate Military Service or Agency shall assure continuous protection of nuclear weapons for the scheduled voyage, and this protection shall be no less than that required on board U.S. Navy Commissioned transport ships (e.g., AE type ships). The security responsibility during the voyage shall be vested in the courier, whose responsibility in this matter shall be subordinate to the authority of the ship's Commanding Officer or Master only in circumstances where the ship's Commanding Officer or Master rules that the ship's safety requirements are paramount.

VII. EXCEPTIONS AND WAIVERS

Temporary exceptions, or temporary waivers to the provisions of this Directive may be granted by the Unified and Specified Commands, the Services, or DASA, as applicable, providing that compensating measures have been taken to achieve a comparable degree of security. Exceptions, or waivers that must be continued shall be reported to the Commanders of Unified and Specified Commands, Chiefs of Services, or Director of DASA, as applicable.

VIII. INSPECTIONS AND/OR SURVEYS

The Services, DASA, and Unified and Specified Commands shall, at regular intervals, accomplish security inspections and/or surveys of their units which have U.S. nuclear weapons or are charged with the responsibility of transporting them.

IX. EFFECTIVE DATE

This Directive is effective immediately.

X. IMPLEMENTATION

- A. DoD Components shall establish priorities for meeting the new physical security requirements set forth in Sections VI.F., VI.G., VI.H., and VI.I. Based on these priorities, financing requirements shall be included in the Military Construction budget estimates of the Services and DASA beginning with FY 1970, with the remaining financing requirements included in the FY 1971 budget estimates. Until these new physical security requirements are met, compensating measures shall be applied to assure a comparable degree of security.

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- B. Two (2) copies of each implementing document shall be forwarded to the Assistant Secretary of Defense (Administration) within ninety (90) days. One copy shall be marked to indicate the implemented sections, subsections, paragraphs, and subparagraphs of this Directive.
- C. Two (2) copies of all supplements and amendments to original implementing instructions shall be furnished to the Assistant Secretary of Defense (Administration) within fifteen (15) days of publication.

Paul H. Nitze
Deputy Secretary of Defense

RESPONSIBILITY FOR SECURITY SHARED

Dr. WALSKE. The services then have a responsibility for issuing implementing instructions. The responsibility for security, however, is shared between the services and between the operating commanders. In some instances, you have a commander-in-chief of Europe, a commander-in-chief of the Pacific who is a combined commander. He has a responsibility for security which cuts across the service responsibility.

Actually, the security must be good enough to satisfy the requirement of both the operating commanders and the services and also, be in accord with the Department of Defense's regulations and directives.

Senator SYMINGTON. Based on a trip that Senator Pastore and Mr. Murphy, of our staff, made this year—I think you made two in the last couple of months?

Mr. MURPHY. Yes, sir. I made one in November 1972 with an AEC group; and subsequently with Senator Pastore and Senator Baker, both on security.

Senator SYMINGTON. Two years ago, Senator Pastore, and Mr. Murphy, and I made another trip. Along with us were Congressman Anderson and Congressman Hansen. Based on those trips, I think this question is quite important. Who is responsible for assuring compliance with security procedures?

Dr. WALSKE. Each of the operating commanders which I described, that is the CINC's, has a structure directly under his control which assures compliance.

Second, the services also conduct inspections to insure compliance. At the Secretary of Defense's level, it has been my practice in the 7-odd years I have been in this position to do a certain amount of field checking, myself, of the situation, but I don't consider myself a formal inspector. The Defense Nuclear Agency conducts a formal technical standardization inspection program designed to insure compliance with AEC, DOD, and Service security requirements.

Senator SYMINGTON. Colonel Shwiler tells me that Senator Baker especially was worried about possible takeovers.

Was an analysis made of that as part of the program, as to how long it would take a possible enemy to grab up what we had in a particular place?

I would like Mr. Murphy to make a comment on that. He has just come back from two trips.

Mr. MURPHY. [Classified matter deleted.]

Senator SYMINGTON. I think that is a good report. It is a justification for apprehension. Again, I will say I wish we had more coordination of the atomic weapons picture.

Dr. WALSKE. Could I comment on Mr. Murphy's remarks?

Senator SYMINGTON. Yes.

Dr. WALSKE. [Deleted.]

Senator SYMINGTON. In 1959, I visited a relative of mine who was President Eisenhower's Ambassador to Great Britain, where I had a chance to see more than a member of the Armed Services Committee would normally see about this. [Deleted.]

I don't know about the JUPITERS that were [deleted] at the same time, but I imagine there was little difference between the two.

In 1967, when I went to Europe with General Holloway, we had a situation that inspired nervousness because friction with France was

developing rapidly under General DeGaulle. We had our weapons on foreign soil with French planes and pilots. At that time, I asked, how long would it take if a team suddenly came in to make the weapons usable in which case, based on this airbase, that country would have been the second most powerful atomic country in the free world.

They said, [deleted].

Since then, based on a trip we took 2 years ago, it has been very much improved.

CIVILIANS WITNESS WEAPONS FIRING DRILL

On the other hand, in 1967, I saw one of our missiles, either the HONEST JOHN or PERSHING in Europe and they emphasized how secret it was. They had it all done right up to the actual firing for me, including the whistle. Everybody came in and went to their post, you might say, under the alert immediately. Like a pilot running for a plane under an Air Force alert. I suddenly looked up and I saw scores of civilians standing around a sort of punch bowl in which all of this was located.

I said, "Who are those people?" He said, "They are people living around here."

I said, "They are looking at everything you are doing. You said it is highly classified. How about it?"

The General in charge said, "The [deleted] are a very homogeneous people."

That was the answer.

Let us turn to justification for new weapons systems.

MOVEMENT OF WEAPONS BY AIR

Representative LUJAN. Before you leave the security field, one of the comments that I have heard is that there is some serious thought being given to the movement of weapons through the air rather than convoys and that sort of thing.

It occurs to me we might improve the security but what about safety? Is there serious thought being given to moving them by air?

Dr. WALSKE. We do move by air as much as we possibly can. In fact, the DOD directive on logistics movements which could be provided to you, requires or recommends air movement preferentially for reasons of both safety and security.

Representative LUJAN. How can it be safer?

Dr. WALSKE. There is a little qualification on safety.

In terms of the number of miles that a weapon is moved, air movement is definitely safer than ground movement, in that the accident rate per weapon mile is much less for air movement.

Just think, for example, of say, the [deleted] and the amount of traffic we have there and that kind of comes through.

One qualification I would make is that if you have an accident in an air movement, the velocities are higher and therefore, the nature of the accident is more severe. The probability of getting an explosion of an implosion system is probably greater in an air accident than it is with a ground movement. It has been the consensus in the Department of Defense that all things considered, air movements are preferred. The Army uses helicopters in quite a lot of its weapon movements. In this case, the velocities are not so terribly much higher than for ground movements.

WEAPONS MOVEMENT BY HELICOPTER

Representative LUJAN. Moving by helicopter does not appear to me to be a very safe thing. Maybe I don't have quite as much trust in helicopters as you do.

Dr. WALSKE. I agree, they don't look reliable, but the statistics support their reliability.

Senator SYMINGTON. I think Congressman Lujan's question is very pertinent. What worries me is that there is so much unnecessary secrecy about the situation. Now, we have discussed these very expensive weapons for 155mm's and 8-inch. [Deleted.] The question that I asked in this hearing room was, "We are putting up hundreds upon hundreds of millions of dollars to make the shell. Where would we use it?"

The answer was, in Europe. [Deleted.]

I said, "That is not my question."

[Deleted.]

Under all the circumstances, I notice [deleted].

Representative HOSMER. The use of those things is more or less a matter which has been the subject of considerable analysis in NATO?

Dr. WALSKE. Yes, sir. In terms of the nuclear planning group under the civilian side of NATO and under SACEUR, the military site of NATO, there is a total interchange in a planning sense.

There are no secrets from the NATO allies in terms of our present posture.

[Deleted.]

So, there is actually positive motion in that direction.

Senator SYMINGTON. I think you don't quite get my point. [Deleted.]

Now, several thoughts occur to me. If you decide you are going to have a golf tournament and you advertise it and you get all the pros to accept and you put up the purses, then the president of the golf club says, "You can't play on this course," you have a problem.

FRENCH ATTITUDE PUZZLING

When I was with General Lemnitzer, then head of SHAPE, he said "it is unbelievable the way we are being handled by the French." I remember specifically he told me that he received an order from a French colonel to take the flag down from his headquarters at SHAPE in Brussels. This was at a time when everybody was saying, "Well, if there is any real trouble, and we are short, the French will come back." They kicked us out as you know. When this colonel ordered General Lemnitzer to take the French flag down, he said, "I will not do it unless I get an order from President DeGaulle, himself."

Within 48 hours, he had a letter from President DeGaulle, instructing him to take the French flag off the headquarters at SHAPE. This is an illustration of why I believe it important this matter be clarified as to where we could use these weapons.

Representative HOSMER. We have discussed the use of these weapons on a NATO basis, Mr. Chairman, with NATO people and not on an individual basis. When the time for use came, then the decision would be made irrespective of the national basis, on a NATO basis. I think that the questions are not logically directable on a national basis to an individual or national official, but they should be directed to NATO on a NATO basis.

Senator SYMINGTON. [Deleted.]

Representative HOSMER. I think that is right, too. You can't say exactly that because something happened the last time around, it will happen again.

Senator SYMINGTON. I would quote from the testimony of General Giller: "Our next viewgraph gives you some idea of the number of tubes available in Europe. [Deleted.] 155 millimeter shells over there. [Deleted] NATO tubes which are capable of firing, [deleted]."

JUSTIFICATION FOR NEW WEAPONS SYSTEMS

Now, justification for new weapons systems—Dr. Walske, would you say that nuclear weapons are developed to fill stated needs or that services needs are influenced by what seems available from the Atomic Energy Commission weapons laboratories?

Dr. WALSKE. I believe both. The nuclear weapons area is one in which the laboratories have often led. They have bright people. They know the military problems. In many cases, they travel, they interact and quite often, they come up with solutions to military problems before the military people know that a solution is possible.

On the other hand, there are certainly instances, for example, where one of the services is developing a new delivery system and the delivery system will profit from having a nuclear warhead and the services, in essence, generate the requirement for the warhead. The answer to your question is both ways.

Senator SYMINGTON. Are you saying that the Atomic Energy Commission will supply warheads to the services developing weapons without approval of the services?

Dr. WALSKE. No, sir. I was referring to the origin of ideas and the inspiration for ideas. Once a laboratory has such a good idea, it is still necessary for the requirement to be validated by the services and to originate with the services, otherwise weapons are not developed.

WHO DEVELOPS NUCLEAR WEAPONS

Senator SYMINGTON. I was not talking about research, either basic or applied. I was talking of development.

Would you say that nuclear weapons are developed to fill stated needs, or that service needs are influenced by what seems available from the AEC weapons laboratories?

Dr. WALSKE. Engineering development is only entered into by the AEC after formal request by the Department of Defense.

Senator SYMINGTON. That is what I was getting at. Thank you.

Which command in each service is responsible for initiating requirement for new nuclear weapons?

ORIGIN OF REQUESTS FOR NEW NUCLEAR WEAPONS

Dr. WALSKE. Requirements for new nuclear weapons may originate from the commanders in chief of the operating commands in the field who each year forward their recommendations to the Joint Chiefs of Staff and the Joint Chiefs of Staff make their recommendations to the Secretary of Defense on their bases.

At the same time, each service has at several places within its own organization the capability of generating nuclear weapons requirements.

So, there are actually two channels by which nuclear weapons requirements can be forwarded to the Secretary of Defense.

That is either through the Joint Chiefs of Staff and the combined command structure or from the services to the service Chief of Staff and Secretary.

FINAL DECISIONMAKER

Senator SYMINGTON. Who is the final decisionmaker, leaving aside the White House and Budget Bureau? Is it the Secretary of Defense, himself?

Dr. WALSKE. In terms of the initiation of weapons engineering, weapons development, this is primarily the responsibility of the Director of Defense Research and Engineering.

Senator SYMINGTON. Can he instruct the AEC to build a certain weapon?

APPROVAL OF PRESIDENT REQUIRED

Dr. WALSKE. To take it into engineering development, yes, sir. As far as production goes, that is going into the stockpile, that is a further step. This requires actually the approval of the President based on the recommendation of the Secretary of Defense and the Atomic Energy Commission.

Senator SYMINGTON. How is the service stated requirement for a new nuclear warhead related to existing or proposed delivery systems?

Dr. WALSKE. In moving forward with the recommendation to the Secretary of Defense or the Director of Defense Research and Engineering, any requirement for weapon development must be justified in terms of an actual conceived use in the services.

A full presentation has to be made by the services in making such a request.

Senator SYMINGTON. To whom?

Dr. WALSKE. To the Director of Defense Research and Engineering.

Senator SYMINGTON. Does he approve it?

Dr. WALSKE. He may approve or disapprove. I would like to add one thing here.

In terms of major systems where there can be an issue of judgment, the Director of Defense Research and Engineering is rather careful to check with the Secretary of Defense to see that he is in step with him before he approves such a request.

WHEN IS AEC FIRST CONSULTED?

Senator SYMINGTON. When is the AEC first consulted informally about the service weapons concept under consideration?

Dr. WALSKE. We have a process of—you say informally?

Senator SYMINGTON. Yes.

Dr. WALSKE. Informally, consultation begins to go back and forth at the earliest possible moment in the conceptual feasibility studies.

Senator SYMINGTON. When is the Atomic Energy Commission consulted formally?

PHASE 1, 2, 3 PROCESSES

Dr. WALSKE. This occurs in what we call our phase 1, phase 2, phase 3 process, where phase 1 is conceptual study jointly by an interested service and the AEC, just to sketch out whether or not a given system could profitably be equipped in a nuclear way. One goes into more detail in phase 2 and actually evaluates the feasibility and the cost and impact on the industrial complex. The channel for routine consultation is the annual nuclear weapons development guidance/weapon development status report cycle.

Senator SYMINGTON. My next question was going to be, when does phase 1, weapons conception, officially start.

Dr. WALSKE. I already started answering that.

This starts, really, just as soon as anyone starts to seriously consider that a nuclear warhead should be provided for a given kind of system or might be provided.

Senator SYMINGTON. You don't mean anyone. Whom do you mean? What kind of person?

Dr. WALSKE. A responsible person in one of the services. The services have to state their needs. So, it is a coordinated service position.

Senator SYMINGTON. If it is a new nuclear bomb, who do they start with?

Dr. WALSKE. In the case of the Air Force, it would come from their Deputy Chief of Staff for Research and Development and his office, but it would be coordinated with the operations people. If the Chief of Staff of the Air Force is convinced and approves, the request is submitted to the Secretary of the Air Force who also can approve or disapprove. Concurrently, the air staff will be trying to make their case in the JCS.

Senator SYMINGTON. How about the other services?

General KEITH. Similarly. In the Army the civilian side gets in.

General BRICKEL. Also in the Navy.

Senator SYMINGTON. What actions within the Department of Defense are necessary before the service and the Atomic Energy Commission can start a joint study program, phase 2 you referred to, on the feasibility of a new nuclear weapon?

Dr. WALSKE. The justification for such a study has to be provided to the Director of Defense Research and Engineering who must be convinced of the need. The request to start such a study, a phase 2 study, originates with him and goes to the Atomic Energy Commission.

Senator SYMINGTON. When does the Office of the Joint Chiefs of Staff become involved in the negotiations for the development of a new nuclear weapon?

Dr. WALSKE. In the instance just mentioned, of a phase 2, for example, the Office of the Joint Chiefs of Staff is asked to comment and participate in the decision as to whether a new phase 2 should be initiated.

The Joint Chiefs of Staff also annually recommend to the Secretary of Defense nuclear weapon development guidance which forms the basic paper which goes from Defense to the AEC annually, covering the whole field and establishing the direction and priorities of AEC research.

Senator SYMINGTON. When does the Office of the Joint Chiefs of Staff become involved in the negotiations for the development of a new nuclear weapon?

Dr. WALSKE. In terms of development for phase 3?

Senator SYMINGTON. Yes.

Dr. WALSKE. In a similar way when a phase 3 request is being considered by the Director of Defense Research and Engineering, the Joint Chiefs of Staff are asked to comment and their opinions are considered.

Senator SYMINGTON. What is your role as Atomic Energy Assistant to the Secretary of Defense in the initiation of phase 1 and phase 2 studies?

Dr. WALSKE. I don't initiate any of them. As an interested officer in the Office of the Secretary of Defense, I participate completely in all of these actions, advise the Services, the JCS, and the Secretary of Defense, and contribute to the decision.

Senator SYMINGTON. Most of these operations are financed by the Atomic Energy Commission; isn't that correct?

WHO PAYS FOR PHASE 1, 2, 3 STUDIES

Dr. WALSKE. The phase 1, 2, and 3 studies are conducted jointly by the AEC and DOD with each paying its own direct costs; the AEC paying for all weapon research, development, and production, and the Services paying for the items which they provide.

Senator SYMINGTON. I know how I feel if I know I am going to get something for nothing as against being forced to defend it with my own group and on my own budget.

Do you think that is one of the reasons why the costs are high in this field?

Dr. WALSKE. I suppose it is somewhat easier to ask your friend to do something that he is going to pay for than it is to pay for it, yourself. There must be some of that. But the friend in this case, that is the Atomic Energy Commission, is not willing to do wasteful or unproductive things. It wants to be convinced that whatever it is asked to do is worthwhile and to the point.

So, from my observation, the Atomic Energy Commission is not hesitant to speak up and tell us when we have asked for too much or we have asked for something too fast.

Senator SYMINGTON. Suppose a very strong, a very influential individual in the Department of Defense, requested a particular weapon, even though it was silly because he did not have to pay for it, do you think that the Atomic Energy Commission would stand up and say, "No"? Do you know of cases where that has happened to justify your point that the Commission rejects anything that is silly?

Dr. WALSKE. I can't recollect things which are described as silly, but I can recollect a number of instances when General Camm was responding and, in his opinion, we wanted something unreasonably fast and he has told us that we had better take a little more time to develop something rather than go into a crash program.

But to meet some dates which the Defense Department prefers—

Senator SYMINGTON. General Camm, how long have you been with the Atomic Energy Commission?

General CAMM. This time, I came about a year ago, sir. I was with them in 1946.

Senator SYMINGTON. Would you say your experience with General Giller was the same?

Dr. WALSKE. Yes, sir.

Senator SYMINGTON. He is in the room, by the way.

What actions are necessary by the services and the office of the Secretary of Defense before a phase 3, development engineering agreement, can be signed with the Atomic Energy Commission?

Dr. WALSKE. Phase 2 must have been completed which provides both the technical feasibility and the cost and impact on the AEC production complex if one goes ahead with engineering development and production.

This information is considered by the service that requested the study and they reach a decision as to whether to make a recommendation to go into phase 3, engineering development. If they decide to do so, their recommendation is then made to the Director of Defense Research and Engineering, who considers it, himself, but also gets the advice of myself, of the Joint Chiefs of Staff, of the other services, and reaches a decision.

As I have already indicated, if it is a major decision, he would inevitably check with the Secretary of Defense before going ahead.

This, then, is conveyed in a letter to the Atomic Energy Commission and the Atomic Energy Commission responds to the letter.

If they accept the task, then phase 3 begins.

Senator SYMINGTON. When is the last time that information of this character was developed in this detail before the Joint Committee?

Dr. WALSKE. Of the process of weapon development?

Senator SYMINGTON. The questions I have been asking you today.

WEAPONS DEVELOPMENT QUESTIONS NEW

Dr. WALSKE. In my experience, I have never answered these types of questions before the Joint Committee. I recollect the last hearing in which the Office of the Secretary of Defense was involved before the Joint Committee on the subject of nuclear weapons must have been 1967 when Alain Enthoven came over as the main witness and I was the supporting witness.

Senator SYMINGTON. You, yourself, as head of this department, have not had a hearing of this character?

Dr. WALSKE. I think it was 1967, it might have been 1968. That hearing was of this general character, but the emphasis at that particular time was more of a total review of all of our individual theater nuclear weapons system and why some were being procured and why others were not.

Senator SYMINGTON. Don't misunderstand me, my good friend from California, Congressman Hosmer, says you have been on the job for 8 years. My friend, Mr. Murphy, has been on the staff for 15 years. He has told me there has never been a hearing of this depth. I want to build everything we need, but I don't want anything we don't need because the financial situation is getting pretty serious in this country.

BACKGROUND INFORMATION NOT LACKING

Dr. WALSKE. Mr. Chairman, could I suggest, though, that while the Defense Department has not been a participant in this type of hearing for the period I indicated, we have provided volumes of information to the Atomic Energy Commission to support their presence in hearings. It seems that it would put the matter in better perspective if perhaps General Giller would say to what extent this type of information has been developed before the committee by the Atomic Energy Commission staff over, roughly, this period of time.

Senator SYMINGTON. General Giller, would you like to comment?

General GILLER. I think that during my 5 years previously we had not gone into the depth with which this hearing has gone regarding the rationale for systems, where they are and how many.

Insofar as the discussion of the process of decision machinery between the Department of Defense and the AEC, namely, the phase 1, 2 and 3 system, I can't recall exactly, but in the record I think at least two times in my authorization testimony I have described and have used viewgraphs in which this process has been described. But it was in the form of just describing a process, but not an in-depth probing of the whole basic system.

IN-DEPTH PROBING UNUSUAL

Senator SYMINGTON. That verifies the statement made by Mr. Murphy; and I know the newer members of this committee are interested in the process, as I am.

Representative HOSMER. Mr. Chairman, I think it should not be overlooked that individual members of the committee who have interested themselves in doing so have quite frequently contacted the Pentagon, the laboratories, attended special briefings, also taken part in seminars with respect to particular weapons programs, so that it has not been a subject which has been fully outside the ken of members of this committee.

Senator SYMINGTON. I am sure that is true.

I thank my good friend from California, and I agree it is constructive to have a hearing and get all the facts together, instead of going to the place to find things out.

That is why I am interested in the presentation with the questions that the staff prepared this morning.

NUCLEAR ARTILLERY

Representative LUJAN. Mr. Chairman, might I pursue the earlier discussion that you had about [deleted].

You certainly did not mean to indicate, did you, Dr. Walske, that [deleted] artillery shell.

Dr. WALSKE. Yes, sir, in fact, they are deployed in [deleted]. And, of course, there are some that are available in the United States which

could be deployed to any particular area of need. We start a general conversation and end up focusing on Central Europe because it is such an important area in our thinking.

I think it is a lapse we fall into.

Representative LUJAN. I wondered why we centered, [deleted] at the moment. Certainly, no nation is going to say, it is fine for you to come and explode your atomic weapons here.

[Deleted.]

Would that not be your assessment?

Dr. WALSKE. I would expect that, with respect to nuclear weapons use, if we were at the point of use of the weapons in the defense [deleted].

Also, there are foolish things you can do with nuclear weapons if you don't have a good plan. Therefore, it is necessary to have a good plan for using nuclear weapons and one that is convincing to our allies that it is going to be in their interest in a given situation.

Representative LUJAN. Do you have agreements with other nations that you can use these weapons in times of war?

Dr. WALSKE. In all NATO countries. [Deleted.]

You raised the question about what would their reaction be in time of actual crisis?

It takes a little speculation to answer that question, but I speculate to say that I think they would ask for our support.

General KEITH. I think we have two separate issues to consider. On the one hand, we are talking about [deleted].

[Classified matter deleted.]

Colonel SHWILLER. [Deleted.]

Dr. WALSKE. Yes.

Colonel SHWILLER. We received it yesterday.

Dr. WALSKE. [Deleted.]

Colonel SHWILLER. [Deleted.]

Senator SYMINGTON. How many of our total of some 7,000-plus nuclear weapons are located [deleted]. Around [deleted] is it not?

Dr. WALSKE. I will give you that. As of April 30, which are the figures that I have, [deleted] there were [deleted].

Senator SYMINGTON. Would you recommend producing this shell if one European country refused to use it, but the other countries agreed.

Dr. WALSKE. [Deleted.]

Senator SYMINGTON. Right.

Dr. WALSKE. [Deleted.]

Senator SYMINGTON. The premise of this new nuclear shell is that it is [deleted]; is it not?

Dr. WALSKE. No, sir. It is an [deleted] round as is the present round. It has other characteristics which are different.

Senator SYMINGTON. So, the new shell is [deleted].

Dr. WALSKE. It is [deleted].

Senator SYMINGTON. It is designed [deleted].

Dr. WALSKE. The way that it is designed, [deleted].

Senator SYMINGTON. I did not mean to put it quite that way.

My point is this: The United States may consider a nuclear war in Europe as tactical, but to the Europeans it could well be a strategic nuclear war, particularly if there is considerable fallout.

[Deleted.]

I can understand that the NATO countries do not want a problem of having their country turned into a nuclear battlefield if they can prevent it, regardless of the size of the weapon.

Representative HOSMER. Don't these issues go beyond your cognizance. Dr. Walske, to the actual strategy and tactics of the defense of Europe by the Unified Commands of Europe, NATO Command. Therefore, if one of the countries suddenly says, [deleted].

Dr. WALSKE. Yes, sir.

My responsibility is as an advisor. I am not in the final decision-making business, but I would like to make a point, if I may, about the [deleted] of nuclear artillery because it is often misunderstood.

This applies not to just nuclear artillery, but any nuclear weapon. [Deleted.]

NUCLEAR ARTILLERY AND FALLOUT

The fact is that when a nuclear weapon is exploded, it is a fireball which is not very large in diameter. If the fireball is kept from intersecting the ground the local fallout, in the absence of a rainstorm, is of no consequence. The fallout becomes a worldwide fallout, and it is the same proposition as you would get from an atmospheric nuclear test some distance off the ground.

The way nuclear artillery is used in the doctrine is such that fireballs are never to intersect the ground. I will correct that in just a moment. Therefore, the fallout from the use of nuclear artillery would not be local and would not be a problem.

The difference between [deleted] are, is therefore nothing in this particular instance.

On the other hand, one can talk about other types of unwanted damage. That is, if you were to destroy with the blast wave, structures or civilians that you wanted to avoid.

Now, in my experience some of the best studies done at Livermore by the Lawrence Radiation Laboratory people, and at Los Alamos, indicate that in the European situation, if you are interested in striking military force and avoiding striking towns and villages and so on, and still having enough yield so that you can get some impressive impact potshot, that you should have, say, [deleted] yield or more in order to get some sizable type of impact, that is an area coverage which is more than a point, and probably should keep yields [deleted].

These are somewhat spongy figures. [Deleted] to [deleted] turns out to be a yield range which can be militarily effective, decidedly effective, and which can be used between villages, if you like, as you find them in the density that they occur in Europe.

There is very little understanding about these types of problems. Senator SYMINGTON. What did you say about the rain?

RAINOUT

Dr. WALSKE. In the case of rain, if a cloud from a nuclear explosion passes under a rain cloud, a rainstorm, you can get something which we call rainout which is not fully understood, but it looks as if you can get a heavy deposition of radioactivity in that case.

Senator SYMINGTON. Colonel Shwiller, do you have anything you wish to present?

Colonel SHWILLER. I would like to get some statistics. If you assume you are going after a 2,000-foot front with tanks and you want to destroy them by blast, and assuming an appropriate height of burst so that the fireball doesn't touch the ground, it takes about [deleted] pounds per square inch, which requires [deleted].

If you went after the personnel in those tanks with the same 2,000-foot front with an appropriate height of burst, you can do this with a [deleted] weapon. Here, you are depending upon the [deleted] to give almost instantaneous incapacitation.

If you went after what Dr. Walske referred to as the [deleted] this would take about [deleted], which is about [deleted] or something less than [deleted] which used the blast to get the tanks.

There are some more questions about this later. It is a question of why the Army has never really utilized [deleted].

On that basis, of course, you talk about your artillery; you have some pretty good kill mechanisms in the existing artillery up to say, the [deleted] 8-inch shell if you are willing to accept [deleted].

And, again, assuming all [deleted] that they all go at the appropriate high burst.

This was just a—

Representative HOSMER. What about the availability of these weapons from the technological standpoint? Are they available or not, the [deleted] that kill with [deleted] and would they produce [deleted].

Colonel SHWILLER. Do you want me to answer, or Dr. Walske?

Representative HOSMER. Dr. Walske could answer it.

Dr. WALSKE. With regard to nuclear artillery, a test relative to a concept for [deleted] this is a Livermore design, it produces, should produce, about a [deleted] yield, which the laboratory estimates would be equivalent in terms of personnel kill to about a [deleted] weapon.

Representative HOSMER. These are the kinds of weapons on the letter that I sent to a former Secretary of Defense, Clark Clifford, referred to. That was some considerable time ago. Is it not?

Dr. WALSKE. Yes. This is not a weapon yet. This will be a test of a concept [deleted]. Assuming it is successful, it will [deleted] for the [deleted], but nevertheless, Colonel Shwiller is basically correct that [deleted] on the battlefield has some very attractive features.

I think that for future development it is a possibility. It is not in hand at the moment, but it is certainly a possibility.

DESIRABILITY OF NUCLEAR ARTILLERY CONFUSED

Representative HOSMER. I think our problem is that as far as the committee's knowledge is concerned, the problem has not been discussed with the services as to the usability, the desirability of such a weapon and if there is a desirability, how fast you could get it, whether you would want to go ahead with some of the existing artillery developments with [deleted] in mind and so forth.

These things you have kind of left us in the dark on.

Dr. WALSKE. I think you would never want all your weapons to depend on [deleted] in other words, to [deleted] have a [deleted] effect.

Representative HOSMER. At the present moment, we are depending on [deleted.]

Dr. WALSKE. It is fair enough to say some undoubtedly could be used with [deleted].

Senator SYMINGTON. What disturbs me is that I think we ought to do a great deal more research and development in the nuclear field than we are doing, particularly with respect to its applications in nondefense areas.

Would you describe the nuclear weapon development guidance document?

NUCLEAR WEAPON DEVELOPMENT GUIDANCE DOCUMENT

Dr. WALSKE. It is a document which has as its basic objective the identification of the priorities to be assigned to the possible types of nuclear weapon developments of which people are aware.

In other words, all the possibilities are considered. Some are rejected as not being of interest. And the ones that are of interest are arranged by a priority system.

Recently—I have forgotten the date—we sent the latest priority lineup to the Joint Committee as it was evolved in the Department of Defense.

Senator SYMINGTON. What contributions do the unified and specified commanders make to the nuclear weapon development guidance document?

Dr. WALSKE. The unified and specified commanders recommend inputs for the initial draft of the NWDG from the Defense Nuclear Agency. They review the draft in context of their requirements and recommend changes to DNA. Concurrently, they also submit their requirements to the JCS.

Senator SYMINGTON. What contributions do the individual services make to the NWDG?

Dr. WALSKE. The individual services review the draft NWDG concurrently with a review by the JCS. The services recommend additions, deletions, or changes as indicated by their own priorities. This is a joint negotiating process and so not all service desires can be accommodated.

INPUT TO NWDG BY JCS

Senator SYMINGTON. Do the Joint Chiefs have an input to the NWDG or do they act as a conduit in sending the document to the Department of Defense?

Dr. WALSKE. The JCS do not make a direct input into the NWDG. They act as a broker in negotiating inputs and changes recommended by the services and the unified and specified commands.

Senator SYMINGTON. What justification is required from the unified and specified commanders when they indicate their need for nuclear weapons?

Dr. WALSKE. The unified and specified commanders must submit justifications that are convincing, that have the support of one or more of the services, and that can survive the competition with other proposals.

Senator SYMINGTON. Specifically, which unified or specified commander or service head has requested that a new [deleted].

Dr. WALSKE. I would want to check within the system, but I believe there is general support for [deleted].

General BRICKEL. I would add that I believe CINCSAC has asked for that and also it has been requested from CINCPAC and from CINCEUR as well.

Senator SYMINGTON. Will you file additional information for the record on that?

Dr. WALSKE. Yes, sir.

[The information later supplied follows:]

CINCSAC, CINCPAC, and USCINCEUR have supported the requirement for the [deleted] originally developed by the Air Force.

Senator SYMINGTON. For the committee's information, would you state in general terms how a [deleted] would be comparable to and different from the B-28, the B-43, B-57 and B-61 [deleted] bombs now in the inventory?

Dr. WALSKE. The main, and most important characteristic from an operational point of view is that this [deleted] would be capable of [deleted]. In particular—I would like to correct this, if I am wrong—but it is [deleted] whereas, it is a [deleted] in the case of the B-43 and the B-28.

We can provide those numbers accurately, if you would like, for the record.

Colonel SHWILLER. Also,—There is a capability [deleted] for the B-57 and B-61.

Dr. WALSKE. In addition, for the [deleted] we are asking that it incorporate the most that we can feasibly use in terms of safety features. That is, we want it to be safe as our newest technology can make it.

Colonel SHWILLER. One of the intriguing characteristics of this [deleted] is that it would be useful against an [deleted]. I have never been able to figure out what they are talking about.

Senator SYMINGTON. Could you answer that question from the staff?

Dr. WALSKE. I would have to provide the answer. It takes me by surprise.

Senator SYMINGTON. Would you supply it for the record?

Dr. WALSKE. Yes, sir.

Colonel SHWILLER. The statement is either in DNA 48 or DNA 49.

[The information subsequently supplied follows:]

The statement appears on page 133 of DNA report 49M and was taken from the JCS-recommended Calendar Year 1973 Nuclear Weapons Development Guidance Document. The statement reads, "* * * and which has a [deleted].

Senator SYMINGTON. Could you equate yield and accuracy of delivery versus target?

General BRICKEL. If I may, sir, I would say it is not yield and accuracy, so far as type of target, but so far as delivery means. The accuracy is primarily a function of the delivery means, either a surface burst from a [deleted] or an air burst from a [deleted].

The yield, of course, is selected for the target effects. So, there are really two things there. The yield is dependent on the weapon effects

you want on the target, and the accuracy of the delivery mode that you wish.

Senator SYMINGTON. What category of items are included in the generic term "military characteristics"?

Dr. WALSKE. The basic safety specifications are included. The yields desired, the weights and shapes, the priority. If one has to trade off safety cost for weight, these things are ordered in priority within the military characteristics.

Under safety, the basic details have the safety concept of the Army fusing system. We usually deal with the [deleted] of the weapon. We also deal in a gross way with required weapon effects from the weapon and also on the weapon.

That is the vulnerability levels that should be designed into the warhead.

"MORE BANG FOR THE BUCK"

Senator SYMINGTON. Is the old cliché of "more bang for the buck" relevant to the battlefield weapons for use in NATO?

Dr. WALSKE. Generally, we don't have a problem achieving the yields we want. So, if we can do things to reduce cost, that certainly is attractive.

In that sense, I guess it applies. I can think of developments, for example, in the atomic demolition area where we are interested in the possibility of very inexpensive atomic demolition munitions in terms of the amount of special nuclear material it requires.

There is a development along that line that is being worked on [deleted] which has been quite successful.

Representative LUJAN. Mr. Chairman, I would like to ask probably the same question in different terms.

How far down the priority list is usually the cost item? Is it relatively low?

Dr. WALSKE. There are two kinds of cost. One is the cost to fabricate the weapon. The other is the cost of special nuclear materials.

COST OF SPECIAL NUCLEAR MATERIALS KEY CONSIDERATION

Since we have [deleted] on the production of special nuclear materials, the cost in special nuclear materials is a very key consideration, and governs greatly what the Defense Department can hope to build into the stockpile.

Representative LUJAN. What about new development?

Dr. WALSKE. It is considered from the very beginning of the development. The developments are oriented in the direction to produce the weapons which have [deleted].

Representative LUJAN. Quite serious consideration, then, is given to cost?

Dr. WALSKE. Yes. I would not want to say it is No. 1. If you have to have a certain weight and shape, you have to have a certain weight and shape. But the tradeoff [deleted] is very actively discussed.

For example, take the further production of B-61 tactical bombs. The majority of those will be built in a version in which the [deleted]. That is done specifically in order to [deleted].

As a matter of fact, it is a tradeoff that looks reasonable. The maximum yield of the [deleted] type B-61 is several hundred. Taking that [deleted] will still give a bomb with a maximum yield of [deleted] which is large enough, really, for most of the kinds of theater nuclear targets that we can conceive of, principally [deleted] in this case,

It is not large enough for all of them. For example, in [deleted] where there are [deleted] and so on, it really requires something even more than [deleted] to get a high probability of kill on a [deleted] like that. Perhaps a megaton, something like that.

LOW-YIELD ANTIPERSONNEL BATTLEFIELD WEAPONS

Senator SYMINGTON. Do you know if the Department of Defense is giving any consideration to developing low-yield antipersonnel battlefield weapons which depend upon enhanced neutron radiation as a kill mechanism?

Dr. WALSKE. Yes, we are. That is discussed in the Development Guidance as an area of interest for the Department of Defense.

Senator SYMINGTON. Would you agree that [deleted] a low-yield device could be extremely effective against ground forces?

Dr. WALSKE. That was back [deleted] according to my information. At one time there was some uncertainty about the amount of radiation that it would take to get immediate incapacitation of a person.

While in the past there had been quite a burst of enthusiasm for enhanced radiation weapons, uncertainty that developed in the area of biological effects did slow down the interest in it, but a good bit of interest exists today in the area.

Senator SYMINGTON. Do you know if the services have ever requested the weaponization of a [deleted] device?

Dr. WALSKE. The first warhead for the [deleted] called the [deleted] was an [deleted] warhead. After this reevaluation of the [deleted] that warhead was dropped, development of it was dropped, and the [deleted] warhead, which is a hydrogen bomb type warhead, was developed and is the warhead that is going into [deleted].

So, yes, there was that move in that direction which did not come to fruition.

Senator SYMINGTON. Do you know which agency in the Defense Department might have turned down the request for the weaponization of a [deleted] device?

Dr. WALSKE. In the specific case of the [deleted] this was on the recommendation of the Army to discontinue the [deleted]. This was concurred in by the Office of the Secretary of Defense.

Senator SYMINGTON. Why did the Army turn it down?

General KEITH. As Dr. Walske indicated, sir, we undertook studies to assure ourselves that the [deleted] effects were those which had been initially advertised and as a result of those, and the [deleted] experiments we did, we found that we did not have a configuration that was a useful warhead for [deleted].

Senator SYMINGTON. Am I correct in stating that the AEC and the Defense Department are just now giving serious consideration to developing [deleted] weapons for battlefield use?

General KEITH. I believe the [deleted] experiment that Dr. Walske previously described [deleted] is our first move in that direction, although we do have [deleted].

Representative LUJAN. Dr. Walske, do we have any knowledge of the progress the Russians have made in this field, what they are doing?

Dr. WALSKE. [Classified matter deleted.]

Representative LUJAN. You do or you do not?

Dr. WALSKE. [Deleted.]

Representative LUJAN. Thank you.

Senator SYMINGTON. We understand that AEC plans to test a [deleted] in July 1973.

Could you describe this test which has the code name [deleted]?

Dr. WALSKE. I have a few words here. [Deleted] will be the [deleted]. It uses the [deleted] which was developed at [deleted] and which, in this test, will be [deleted]. That is a [deleted].

The size and configuration and the construction will be consistent with the use of [deleted].

Because of the [deleted] such a [deleted] would have a militarily effective equivalent yield of about [deleted] against personnel.

In tactical use, a [deleted] based on [deleted] could have a [deleted].

The principal difficulty is probably not in the area of whether or not it will work. It will probably work. The principal difficulty was referred to before and that was because of the [deleted] in the [deleted], the [deleted] may no longer be [deleted] the existing [deleted].

So that there will be a problem obtaining the same kind [deleted] with this [deleted] as we can with the new [deleted] which will be a [deleted] one. That, in itself, does not rule it out of consideration. It still may be an attractive thing to consider building some of this type [deleted].

The question of how many should be the [deleted] or the [deleted] which is proposed for now, and how many should be this new type [deleted] is an open question that has to be examined.

Representative HOSMER. If you are going to lose your [deleted] anyway, why stick with the [deleted] mode of delivery and go to rocket or something else?

Dr. WALSKE. It is more attractive to put it in a missile if you have enough missiles. [Deleted] and missiles are complementary. It is not "either/or."

Representative HOSMER. Your parameters, your geometry, and weight requirement are much more severe with [deleted] than they are with the missile. In those considerations which have anything to do with cost and so forth, I think you should opt for the missile to begin with and develop the missile.

Dr. WALSKE. Let me ask General Keith to respond.

GUIDED MISSILE VERSUS FREE ROCKET

General KEITH. There are a couple of reasons why that would not be attractive, sir.

First, if we go to a guided missile, we have a very expensive system with a relatively small mix of the target array we would want to attack. If you go to a free rocket, which is the cheaper solution as

a delivery means, you do not get the kind of accuracies that are required.

In the whole nuclear artillery family, when we are talking about the kind of targets that we would be attacking up to [deleted], we don't have any more cost effective way to deliver nuclear firepower on the kind of targets that are within the division area of influence.

We feel very strongly about having our nuclear delivery capability broadly spread. Its deterrent value is enhanced when you have all of the cannons in a division arrayed as a possible threat, as opposed to a single kind of low density system which is easily identifiable.

Representative HOSMER. Thank you.

Senator SYMINGTON. Assuming an air burst, would there be a problem with a weaponized version of [deleted] in terms of [deleted] and area denial?

Dr. WALSKE. I haven't looked into that, but it sounds unlikely to me. I don't know the answer, but I can find out.

RADIATION DOSAGE FIGURE REVISED UPWARD

Senator SYMINGTON. We understand that a recent study by the Combat Development Command's Institute of Nuclear Studies indicated that about 20,000 rad would be required to cause almost immediate permanent incapacitation in humans. The previous estimate had been 5,000 to 6,000 rad. Would you please comment on the threefold increase?

Dr. WALSKE. The new data incorporated extensive studies of animals, monkeys, baboons, and guinea pigs and their response to heavy dosages of radiation, super lethal dosages.

Under laboratory conditions, accurate records were obtained at the time of onset of various symptoms. This was not always available from earlier data. The new data also showed good correlation with the observations of those human victims of critical accidents that occurred from 1946 to 1964.

[Deleted.]

Representative HANSEN. Can you equate that in terms of the [deleted] individual, say a soldier?

Dr. WALSKE. As opposed to in terms [deleted]?

Representative HANSEN. Right.

Dr. WALSKE. No, I can't, but I can find out.

Representative HANSEN. I would be interested if this could be done.

Dr. WALSKE. Colonel Lennon has an answer.

Colonel LENNON. These are [deleted] to the individual.

So, the [deleted] will be about the same as the [deleted].

Senator SYMINGTON. As I understand it, and Congressman Hansen might be interested in this, you are referring to the performance of [deleted]. Is this the test you are referring to?

Dr. WALSKE. Yes, sir.

Senator SYMINGTON. Assuming that the required [deleted].

Dr. WALSKE. I have this fact which is very unrelated to your question. That is if [deleted] gives a [deleted] of fusion, which is what it is designed to give, that will have the effect of an equivalent yield of [deleted]. Does that answer the spirit of the question?

Senator SYMINGTON. Thank you, it does.

Again, assuming a required [deleted].

Colonel LENNON. Yes.

Dr. WALSKE. Colonel Lennon says "yes."

Senator SYMINGTON. How would this distance of some [deleted].

Dr. WALSKE. We will supply that for the record.

[Material later supplied follows:]

[Classified matter deleted.]

Senator SYMINGTON. In considering the effectiveness of nuclear weapons against ground forces, do you believe that [deleted]?

Dr. WALSKE. [Deleted.]

Senator SYMINGTON. Do you believe it is realistic to start to manufacture [deleted] artillery shells over the next [deleted] years when there is a good possibility that a [deleted] weapon could become available in that time frame?

Dr. WALSKE. Our actual program is not [deleted]. In the verified sense at the Secretary of Defense level, we are only at the point of [deleted]. The question of whether we will build more than [deleted] is to be decided later.

Now, whether all these [deleted] should be of the design that we have or whether some of them should be [deleted]. I think, is a good question and one that we will want to look at, that is near the end of the production run.

Senator SYMINGTON. Would you do this from my personal standpoint, add to the record why you think it is good?

Dr. WALSKE. I could say something here, if you would like.

Senator SYMINGTON. I am looking at the clock.

Dr. WALSKE. Yes, sir.

[The information later supplied follows:]

The new [deleted] projectile will overcome [deleted]. It will be a [deleted]. It will have [deleted]. It will be usable at [deleted].

[Deleted.] The new [deleted] projectile has all of the improved feature of the [deleted] plus the fact that [deleted]. There is more than enough [deleted] in the existing artillery projectiles to pay for the entire lifetime cost of replacing them with the proposed new projectiles.

WALLEYE MISSILE

Senator SYMINGTON. We understand that the Walleye missile now has a nuclear warhead of [deleted] because of your insistence.

Would you describe the damage to most targets resulting from a Walleye strike, assuming a low CEP [deleted].

Dr. WALSKE. First, I want to deny the allegation. The Walleye does not have a warhead of [deleted] because of my insistence. It does have a warhead of [deleted]. With regard to the effect, General Brickel, I think, can reply to that.

General BRICKEL. Basically, the Walleye will be used as a surface burst weapon against a [deleted]. There are several kinds of targets in this range.

For example, a [deleted].

It has a low CEP [deleted]. So, it would be totally destroyed. The same for a [deleted]. The radius of destruction is about [deleted]. The CEP is again [deleted].

Looking at another type of target, such as a [deleted] either [deleted] you get severe damage out to [deleted]. We are talking of [deleted] that might be typically of the order of [deleted] meters. If you targeted this at the [deleted] you would lose [deleted].

For a [deleted] which is another target [deleted], if you can get within [deleted].

These are typical types of things that would occur in the use of this weapon.

Senator SYMINGTON. Colonel Shwiler has a question.

Colonel SHWILLER. How would this correlate with the [deleted]?

OPTICALLY GUIDED WEAPON CONSIDERED

General BRICKEL. The first question is the accuracy. We are getting into the idea of using an optically guided weapon which puts the aircraft up in a region where it can launch the weapon and guide it to the target. If you look at some of the structure that Dr. Walske was referring to, [deleted]. It is also a larger structure.

Colonel SHWILLER. I would venture a guess you would get a terrible headache if you were [deleted].

General BRICKEL. You would.

Senator SYMINGTON. Would it be possible to reconfigure an existing small nuclear warhead for use with the new Maverick missile?

General BRICKEL. The question becomes more, again, of cost and whether it is a desirable thing to have. The Maverick has had a fine test record with high accuracy [deleted]. It has a shaped charge of the order of 125 pounds total weight, of which about 80 pounds is high explosive. This charge against the design targets, which are vehicles, such as tanks or trucks or missile launchers, this sort of thing has been totally effective and destroyed the vehicles.

If you desire to use that particular missile against, say, a larger target of some kind, then the question of what guidance system has to be looked at and trajectory has to be looked at, these are put together from different points of view.

If you are attacking a [deleted] with a Walleye also, you are talking about a [deleted] trajectory that comes into impact, say, [deleted] over the horizontal. If you need, [deleted] that we have been discussing, an air burst, that is another type of guidance and another [deleted] precisely in the area of the target.

Senator SYMINGTON. Would you describe, briefly, radar area correlation guidance?

RADAR AREA CORRELATION GUIDANCE

General BRICKEL. Radar correlation guidance takes a preplanned, or predeveloped map of a target area in terms of predicted radar returns. Then, the radar of the incoming vehicle looks at the target area as it flies over. When the map matches what is on the radar, it zeroes into the selected target area and strikes the target desired.

Senator SYMINGTON. When is it expected that this technique could be made available for Army surface-to-surface missiles?

General KEITH. [Classified matter deleted.]

Senator SYMINGTON. Am I correct in stating that radar area correlation guidance will provide missiles with a maximum circular probable error of less [deleted].

General KEITH. Yes, sir, all our experiments, to date, will indicate we can obtain [deleted].

Representative HOSMER. What kind of missiles are we talking about, what range?

General KEITH. The Pershing is a 400-mile missile, sir.

Senator SYMINGTON. Would you describe the DOD activity to develop the modular guided glide bomb—MGGB?

MODULAR GLIDE BOMB

General BRICKEL. Basically, the modular glide bomb in its present configuration, is a high explosive [deleted] bomb to which has been added an optical guidance head and collapsible, or foldable, wings. They are sort of switchblade wings that fold on the top of the vehicle. It is a glide bomb that is dropped at an altitude. The wings fold out and it glides some [deleted]. Like each of the weapons that I have mentioned, the Maverick and the Walleye, the MGGB is [deleted].

Senator SYMINGTON. What type of accuracy could be expected?

General BRICKEL. You would expect the same kind of accuracy you get from a [deleted] of system.

Senator SYMINGTON. Could the [deleted] be equipped with a guidance glide capability?

General BRICKEL. There is a joint Sandia Laboratory-Air Force program to look at just this kind of capability. I believe there are some tests planned in the near future. In principle, at least, there would be no reason why [deleted] that size and shape could not be equipped.

Senator SYMINGTON. Let me say I want to try to get a definition term. We talk about tactical bombs. If a fighter out of Europe can drop several hundred tons on Moscow with enough gas to get back, and over a megaton with a possibility to get back, I don't like to see the B-61 described as a tactical bomb. That would be certainly a strategic mission in every sense of the word.

If the [deleted] what effect would it have on required yields for different types of targets?

General BRICKEL. Again, the accuracy that you would get would be such that you would probably want a small yield for a surface burst. Again, if a different guidance system is used so that a trajectory is shaped.

[Deleted.]

Senator SYMINGTON. What is the [deleted]?

Dr. WALSKE. [Deleted.]

Senator SYMINGTON. [Deleted] I understand. Which is right?

Will you have somebody look that up?

Dr. WALSKE. The point should be made here, Mr. Chairman, with regard to yield. That is, even if you have zero CEP, if a target, is a large target like an airfield, you can't get by with a small yield.

In that case, if you want to kill an area target, you have to have a large yield. Some of our targets are like that.

Senator SYMINGTON. Are there established guidelines which are used to decide when a nuclear weapon is obsolete, obsolescent or no longer desirable? Please use the [deleted] and [deleted] bombs and the [deleted] missiles as example and make it as brief as you can.

Dr. WALSKE. The reason why these particular ones were replaced varied. In the case of the [deleted] and the [deleted] it would be a combination of size and delivery characteristics primarily as compared with the [deleted] the question of [deleted] also.

In the case of [deleted] it was almost a political decision. [Deleted.]

So, after review—this was before my time, but I understand after the review of the system, it was decided to be politically unacceptable.

In the case of the [deleted] that was probably overcome by technology, either conventional air-to-air missiles which would do the same job and do it equally well or in the case of going against larger targets, perhaps the yield was too small.

BOMBS ASSIGNED TO VARIOUS FORCES

Senator SYMINGTON. I understand that there are almost [deleted] laydown bombs in the inventory as well as [deleted] nuclear air to surface missiles.

How many of these bombs are assigned to the Navy and Marine forces? How many to the Air Force fighter bombers and how many to the SAC bombers?

Dr. WALSKE. I have it here, but I can supply it for the record.

[The information subsequently supplied follows:]

Assigned to:	Number
CINCSAC -----	[Deleted.]
USAFE -----	[Deleted.]
PACAF -----	[Deleted.]
CINCLANT -----	[Deleted.]
NAVEUR -----	[Deleted.]
PACFLT -----	[Deleted.]

Senator SYMINGTON. On what basis did the Department of Defense justify the building of an additional [deleted].

Dr. WALSKE. On the basis that they will replace bombs which are operationally less effective.

Senator SYMINGTON. How many [deleted] bombs are now assigned to the Air Force, Marines, and Navy?

Dr. WALSKE. May I provide that?

Senator SYMINGTON. How many of the [deleted] Air Force bombs are for SAC, for PACAF, for USAFE?

Dr. WALSKE. I will provide that.

[The information later supplied follows:]

[Deleted] bombs are allocated as follows:

CINCSAC -----	[Deleted.]
Other USAF -----	[Deleted.]
Navy -----	[Deleted.]

Of the [deleted] bombs, PACAF will receive the first [deleted] to round out our [deleted]. USAFE will receive the major portion of the remainder, with an additional small allocation to CINCPAC.

Senator SYMINGTON. How many of the [deleted] bombs will be equipped with a PAL?

Dr. WALSKE. They will all be equipped with a PAL. Some of them will be equipped with a category "F" PAL which is the one that has [deleted]. About half of them, roughly.

Senator SYMINGTON. That was to be my next question. What is the advantage of having the [deleted] bomb equipped with a PAL-F?

Dr. WALSKE. It will give a denial time against bypass of the PAL, itself, of [deleted] or more as opposed to perhaps just [deleted] for the present PAL.

Senator SYMINGTON. Why aren't all the [deleted] bombs equipped with PAL-F?

Dr. WALSKE. We took a look at [deleted] and planned enough so that we could take care of those. The added cost of putting PAL-F on all of them seemed prohibitive.

If they were not rather costly, it would be good to have them [deleted].

Representative LUJAN. How expensive is the [deleted] system?

Dr. WALSKE. It adds about \$30,000 to the cost of each.

Senator SYMINGTON. Where is it planned to send the PAL-F equipped [deleted] bombs?

Dr. WALSKE. The tentative plan is [deleted].

Senator SYMINGTON. Where is it planned to position the [deleted] bombs?

Dr. WALSKE. They would go partially to [deleted].

Senator SYMINGTON. Which weapons will the [deleted] bombs replace?

Dr. WALSKE. They will replace [deleted].

Senator SYMINGTON. For the record, will you state the yield of the replaced weapons increase.

[The information later supplied follows:]

[Classified matter deleted.]

Representative HOSMER. What is the [deleted] yield?

Dr. WALSKE. The [deleted] yield as it exists in the stockpile now [deleted]. Most of the new ones that will be built will have [deleted].

Senator SYMINGTON. That is a good question. [Deleted.]

Dr. WALSKE. [Deleted.]

Representative LUJAN. [Deleted.]

Dr. WALSKE. [Deleted.]

Senator SYMINGTON. What is the advantage of the [deleted] bomb over the replaced bombs?

Dr. WALSKE. It is smaller in diameter. It is lighter. It can be carried at a higher speed. [Deleted.]

Senator SYMINGTON. Which aircraft can deliver the [deleted] at high and low altitudes at supersonic speeds?

Dr. WALSKE. I can give a specific answer, if you want it enumerated.

Senator SYMINGTON. Will you state the number of aircraft of each type in the answer?

Dr. WALSKE. Yes, sir.

[The information subsequently supplied follows:]

[Classified matter deleted.]

Senator SYMINGTON. Would you please describe recent advances in permissive action link devices which are being incorporated in the new weapons?

Dr. WALSKE. Yes, sir.

[The information to be supplied follows:]

[Classified matter deleted.]

Senator SYMINGTON. Under duress such as heightened international tension, how long would it take to overcome a [deleted] in a PAL-D system?

Dr. WALSKE. [Deleted.]

Colonel SHWILLER. [Deleted.]

Dr. WALSKE. [Deleted.]

Senator SYMINGTON. [Deleted.]

Dr. WALSKE. [Deleted.]

Senator SYMINGTON. [Deleted] of [deleted].

Dr. WALSKE. [Deleted.]

Senator SYMINGTON. [Deleted.]

Dr. WALSKE. That is rather lengthy. Would you like for that to be submitted for the record?

Senator SYMINGTON. Yes.

Dr. WALSKE. Yes, sir.

[The information later supplied follows:]

[Classified matter deleted.]

Senator SYMINGTON. What new command and control techniques and tactics are under study or development?

Could you supply that for the record?

Dr. WALSKE. Yes, sir.

[The information subsequently supplied follows:]

[Classified matter deleted.]

Senator SYMINGTON. Members of the committee, this completes my questioning. I would ask unanimous consent that staff be allowed to file additional questions based on the answers that they consider proper.

Congressman Hosmer, that is all I have, sir.

Representative HOSMER. I wonder, Dr. Walske, do you have any materials that will complete the record that you have not been asked for in response to questions?

ARMY STUDY ON RATIONAL USES OF THEATER NUCLEAR WEAPONS

Dr. WALSKE. I have provided two documents to the committee. One not specifically for this hearing and one specifically in connection with the hearing which I recommend to the members.

One is approximately a 40-page document which is a synopsis of the Army's study of the rational uses of theater nuclear weapons. It is more on the question of what is rational. That is a paper approved at the level of the Chief of Staff of the Army. It is in the files of the committee.

The second paper is similar, but more personal. It consists of excerpts from a talk I gave to the Armed Forces Staff College on the subject of the rationale behind theater nuclear weapons. This develops the principle of the intermediate option between conventional

warfare and the strategic nuclear exchange and explains some circumstances under which such an option can add to the deterrent value.

OPTIONS FOR BOMB USE

Representative HOSMER. My second question would be to briefly explain this intermediate option in terms of its relevance to deterrence.

Dr. WALSKE. Well sir, if the Russians attacked conventionally in Europe, say in Central Europe, and if they were winning, defeating our forces, without intermediate options, we would be faced with two choices: one would be conventional defeat, that is postulated in my example; the other would be escalation to a strategic nuclear exchange. Both of these are unattractive. The great question is can one construct options at an intermediate level which will not necessarily escalate into a strategic nuclear exchange which can give some hope of terminating the battle on terms acceptable to us and which depend primarily on battlefield weapons. This is the direction and the thrust of the examination. Those of us who have studied it, those of us in the services who have studied it believe that such options, while not being guaranteed that they won't escalate into strategic nuclear exchange, will provide something extra, will add to the deterrent and by their existence, will complicate the problem that an enemy sees when he contemplates such a conventional attack with superior forces.

Representative HOSMER. You depend on the assumption that escalation is not automatic with the first use of any kind of nuclear weapon?

Dr. WALSKE. They do indeed, but the rational thinking here constrains the use of the theater nuclear weapon. That is, it does not allow an uninhibited total usage. It is quite a constrained use [deleted].

Representative HOSMER. It is more a matter calculated not to invite escalation.

Dr. WALSKE. Yes, [deleted].

Representative LUJAN. I have one question.

ARTILLERY WEAPONS IMPROVEMENT

In talking about these 155-millimeter and the 8-inch artillery weapons—although this happened before I got here—I thought that they had been sold on the basis of being able to use the cannons that we now have.

What you are now saying is that you will have to develop new ones in order to use the ones that are being approved.

General KEITH. No, sir; that is not correct.

Representative LUJAN. It is not correct it was sold on that basis?

General KEITH. It is not correct that we need to develop new ones. We, in fact, are improving both the 8-inch and 155-millimeter, but not to accommodate a new nuclear round, necessarily.

Rather, we are extending the range of both cannons because we are [deleted].

Representative LUJAN. You are increasing the range on conventional weapons as well.

General KEITH. We are extending the tube length on both the 155-millimeter and on the 8-inch, which gives us increased range for the entire munitions family.

In addition to that, we are developing a family of ammunition which is rocket assisted and the new nuclear rounds are [deleted] for those.

It is an entirely new family but not driven by the nuclear round. The primary driving force on the new nuclear round is to add credibility to their deterrent value. Lower collateral damage is one of the things that determines acceptability of using these rounds. That acceptability against more credibility if you are more precise in both your fusing and your delivery and the weapons are more secure.

All of these are features of both the new artillery rounds.

Representative LUJAN. You talked about it being [deleted] the improvement of the cannon, itself, has nothing to do with the fact that it is not driven, the improvement is not driven by the fact it is [deleted].

General KEITH. That is correct. The rounds can be fired either out of our current 155-millimeter and 8-inch cannon or the new longer tubes.

Representative LUJAN. Basically, we are not talking of changing it just to accommodate these two shells.

General KEITH. That is correct.

Senator SYMINGTON. Mr. Murphy wrote the following memorandum on May 21, 1973:

"On May 2, 1973 Gen. Brickel and Col. Lynwood Lennon met with Col. Shwiler and myself to discuss NATO nuclear weapons requirements, particularly the (Deleted).

"According to Col. Lennon, SACEUR's plan called for (Deleted) nuclear weapons to cover the Soviet threat. At present, Col. Lennon said SACEUR had (Deleted) nuclear (Deleted) but he needed a total of (Deleted). Thus of the (Deleted) nuclear weapons, (Deleted) would be (Deleted).

"I pressed Col. Lennon on this matter asking him if the (Deleted) had been approved and would he identify by whom. Col. Lennon then said that the JCS had cut the SACEUR request of (Deleted) to (Deleted). DOD had cut the (Deleted) to (Deleted). Thus they were right back where they started from.

"In regard to the (Deleted), Col. Lennon said that (Deleted) were required for both. He said the cost would be as follows: (Deleted)"

Would you comment on that, based on the recent answers?

General KEITH. I don't know the basis for Colonel Lennon's answer—

Senator SYMINGTON. Maybe the Colonel had better answer it.

Colonel LENNON. Go ahead.

LONGER TUBE

General KEITH. We do in fact, as I pointed out, have complementary programs. Delivery of the nuclear artillery to the maximum range, which is described in the performance of those nuclear artillery rounds [deleted] requires the longer tube, but the longer tube development was not driven by the nuclear round.

Colonel LENNON. That, essentially, is the basis for my comment on the requirement for the long tube. The long tube is required to get the extended ranges mentioned in connection with the improved am-

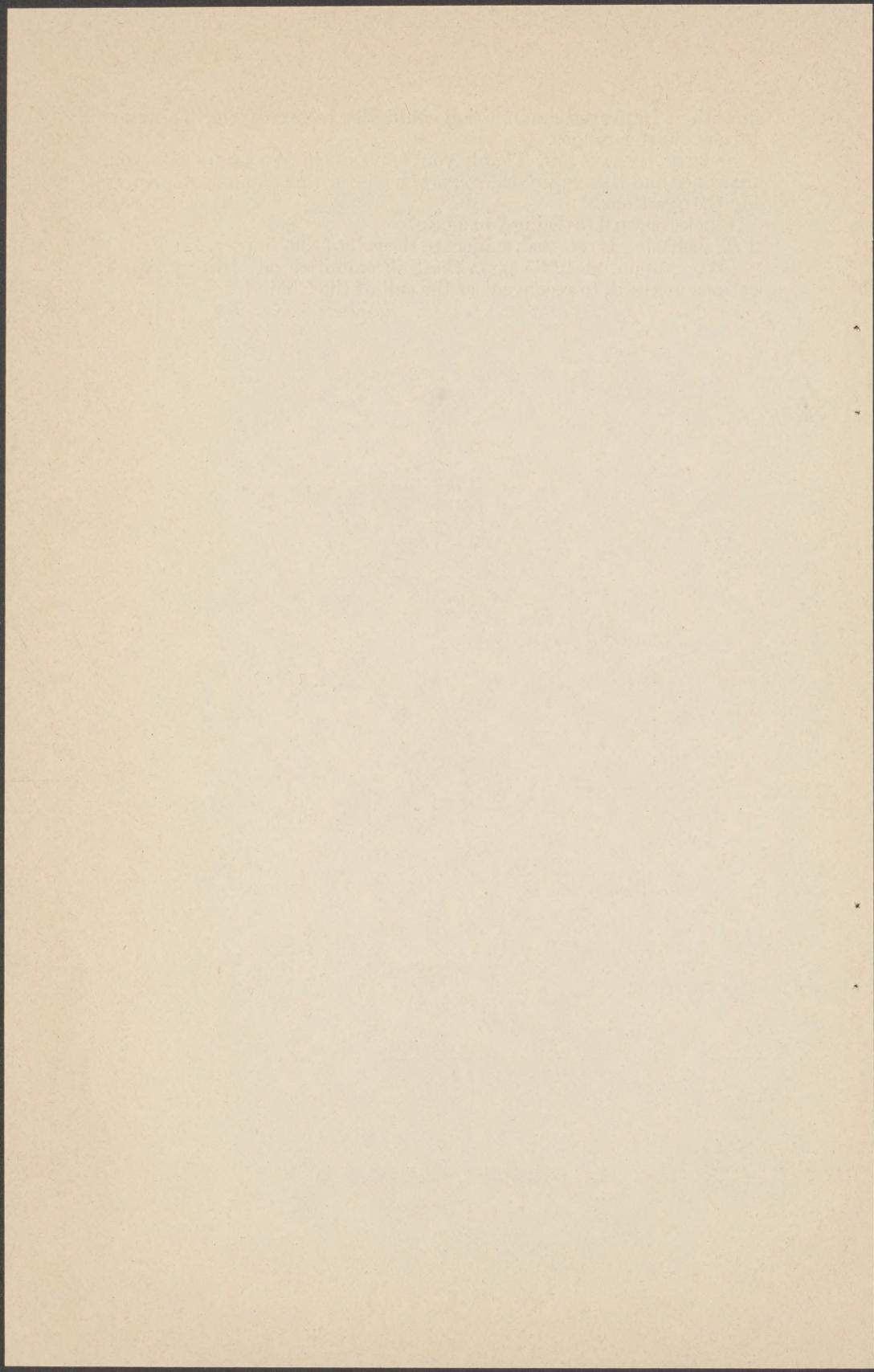
munition. Improved ammunition could also be fired from the present tube at shorter ranges.

Senator SYMINGTON. Thank you very much. We appreciate your tolerance and the respect the experts have for this amateur in answering the questions.

I look forward to seeing you again.

The hearing is recessed, subject to the call of the chair.

[Whereupon, at 12:35 p.m., the Subcommittee on Military Applications recessed, to reconvene at the call of the Chair.]



MILITARY APPLICATIONS OF NUCLEAR TECHNOLOGY

FRIDAY, JUNE 29, 1973

CONGRESS OF THE UNITED STATES,
SUBCOMMITTEE ON MILITARY APPLICATIONS
OF THE JOINT COMMITTEE ON ATOMIC ENERGY,
Washington, D.C.

The Subcommittee on Military Applications met at 10 a.m., pursuant to call, in room H-403, the Capitol, Hon. Stuart Symington (chairman of the subcommittee) presiding.

Present: Senators Symington and Bennett of the subcommittee and Senator Pastore, vice chairman of the Joint Committee; and Representatives Holifield and Hosmer of the subcommittee, and Chairman Price and Representatives Hansen and Lujan of the Joint Committee.

Also present: Edward J. Bauser, executive director; George F. Murphy, Jr., deputy director; and Seymour Shwiller (USAF, ret.), technical consultant.

OPENING STATEMENT OF CHAIRMAN SYMINGTON

Senator SYMINGTON. The hearing will come to order.

On April 16, 1973, this subcommittee on military applications received testimony from Gen. Edward Giller, Assistant General Manager for National Security, Atomic Energy Commission.¹

On May 22, 1973, Dr. Carl Walske, Assistant to the Secretary of Defense for Atomic Energy, appeared before the subcommittee.

Today, we are very glad to have with us Gen. Andrew J. Goodpaster, Supreme Allied Commander, Europe.

In the past two decades, NATO and its military ancillary, SHAPE, have both changed substantially. Perhaps it is fair to say we have had a move from a primarily defensive alliance to an alliance which combines detente as well as defense.

EUROPEAN ECONOMIC PROGRESS SUBSTANTIAL

Economic progress in the European community has been substantial indeed, remarkable in both its degree and its rapidity. Today, the West German deutschemark is one of the strongest currencies in the world. In fact, I think I heard this morning that they were going to have to revalue it upward. And West German trade with the Soviet Union rose some 27 percent during 1972 to a volume of some \$1.2 bil-

¹ Military Applications of Nuclear Technology, Part 1.

lion—approximately the same amount as the balance of payments cost which must be borne by the American taxpayers as a result of the current stationing of hundreds of thousands of American military in Europe.

Our allied partners are increasing steadily their trade and their overall relationships with the countries behind the Iron Curtain; but the United States continues to maintain about 7,000 nuclear warheads in Europe, ostensibly for the protection of the countries of Europe.

For these, as well as other reasons, we believe it important to explore the current validity of the military assumptions upon which the location of these nuclear weapons, first deployed many years ago, are based.

We believe also it is important to examine the political aspects resulting from the location of these U.S. nuclear weapons in NATO, as well as the nature of the political agreements incident to the possible employment of said weapons.

In addition, although the primary concern of this subcommittee has to do with nuclear weaponry, obviously any such interest also embraces the total of U.S. military commitments to Europe, including the Warsaw Pact and its implications.

OVERALL MILITARY COMMITMENTS SUBCOMMITTEE CONCERN

I will say at this time that I consider it unfortunate that a majority of this committee has consistently refused to allow staff members of the Armed Services Committees to attend these meetings; consequently, there is little or no coordination between the Armed Services Committees and the military aspects of the Atomic Energy Commission. In my opinion, this lack of consideration has cost the American taxpayer many billions of dollars.

INCREASED ROLE OF ALLIES IN OWN DEFENSE CALLED FOR

A thorough examination of these and other aspects of our world wide commitments is particularly pertinent at this time; a time when the American dollar is under steady and continuing attack in the European money markets, as our economy continues to worsen. Clearly, the time has now come when, in the interest of true national security—which includes a sound economy as well as a continuing faith of the people in their Government—our allies should take over much, if not most, of their own defense.

General Goodpaster, it is always a pleasure to see you. We look forward to hearing from you. We would appreciate your identifying the individuals accompanying you this morning and then proceed with your prepared statement, of which we have received an advanced copy.

STATEMENT OF GEN. A. J. GOODPASTER, SUPREME ALLIED COMMANDER, EUROPE

General GOODPASTER. Mr. Chairman, I have with me my military assistant, Captain Smedberg, U.S. Navy. Also with me are General Giller and General Camm from the Atomic Energy Commission.

Mr. Chairman and gentlemen: I appreciate the opportunity to appear before this subcommittee and present my concepts and judgments concerning nuclear weapons in Europe. Let me first say that I regard our nuclear posture and activities as one of the most important and at the same time, one of the most demanding tasks for which we in the European military commands are charged with responsibility.

Along with conventional forces and the strategic nuclear umbrella, our tactical nuclear capability is one of the major military tools indispensable to our successful deterrence and defense.

I welcome the chance to appear before this subcommittee in view of the concern that I know we share over these nuclear matters.

With your permission, I shall make a short opening statement. In doing so, I shall limit my remarks to an outline of the role of theater nuclear weapons in the context of NATO strategy, the need for certain improvements in the types and technology of our weapons, the determination of weapons requirements, and the ever important tasks of securing and safeguarding our weapons in Europe.

INTRODUCTION

In establishing perspective, I will submit my view that the NATO Alliance is at a critical and challenging juncture. In an era of negotiation, it is especially necessary to avoid a misleading euphoria and to strike a balance between, on the one hand, a natural desire for detente and military force reductions, and on the other, the necessity to negotiate from the base of strength provided by a credible deterrent and fighting force.

It is also necessary to balance the pressures for satisfying non-military needs significant now in all the Alliance nations, against what I view to be compelling demands to maintain and improve the capabilities of our conventional and nuclear fighting forces in order to cope with opposing forces which far exceed the defensive needs of the Warsaw Pact.

ROLE OF THEATER NUCLEAR WEAPONS

Basic NATO strategy and policies governing nuclear activities in Allied Command Europe are contained in NATO documentation agreed by all the NATO nations that participate in the integrated defense; that is, all NATO nations except France. Our current strategy, to which I fully subscribe, is stated in the Military Committee Document 14/3. It is a strategy of flexible response and is based on the concept of deterrence, solidarity, and forward defense.

MC 14/3 recognizes the essentially defensive nature of the NATO Alliance. It provides for the security of the North Atlantic Treaty area by directing a credible deterrent in the form of NATO military forces capable of confronting aggression at any level of intensity or scope of action.

Should deterrence fail, the forces of Allied Command Europe would execute the strategy of MC 14/3 by establishing a direct defense to counter the aggression by the enemy.

OPTIONS EXPLAINED

Successful defense would defeat the aggressor or place the burden of escalation on him. Our defense options are designed with the aim

to prevail against aggression, whatever its place, time, level, or duration. Specifically included is the option for the tactical use of nuclear weapons, if necessary, and if authorized by the President, either on a preplanned or a case-by-case basis.

Should it appear that the aggression cannot be contained and the situation restored by direct defense, the strategy provides for action to defeat the aggression by deliberately raising—in a controlled fashion—the scope and intensity of combat, making the cost and the risk appear disproportionate to the aggressor's objectives and making the threat of NATO nuclear response progressively more imminent.

One escalatory step envisioned in the agreed strategy is the selective tactical use of nuclear weapons. In the event of a major Warsaw Pact nuclear attack, or in the event of escalation to strategic nuclear warfare, the forces of Allied Command Europe would, when so directed, execute a general nuclear response in conjunction with external strategic nuclear forces.

In such circumstances, the tactical use of nuclear weapons would be an important and essential complement to the nuclear, the strategic nuclear systems. Thus, the concepts and doctrine for the tactical use of nuclear weapons in Europe are governed by the NATO strategy of flexible response and defensive operations.

The targets for nuclear strikes are military in nature and are based on the criterion of achieving essential military effectiveness while minimizing civilian casualties and collateral damage.

From this brief synopsis of NATO's approved strategy, it is apparent that between the options of non-nuclear, or "conventional," warfare and a conflict involving strategic nuclear exchange, there is a real need for theater nuclear weapons to provide an essential part of the spectrum of flexible war-fighting capability which we believe is essential to deter or to defeat aggression.

Certainly, such weapons are necessary while confronting an opponent who possesses a similar capability. They could, moreover, be the key element required to avoid the necessity of choosing between conventional defeat or an all-out strategic nuclear exchange.

CONVENTIONAL AND NUCLEAR DETERRENENTS BOTH NEEDED

The point that I would urge for your consideration, based on my own several years' analysis of our NATO strategy and our means for its execution, as well as the capabilities of the potential aggressor, is that we need both a conventional and a nuclear deterrent and that they complement each other.

Besides a strong, effective conventional force and our strategic nuclear force, our deterrent/defensive strategy mandates that we possess the capability to execute a broad range of defensive options, including, if necessary, and if directed by the President, the defensive tactical use of nuclear weapons. Without the capability for this full range of options in NATO and the associated NATO plans for implementing them, a potential aggressor would be relieved of a large degree of uncertainty in estimating NATO reaction to aggression and might be tempted to pursue an adventuristic course of action involving coercion, blackmail, or actual hostilities. On the other hand, with a credible

arsenal of nuclear weapons and delivery systems for tactical use and with flexibility and precision in the capability to direct and control such use, this element of deterrence should be perceived as effective against either coercion or actual aggression.

Senator PASTORE. Could we, at this point, Mr. Chairman, pursue some of these points before he goes on with the rest of the statement?

Senator SYMINGTON. Senator Pastore, I know your time is limited. I will be glad to yield to you. I am sure the General will agree to answer any questions you have at this time.

Senator PASTORE. Thank you, Mr. Chairman. General, I quite agree with you. First of all, let me say this: I do not question nor do I challenge your military acumen. Naturally, I am no match in that area. But there are certain things that to me are rather fundamental. I quite agree with you that the more that we have, the more impressive it would be, I suppose, but the fact still remains that whether or not what we have will have to come into play at some point depends entirely on what the burden may be on the American taxpayer as to whether or not, taking everything into account—circumstances, the new atmosphere, the détente, whether or not we are not carrying out in 1973 the same attitudes that we enjoyed in 1950. Much has changed in that time. A lot of things have changed.

STRENGTH OF DOLLAR IMPORTANT CONSIDERATION

As the chairman has already pointed out, the deutschemark has become much stronger, the American dollar has become much weaker. Apart from the military requirement, I can say that our dollar is in severe trouble throughout the world, so much so that the repercussions are being felt at home.

I would suppose that even you are feeling the pinch because you are being paid in American dollars and you have to sustain the devaluation difference as we have to back home.

The foreigners who are employed we pay in the local currency, and we have to make up for the depreciation which means more American dollars that have to be furnished to Europe.

Now, Mr. Baker and I took a trip—it was a fast trip, but I thought it was rather exhaustive. Would you know how many ADM's we have in the European theater?

General GOODPASTER. I have that information.

Senator PASTORE. Would you be surprised if I told you we have about [deleted]?

General GOODPASTER. The figure I have is [deleted].

Senator PASTORE. That's right, almost [deleted]. Now, would you know how many of these are in [deleted].

General GOODPASTER. There are approximately [deleted].

Senator PASTORE. [Deleted.]

General GOODPASTER. I would like to confirm that figure in precise terms.

Senator PASTORE. That is not necessary, it is not the point I am trying to make.

[Deleted.] We have some in [deleted]. We don't have any in [deleted] do we?

General GOODPASTER. We do not.

Senator PASTORE. As a matter of fact, the [deleted] would like to have them, but we have not furnished them yet, isn't that so?

General GOODPASTER. At the present time, in our planning, we do not have an agreement with the [deleted].

Senator PASTORE. Now we have about [deleted]. Now, you are, of course, familiar with the guidelines, are you not, with regard to the central European region?

General GOODPASTER. Yes, Senator.

Senator PASTORE. I am going to read to you: "section [deleted]."

In [deleted], the construction of ADM demolition chambers is confronted by internal and foreign problems, the solution of which requires careful consideration. [Deleted.]

And here we have a tremendous expense, a tremendous involvement of the American taxpayer by using a weapon to defend a country in which, in our estimation, as you have pointed out, a surprise attack might take place, in [deleted] and Western Europe, before it takes place anywhere else. [Deleted.]

General GOODPASTER. The situation regarding arrangements for the ADM's [deleted] throughout the European area—in its essential points, is about as follows:

Following the promulgation of these guidelines we, the Command, were instructed to enter into discussions with the countries involved. We have had those discussions [deleted].

But there is a great deal of friction that has built up over the years [deleted] and a great deal of emotional concern over these weapons. [Deleted.]

[Deleted.]

EMPLACEMENTS MATTER OF CONCERN

I think we can find ways of dealing with that. One area that is of concern to us is this one of preparing the emplacements. It makes some difference in the effectiveness of the weapon, but it makes a considerable difference in the fallout that would result from use of the weapon if you are able to bury it at the optimum depth.

Senator PASTORE. Don't you think it ought to be our attitude with the [deleted] Government—and that is the one thing that irks me, and irks me no end—[deleted] we have them there, [deleted] we are exploring other alternatives, such as, you say cutting down the yields in order not to have the same area of contamination in case of a shoot out.

Don't you think our posture ought to be, [deleted.]

The [deleted] must know the threat as well as we do. [Deleted.] They have to have it one way or the other.

I think we either need an agreement that they will allow us to [deleted] or have agreement to [deleted] or we ought to be allowed to take them out.

General GOODPASTER. Senator, my views run very much along the same line. May I say this is not a unique issue or a unique set of participants in an issue of this kind. We have many, many issues of this

kind. This is one of the most vexing and difficult for me. I have put a lot of work into this, myself. I hope to be able to resolve this on a militarily adequate basis [deleted.]

As you may know, [deleted] the [deleted] are, in fact, now doing prechambering for conventional preparation. These prechambers would serve our purpose to a very considerable degree. [Deleted.]

Senator PASTORE. [Deleted.]

General GOODPASTER. [Deleted.]

My own very clear expectation, Senator, is that in time of a real emergency these limitations and constraints that have now been brought forward would, in effect, be overcome through prechambering in circumstances of that kind; and insofar as the use of the weapons would be concerned, I can tell you that I would have no hesitation in making the same request of the President of the United States for those weapons that I make for any others.

I would anticipate that the process of international consultation would then go on; and if you were to ask my own personal assessment, under the real threat of danger, many of these considerations that have been voiced here would be set aside at that time.

Senator PASTORE. That may be so.

SURPRISE ATTACK COULD LIMIT OPTIONS

First of all, I want it clearly understood I am not being critical of you, General Goodpaster, because I have the highest admiration and respect for you as a military man. You must realize that the Russians may be many things, but they are not stupid. If they start a surprise attack in Europe, they are out to win. They will not give you all those options you are looking for. [Deleted.]

Another thing, too. I understand that between the time that the President gets the notice and the time that you could fire any of these weapons, you need [deleted]. Am I right or wrong?

General GOODPASTER. I would say at least [deleted]. I think in practical terms, it would take a longer time than that.

Senator PASTORE. Now here we are, we have some artillery shells about [deleted] miles away [deleted].

General GOODPASTER. That is [deleted] kilometers.

Mr. MURPHY. How about [deleted]?

General GOODPASTER. Perhaps I might make a point on this. [Deleted.]

Senator PASTORE. That would be about [deleted].

General GOODPASTER. Yes.

Senator PASTORE. My goodness. If the Russians intended to make a surprise attack—and it would have to be a surprise attack, would it not—do you mean to tell me they would not penetrate more than [deleted]? What would you do with your weapons? You would have to take them out.

General GOODPASTER. The weapons that were there would be available to the unit that would be employed in that area. That is our [deleted] which is a very powerful outfit. The tactical sequence would be that from the time the Russians had crossed the border, they would be involved in military operations, in combat against our light cover-

ing forces, while our major forces moved forward into the main defensive battle areas.

We have the capability of moving these weapons, if it should be necessary. If we should be in a retrograde situation, we have the capability of moving those weapons out.

On the other hand, if at this point it became necessary to recommend the employment of the weapons, we would do that. They would then be available quickly for use in the area of combat.

RESPONSIBILITY OF PRESIDENT AWESOME

Senator PASTORE. That brings me to the point. Look to the cruelty that we are foisting on the President of the United States. Here we have a composition of conventional and nuclear weapons [deleted] miles away from the border. So, a surprise attack comes, the big question here is that if this onslaught is too severe, and it looks like we might have to use nuclears, we can't fight alone with conventional weapons. So we call on the President of the United States to make his determination as to whether or not these nuclear weapons could be used.

KENNEDY CUBAN EVENTS TOOK 6 DAYS

Now the President of the United States is in Washington. This is [deleted] away from the [deleted] border. Here we are. It took President Kennedy about 6 days from the time he learned on October 15 from aerial photos that Soviet offensive missiles were in Cuba, to the time he issued the order on October 21 to stop Soviet missile ships, to make a decision on Cuba. In this Cuban missile crisis there was no other answer he could make, or direction he could go, except to take the course he did take, with Cuba only 90 miles away.

Here is the President of the United States, in almost moments he has to make up his mind to protect those nuclear weapons. Either that, or you have to retreat. He has to make up his mind in a matter of [deleted] as to whether or not he is going to catapult this world into a nuclear conflict.

It makes no sense to me.

General GOODPASTER. May I make one comment there? I think, in making that decision, the location of the nuclear weapons is not going to be a determining factor. We have the capability of moving them along with the movement of our forces. What would be the determining factors is the development of the situation.

It is, of course, an awesome thing to think about—that a President would have to consider an issue of that kind. That is inherent in the kind of world we are living in. That is not the only place that he could be faced with that kind of decision. He could have that in the strategic nuclear area, where we would, from the outset, be in a situation that carries with it the destruction of our homelands; whereas, here we have a capability and this would be a decision for the President, after the international consultation which he would then enter into, this would be a decision for the President at that time in light of the circumstances.

But it does not carry with it the certain and automatic escalation to all out nuclear attack.

Senator PASTORE. Does it not compel you to retreat while you are waiting whereas, if you had better strength conventionally, you could stand your ground? In order to protect your nuclear contingent because you are waiting for the President's decision and in order to protect it, you would have to begin to move back to keep it safe.

Now, my argument is that maybe you ought not to have these shells there [deleted]. They can only go [deleted]. They will be shot on indigenous territory. [Deleted.]

The fact still remains that what you are doing here, in order to give the impression to the Russians that you have all the strength which they, themselves, know is only a frivolity. They are worried about those bombs that can be dropped on Moscow. They are not worried about those shells that are going to fall on [deleted]. They are not worried about that.

WE HAVE "RESPECTABLE POSTURE OF DEFENSE"

General GOODPASTER. Senator, I have to say that I believe that we have what President Washington called "a respectable posture of defense," and I believe the Russians respect it. I believe they respect these tactical nuclear weapons for the impact that they could have on their attacking forces.

It is, of course, true that if they were to come against us with the full forces that they have, they could, under certain circumstances, very well face us with the need to augment the operation of our conventional forces with the selective use of tactical nuclear weapons if we are to resist them and if we are to require them to think again whether they wish to continue this thing or escalate it. I think we can put that kind of burden on them. I think they see it as they analyze the situation in Western Europe today. I think they respect the posture of defense that we have and the cost that we could impose on them.

Senator PASTORE. That may be so. I think they respect those airplanes [deleted] with those bombs, that can penetrate and go through and drop bombs on Moscow. That is what they are afraid of. They are not afraid of the bombs that are going to fall on Rome or Berlin or the bombs that are going to fall on Neuremberg. They are not worried about that. They are worried about the bombs that are going to fall on them. There is your deterrence.

All I am saying is for all purposes, I think we are a little bit too close to the border.

Now, I am not a military man, I am not going to question you any further. I have spoken my piece. I am just a civilian. I tell you very frankly I am concerned with what I saw out there. It was too much of something that was not needed at that point.

General GOODPASTER. Senator, I think the deterrent has the element in it that you described, but it also has the element in it that I described. We need this full range of deterrence. What we have, with all its limitations, has been highly successful in the great objectives that we have been working for, all of us, now for 20 years.

The Russians are bound to respect the impact, the effect of these tactical nuclear weapons against their own forces.

Representative HOSMER. Does that not pose to them at the borders, going through with tanks and that kind of thing, pose to them a very difficult situation? They have to think in terms of the alternative, some kind of leapfrogging area envelopment which poses to them a considerable problem in connection with any possible attack?

These things aren't to be considered in isolation, but in tandem with the alternatives that they do force upon the other planners.

SOVIET HAS ITS OWN DILEMMAS

General GOODPASTER. This presents a dilemma to them. From our standpoint, it is a dilemma that has considerable value. That is, if they are under a threat of weapons of this kind, it denies them the ability freely to mass without consideration of what the consequences would be. If they were to mass in order to achieve the kind of local superiority conventionally that would allow them to rupture our position or, as you say, to resort to other means to try to overleap it, then if they were to try that kind of massing, they would become extremely vulnerable to these weapons. They are inhibited against that kind of massing.

This, in itself, then, becomes an assistance to us, a great assistance in terms of the conventional posture on their side that we have to deal with.

I have to say that in my best judgment, and this is a matter to which I assure you I give the very deepest consideration, the presence of those weapons, both as a deterrent and in terms of the potential war-fighting use to which they could be put, has a very beneficial effect from our side in our objectives of deterrence and the defense pattern that we are able to follow.

There was just one other point that I would like to make, and that is going back to the ADM's, and indeed, to all these weapons, we do plan on their use. Our plans contemplate their possible use and because the decision rests with our President, I very well know that I cannot plan, you might say, on a single basis. I have to see that our plans are valid and that the use of our force is as effective as possible if we do not use the nuclear weapons at any point; and at the same time, we must have plans so that they can be brought into support of our forces when and if it is necessary and when and if the President would approve it.

The next main area I want to talk about is weapons improvements.

WEAPONS IMPROVEMENTS

We are convinced of the necessity for the theater nuclear weapons to our overall strategy. We have been striving to meet the dual criteria for their credibility; that is, military effectiveness of our weapons and political acceptability of our plans for their use in war. Because of this conviction we see the need for certain improvements.

We need weapons improvements in order to meet the criteria to the fullest possible degree. Much of our current inventory, based on the technology of 10 to 20 years ago, consists of weapons with unnecessarily high yields. Achievable new weapons of lower yields and of

greater accuracy could increase military effectiveness, while reducing possible collateral damage, thereby increasing their utility as well as the acceptability in NATO planning for employment in the NATO countries and the adjacent areas in which they would most likely be used.

Similarly, new weapons designs, based on such principles as [deleted] could permit the use of the more discrete targeting and lower yield which I believe we should have in order to increase the value of our smaller nuclear weapons.

FURTHER IMPROVEMENTS FEASIBLE

There are still further improvements that are feasible in the form of new types and categories of weapons, and we make annual recommendations regarding these in our comments on the nuclear weapon development guidance.

Another good reason for beginning a phased introduction into our stockpile of new weapons with up-to-date technology is the increased credibility and evidence of intent which would be signaled both to our allies and to potential aggressors.

I believe it is a sound assumption that tangible evidence of modernization would add to the deterrent value of our nuclear weapons designed for tactical purposes and would reinforce the confidence and the solidarity that we seek to maintain within NATO.

My next main point has to do with requirements for nuclear weapons.

Representative HOSMER. On that last point, you mean that these improvements, if they had an effect on defense, it would be because they would be aimed at a more credible tactical stockpile?

General GOODPASTER. That is correct.

Representative HOSMER. Thank you.

In what range—

Senator SYMINGTON. Congressman Hosmer, Senator Pastore had to leave. I think it would be better if we let the General finish his statement.

Representative HOSMER. All right.

REQUIREMENTS FOR NUCLEAR WEAPONS

General GOODPASTER. Determination of the size and the composition of the nuclear stockpile in Europe is a matter to which the SHAPE staff, as well as our U.S. staff, at Stuttgart, give thorough study and attention. We assess annually the requirements for weapons to execute our [deleted] strike programs against fixed targets [deleted] as well as weapons required in the Naval battle, for air defense and for nonfixed land battle targets.

[Deleted.]

For all our weapons requirements, the analysis covers, within a framework of carefully weighed assumptions and professional judgments, the entire array of potential targets. Our analysts attempt to optimize—within known inventory limitations of delivery systems and weapons types—the application of weapons against those targets judged critical.

The final study, including the numbers and types of weapons we recommend for allocation and deployment to Europe is submitted then each year to the Joint Chiefs of Staff. This assessment constitutes the agreed position of the responsible United States and NATO military commands on this important subject, and is as analytical and realistic as we can make it.

[Deleted.]

SECURITY OF NUCLEAR WEAPONS

The final topic that warrants initial mention is that of the safety and security of the U.S. nuclear weapons deployed in Europe.

As the U.S. Commander-in-Chief in Europe, this custodial responsibility is of particular concern to me in peacetime.

As you know, we have about 7,000 nuclear warheads stored in [deleted] sites from [deleted]. The present storage site array approaches the optimum arrangement, as we have been able to determine it, to provide for the necessary operational accessibility of the weapons while still giving due regard to dispersal and security considerations. This is a matter under continuing review.

Each of the U.S. military services has established procedures for nuclear weapons support and for the training, management, and inspection of the personnel and the sites involved.

My U.S. headquarters at Stuttgart develops and implements the necessary plans and policies to integrate U.S. requirements and responsibilities with those of the United States and Allied forces which are assigned to or earmarked for the Allied Command Europe nuclear mission.

We concentrate on improvement of capability, including assurance of weapons reliability, on safety and security of the weapons, on maintaining custody of the weapons in accordance with U.S. law and international agreement, U.S. standards and criteria, as well as policy promulgated by Presidential, Defense, and Joint Chiefs of Staff directives, and on timely provision of logistics support, including weapons deployment.

While we have always emphasized very stringent security provisions at all of our nuclear storage sites, we have recently conducted a reappraisal and a tightening of our security policies [deleted].

In addition to added emphasis and specific enhanced security measures through the U.S. custodial chain, we have requested and are receiving similar action and cooperation from the non-U.S. NATO user and host nations.

[Deleted.] This is a matter which is receiving my personal attention and active command supervision at each level concerned.

CONCLUSION

In closing, I would like to acknowledge the due regard we all have for the expense that is involved in maintaining and improving our nuclear forces in Europe. It must be remembered, however, that the U.S. nuclear capability has been a key element of NATO's deterrent posture for almost a quarter of a century.

There is good evidence that this capability, as represented by our in-theater forces as well as strategic forces, has been a major influence

in the evolution of Soviet policy toward negotiation and away from confrontation.

The maintenance and modernization of our tactical nuclear capability to insure the credibility of the NATO option for tactical use of nuclear weapons appears to be a sound investment in the continued NATO contribution to peace in Europe, an area of vital security interests to the United States.

Accordingly, I urge continued recognition, support and improvement of this essential capability.

Thank you, gentlemen.

I am now prepared to address questions that you may have.

Senator SYMINGTON. Thank you, General.

Mr. Murphy, we will observe the 10 minute rule. If you will, notify me and each member of the committee when their time is up.

First, General, we appreciate your coming and giving us this information.

Second, we would like to see this transcript declassified as soon as possible. For some reason, there is great secrecy involved—I am not talking about war plans—with the nuclear field and very much more openness with conventional weapons. It is my opinion that has operated against the best interest of the United States in the past. Therefore, I would hope that this could be declassified at the earliest opportunity and released to the public.

General GOODPASTER. I would like to see the maximum of this declassified, myself, Senator, because I feel that it is important to get these analyses and considerations before the people.

Senator SYMINGTON. Knowing you, I am sure that is true.

Now, in support of Senator Pastore's position when he and Senator Baker came back from their trip to Europe, he told me many things of what he had seen. At that time, Chancellor Brandt was over here and I asked the AEC if we had an agreement to use these weapons. Their answer was, "We have no disagreement." I said that is not the question. Then I asked what questions they thought I should ask Chancellor Brandt, whom I have known fairly well since before he was mayor of Berlin.

The reply came back, "Please don't discuss it with him at all; it is a very sensitive subject." I mention that because it shows the merit in some of the questions asked by the Senator from Rhode Island.

CURRENT U.S. FINANCIAL POSITION PRESENTS PRACTICAL PROBLEM

One of your major problems is the financial position of the United States. Today, the dollar has fallen to a new low in Europe. It is my understanding that the Germans either did, or intend to, revalue the mark upward. Therefore, unless you believe that a sound economy and a sound dollar are not important elements of true national security, this problem becomes a more practical problem than it ever has been in the past.

Now, at my request, the staff have gotten together a group of questions, and I will proceed with the remainder of my time to ask these questions.

I would appreciate your answers being as short as possible, although, of course, we want to know exactly how you feel.

In the event of a decision to use nuclear weapons by U.S. forces, does such a step require permission of any NATO country before such weapons can be used in or over NATO territory?

NATO CONSULTATION REQUIRED IF TIME PERMITS

General GOODPASTER. The procedure is as I have described it earlier, Senator. The request would come to me. My request, then, if I consider that there is a necessity to use such weapons, would go to the President. The agreements within NATO require that there should be international consultation in the event time permits consultation. But the decision itself rests with the nuclear power; that is, the United States in this case.

Senator SYMINGTON. If a decision was made to use nuclear weapons by the United States, but other NATO nations did not concur, how many of the 7,000 nuclear weapons in NATO would not be available to SACEUR?

General GOODPASTER. My recommendation, if we are talking selective use rather than general use, would be in terms of the use of a specific number of weapons for a specific purpose. Now, in the circumstances that you describe, once the decision of the nuclear power was given to me in response to my request and if the situation still required the use of these weapons, I would direct their use. All 7,000 would be available for such use.

[Deleted.]

Senator SYMINGTON. Certainly, if the [deleted] did not agree that we could use the weapons, we would have a difficult time using them, at least in some locations.

General GOODPASTER. That is correct.

REACTION TIME POSSIBLY HAMPERED

Senator SYMINGTON. In the event of an attack from the East, reaction time would be extremely important. In the various NATO planning committees, have you reached agreement for preauthorization by host governments, such as [deleted] for use of nuclear weapons on or over their territories?

General GOODPASTER. [Deleted.]

Senator SYMINGTON. You know, this could not be more important because we are talking about the possibilities of starting a nuclear war. We know in this country how careful we have been to protect that possibility from being the decision of anybody but the President of the United States. Under these circumstances, we not only have the right, but we have [deleted].

General GOODPASTER. [Deleted.]

Senator SYMINGTON. General Goodpaster, in December 1962, at Nassau, the United States agreed to provide the United Kingdom with Polaris missiles; in exchange, the British pledged certain missiles and bombers would be assigned and targeted in accordance with national plans.

The joint statement on this meeting also contained the following:

The Prime Minister made it clear that except where His Majesty's Government may decide that supreme national interests are at stake, these British

forces will be used for the purposes of the international defense of the Western Alliance in all circumstances.

I emphasize the words "supreme national interests." Does this mean that if the United Kingdom decided not to use the nuclear weapons in the event of attack from the East on NATO, that the targets covered by United Kingdom nuclear forces would not be hit?

General GOODPASTER. That is correct, because the nuclear power retains the final power of decision as to whether their weapons would be used [deleted].

Senator SYMINGTON. I understand my time is up.

Congressman Holifield?

Representative HOLIFIELD. No questions.

Senator SYMINGTON. Senator Bennett?

EFFECT OF POSSIBLE BUDGET CUTS BY ALLIES

Senator BENNETT. Continuing this list, General: Recently, the Netherlands and Belgium have indicated they will cut back on their military budgets. Does this mean that the possible targets in Eastern Europe must be double or triple covered by U.S. forces to preclude leaving targets uncovered if certain NATO countries decided to refrain from joining in defense of NATO in the event of attack?

In this same connection, Belgium has already announced specific plans to pull units out of West Germany by 1977. What effect will this have on the strength of NATO, both militarily and politically?

General GOODPASTER. The reductions that are being discussed in both the Belgium and the Dutch forces do not extend to their nuclear delivery capabilities, so that that does not in itself imply a change in those capabilities.

Now, with regard to the two units the Belgians are planning to pull back from a position [deleted]. I have given my agreement and concurrence to that. The distance they are moving—the additional distance—is not material to me. They will have better training areas [deleted] than they now have in their positions which are [deleted].

I have not agreed to any movement of Belgian forces from positions [deleted] and in fact, in connection with this change that they are proposing, they are moving a [deleted] in accordance with my recommendations.

[Deleted.]

COMMUNICATIONS CAN BE JAMMED

Senator BENNETT. Communications are the keystone in NATO's nuclear defense plans. Do you have any information that the Soviets have or are developing ways of interfering effectively with U.S. and NATO communication channels? If so, what are we doing to counter such actions?

General GOODPASTER. We very definitely have information that they have that ability to jam. We get around that. The practical method of getting around it is by redundancy; that is, by having multiple channels of communications. However, we have to anticipate that they could cause us a great deal of trouble in that regard.

Senator BENNETT. I guess we can cause them some trouble, too, can't we?

General GOODPASTER. We can do that. I would add that we have means by which despite their causing us trouble, we can communicate. but it degrades; it slows down our communication.

FLEXIBLE RESPONSE

Senator BENNETT. Dr. Kissinger, in his April 23, 1973, speech on "The Year of Europe," said in discussing the goal of flexible response:

There are deficiencies in important areas of our conventional defense. There are still unresolved issues in our doctrine; for example, on the crucial question of the role of tactical nuclear weapons.

Would you comment on these deficiencies, particularly what is meant by "unresolved issues" concerning tactical nuclear weapons? Would you like to comment on both of these statements?

General GOODPASTER. There are deficiencies in the conventional forces posture. Three years ago, in 1970, a major study was conducted in response to the initiative of President Nixon by Secretary General Brosio, in which the full alliance participated. We made a thorough analysis of the shortcomings and deficiencies in the conventional field and presented them our findings and recommendations for programs for action.

I am happy to say that there have been significant actions taken since then. I am not happy to say that these actions have not been sufficient. There still remains a lot that needs to be done.

RECENT ACCOMPLISHMENTS

However, among the accomplishments, such practical things, for example, as shelters for aircraft, which have a tremendous value to us; additional tanks; additional mechanization; additional anti-tank weapons; all of this has been very useful, but there still remain very significant areas where improvements in our conventional forces are certainly needed.

Senator BENNETT. As a matter of practical fact, you can never arrive at a point where you can say there will never be a deficiency?

General GOODPASTER. That is correct. However, there are still practical steps that should be taken before we reach a point of diminishing returns in this regard.

Now, when it comes to the tactical nuclear reference that you quoted, I think that in the last 3 years, we have moved off dead center. In many ways, we were on dead center for many years in the tactical nuclear field.

In the guidelines that have been developed, despite conflicting interests and conflicting views, we have attained a considerable measure of consensus on which I can now go forward with my planning. These procedures that I have described here have been worked out and put into effect much more fully in the last several years.

There are, however, unresolved issues relating, for example, to modernization of our stockpile of nuclear weapons—unresolved in the sense that we see that there are possibilities that would be very valuable if put into effect in modernizing and improving these weapons in ways that we know from the laboratories can now be done.

Those, I think, are the chief areas that I would describe.

Perhaps I could add that our planning, the planning of capabilities and of options, has proceeded quite a long way in the past few years. I think that we have attained quite a lot in this regard. I believe that enough has been achieved and enough can be achieved in these fields to warrant a review and an extension of the agreement in the way proposed by the reference that you cited.

ANGLO-FRENCH NUCLEAR WEAPONS COOPERATION

Senator BENNETT. Are you aware of any plans for Anglo-French nuclear weapons cooperation, either in terms of an exchange of technical data or the coordination of nuclear weapons strike plans?

General GOODPASTER. All I have seen on that, Senator, are a few references in the press which seem to have no tie-in to official thinking, of which I am aware, in either country.

Senator BENNETT. In 1962, Secretary of Defense McNamara said, and I quote:

Limited nuclear capabilities operating independently are dangerous, expensive, prone to obsolescence, and lacking in credibility.

Do you have any comment about that statement made 10 years ago?

General GOODPASTER. I think there is still a great measure of application in each of those comments today. I am concerned, for example, because of the lack of coordination between the French nuclear capability and our own. The coordination with the British has proceeded over these years, and with the caveat pointed out by the Chairman as to "supreme national interest", they have gone right along with the planning in NATO in working up this coordination and planning.

Senator BENNETT. How do you handle the matter of the independent nuclear force of France and those nuclear weapons of the United Kingdom not specifically committed to NATO?

INDEPENDENT NUCLEAR FORCES UNRESOLVED ISSUE

General GOODPASTER. Responding to the question of France, this is an unresolved issue which is a matter of great concern to me and I think to other responsible military and political people in the alliance.

With regard to Britain, I am not aware of a problem. So far as I am aware, they do commit their weapons, subject to this caveat of supreme national interest.

Senator BENNETT. I think my time may be just about up.

Mr. MURPHY. Thirty seconds, Senator.

Senator BENNETT. I have a good sense of time.

Senator SYMINGTON. Congressman Price, you have just come. I will call on Senator Dominick, if that meets with your approval.

General GOODPASTER. May I be permitted to say a special word to my Congressman, Mr. Price?

Representative PRICE. The Congressman who preceded me and with whom I was associated at the time, made the General's appointment to the Academy. Not only myself, but the whole District and the State of Illinois are proud of him.

Senator SYMINGTON. You can cross the river into Missouri and say we are proud of him, too.

POSSIBILITY OF ATTACK

Senator DOMINICK. Let me just ask you what kind of attack you would anticipate in the event the Soviets tried to take over Europe? Would it include our country and the mainland here or would it just be with respect to Europe and what size forces and so on?

General GOODPASTER. At the present time, I cannot conceive of a type of attack against the West that they could remotely consider to be in their interest. The options open to them, of course, extend from surprise attack through attack with a buildup which could or could not be joined with an all-out nuclear attack at that time.

If I were to put myself in a position of a Soviet planner or Soviet military leader to try to design such an attack which had substantial prospect of bringing useful results, results commensurate or better than the costs and risks involved, I simply would be unable to design such an attack.

Now, I think what this means is that as we observe they must drop back to a different level of trying to divide the Alliance or weaken the Alliance or play for the time and the opportunities that might arise. If I were to describe the kinds of attack that are within their capability, it could be a surprise attack using their 20 divisions that are in East Germany. We could have very heavy and difficult and costly combat trying to gain our main battle positions, in a meeting engagement type of combat.

At the end of that, they would be involved, however, in a military situation without a breaking off point. It is hard for me to see any mission or objective that could be set for their military forces in that regard.

Senator DOMINICK. Let me pose another question to you. When I was briefed in Germany and a variety of other places in 1961, which was a long time ago, the possibility of being able to contain a mass conventional attack was not viewed with any great plausibility by us.

Suppose the Soviets and the Warsaw Pact countries should decide they were going to conduct a conventional attack, not nuclear, how long would we be able to withstand that now with conventional forces only?

SUCCESSFUL "CONVENTIONAL WEAPONS" COULD INVOKE USE OF TACTICAL NUCLEAR WEAPONS

General GOODPASTER. I would put it this way. This is a view that I have held now for some years. If they were to come against us with the full forces available to them and sustain the attack and take the losses that we could impose on them, which would be very heavy, and if things were to go reasonably well for them in this process, then within a short period of days, I believe that we would be confronted with the necessity to invoke the use of tactical nuclear weapons on at least a selective basis if we were to prevent the rupture of our main battle positions.

As you see, there are a number of "ifs" there. If they were to come with only part of their force, if their satellite countries should not join with them or they should indeed be causing problems to them, if the shock of the losses that we would impose on them proved to be such as

to halt and to stop their forces, require them to reorganize and so on, or if many of the thousands of chances of battle were to go against them, then the outcome could be less favorable to them.

I think they have to calculate both sides of that, and this goes to my previous answer, they would have to see this with a very high degree of certainty unless somehow they felt they were crowded in a corner or were obliged to fight in order to protect their regime.

Senator DOMINICK. But in your considered judgment, then, or your best judgment, I will say that, a mass heavy sustained attack would require the use of tactical nuclear weapons.

General GOODPASTER. It could require the use, given that the circumstances developed in the way that I described. It is for that use that I feel that this tactical nuclear option supporting our conventional strength is quite essential, both as a deterrent and in war fighting capability.

Senator DOMINICK. What effect, if any, has the present dispute between Great Britain and Iceland on the northern flank and what I understand is a deterioration of the Greek Forces in the southern flank have on our NATO defense?

ICELAND-BRITAIN DISPUTE MATTER OF CONCERN

General GOODPASTER. The Iceland-British dispute impacts directly on my colleague, the Allied Commander, Atlantic, Admiral Cousins. However, that is of immediate concern to me because a major part of his mission is to support the operations of my command and, of course, to support the lines of communication across the Atlantic.

I know from having discussed this with him in the last few days that this is a matter of very, very deep concern to him, particularly if it is linked in any way to the indications that Iceland may ask for the removal of the American base and the American Forces there.

Iceland, in the term he used just a day or two ago, is indeed the cork in the bottle in terms of surveillance operations, in terms of the operation of an antisubmarine barrier across the Greenland-Iceland-Norwegian Gap.

So, this is a matter of very deep concern to us. Within NATO, Secretary General Luns has offered his best offices and is trying to calm the conflict to the point where negotiations are resumed between those two.

ASSESSING GREEK SITUATION

Now, with regard to the Greek situation, it is, of course, a matter of concern whenever we see what appears to be discord or disharmony within the military structure, and we have had some evidences of that, certainly, in the attempted coup and in the defection of certain officers from one of their ships engaged in an exercise.

I do not know of any way of evaluating that in quantitative terms, but it is a situation which warrants concern and certainly bears watching.

I would want to balance that by saying that the structure of the Greek Armed Forces and the condition of discipline and responsiveness within their Armed Forces has, over the years, been strong. Their

soldiers are good soldiers and their responsiveness to commend traditionally has been a very strong one.

Senator DOMINICK. In the process of debate recently on the floor of the Senate in which military assistance was cutoff for Greece and which I was opposed to, a statement was made that recently very able and constructive people in NATO on our side had indicated that the Greek Forces were no longer viable because they were losing all their best officers.

What comment would you have on that?

General GOODPASTER. I know of no responsible assessment to that effect.

EXTENT OF GREEK INVOLVEMENT IN NATO

Senator DOMINICK. To what degree are the Greek Forces involved in NATO—Army and Navy?

General GOODPASTER. They commit essentially all of their forces, Army and Navy and Air, to NATO, either as assigned forces or as forces earmarked to come under NATO command at the appropriate alert stage in case of imminent emergency or conflict.

There are certain logistic and support elements that are withheld but those are a very, very small fraction of their force.

Senator SYMINGTON. Senator, your time is up.

Senator DOMINICK. I just want to ask this one question. Is the force structure of the Greek military meaningful in the defense of NATO?

General GOODPASTER. Yes, indeed. The force structure they have is well suited to the task of defense in that area, particularly in Greek Thrace and that general area.

Senator DOMINICK. Thank you.

Senator SYMINGTON. Congressman Price?

Representative PRICE. I have no questions.

Senator SYMINGTON. Congressman Hansen?

Representative HANSEN. Thank you, Mr. Chairman.

I would appreciate it if you would help clear me on the status of the tactical nuclear weapons that are deployed in [deleted] including the ADM's. It was my impression from our earlier conversations and some of your responses to the questions that [deleted]. Maybe you can clarify for me exactly what that status is and the extent to which the country in which those weapons are to be used can prevent their repositioning and their employment in the case of attack.

ADM QUESTION UNIQUE

General GOODPASTER. The ADM question is unique in the sense that there is a special need for chambering and if it can be prechambered this has particular value. With regard to the other weapons, the deployments are in effect, the readiness is in effect, and subject to the direction of the President as the nuclear power for the American nuclear weapons in response to a request or recommendation, a direction or order from SACEUR would be given for the use of these weapons.

You can speculate on what kinds of problems might arise if the Nation, itself, were in disagreement. Really, that process of international consultation is conducted at the level above where I operate.

As a practical matter, [deleted].

You always have in an alliance these possibilities that forces may withdraw. As we know, French forces did during the last war on one or two occasions. Then we would be faced with the problem that would have to be resolved at the time. Substantially, I would say that procedures are well laid out and all of our planning and the whole perception of this that I and the other military officers up and down the chain of command have is that we would go through that procedure of recommendation, authorization, and then direction to fire.

WHAT OF SOVIET CAPABILITY?

Representative HANSEN. What do we know of the Soviet capability in the use of tactical nuclear weapons, both in offensive and defensive mode?

General GOODPASTER. We know that they have a very substantial delivery capability. I am here talking about their FROG, and SCUD, and SCALEBOARD missiles, also. They have the intermediate and medium range ballistic missiles that could be used against Western Europe.

[Deleted.] The weapons that they are assessed as having are generally considered to be of larger yield and not susceptible of the kind of employment that we would visualize in our selective use program.

Representative HANSEN. Would it be correct—based on what you have said about the value of keeping tactical nuclear weapons in our inventory, if I understand the thrust of your analysis—that the removal of those weapons from our inventory in Western Europe would not only reduce the options that we might have available to us in the event of an attack from the East, but it would increase the option, would it not, of the Soviets for offensive weapons?

General GOODPASTER. It would enlarge the options available to the Soviets. At the present time, they will certainly be restrained in considering the exercise of their capabilities by what they see arrayed against them.

It is in this regard that I have supported very strongly, not the reduction, but the modernization of our stockpile. I think that there are few enough areas where we have a qualitative advantage and this, to my mind, is one.

We postulate that they are attacking us, they are coming against us. Now we have here military weapons that enable us to deal very effectively with the force that is engaged in that particular type of operation. This is a capability that is of great value to us. My own feeling is that the artillery weapons are of tremendous value to us in giving us this kind of capability that can be employed against them with a good prospect of defeating their attack, of halting their attack, and with minimum escalatory effect because they would have to consider, as I put it, whether there is anything west of the Iron Curtain that is worth enough to them to begin to risk an escalation process that would enlarge and make more imminent the threat to their own homeland.

I am sure they analyze the problem in those terms. This is why I have supported very strongly the modernization of tactical nuclear

weapons and particularly the modernization of the nuclear artillery weapons.

Representative HANSEN. Thank you very much.

Senator SYMINGTON. Thank you, Congressman Hansen.

I ask unanimous consent that an article in the Washington Post of June 7, by Michael Gettler entitled "Study Insists NATO Can Defend Itself," be inserted at this point in the record. I also ask unanimous consent that a letter incident to this article written by Chairman Price to Secretary Clements concerning this article be inserted at this point in the record.

I also wrote him and received a letter from him. I also ask unanimous consent that a reply from the Deputy Secretary of Defense on June 22 to the letter from Chairman Price be inserted at this point in the record.

[The documents referred to follow:]

CONGRESS OF THE UNITED STATES,
JOINT COMMITTEE ON ATOMIC ENERGY,
Washington, D.C., June 7, 1973.

HON. WILLIAM P. CLEMENTS, Jr.,
*Deputy Secretary of Defense,
The Department of Defense, Washington, D.C.*

DEAR MR. SECRETARY: The June 7, 1973, Washington Post contains an article by Michael Gettler purporting to quote from a recent Department of Defense study on the capability of NATO conventional forces *vis a vis* Warsaw Pact conventional forces. The major thrust of Mr. Gettler's evaluation of this study was that NATO has been overly pessimistic about their chances in a conflict with Pact forces when only non-nuclear armament was involved. This new optimism, if real, is at variance with testimony I have heard at the House Armed Services Committee and at the Joint Committee on Atomic Energy.

Would you please comment on Mr. Gettler's evaluation of this new DoD study on NATO capability and would you also please attach a copy of this new study with your comments.

Sincerely,

MELVIN PRICE, *Chairman.*

THE DEPUTY OF DEFENSE,
Washington, D.C., June 22, 1973.

HON. MELVIN PRICE,
*Chairman, Joint Committee on Atomic Energy, House of Representatives,
Washington, D.C.*

DEAR MR. CHAIRMAN: Thank you for your letter of June 7, 1973, which asked me to comment on DoD's ongoing US/NATO military capability studies. Because of the extreme importance of our NATO commitment, and because of recent newspaper articles concerning these studies, I welcome this opportunity to clarify the objectives, current status, and potential value of the studies.

As I explained in a recent letter to Senator Symington, the US/NATO military capability studies are the latest attempts in our continuing efforts to improve our analytical capabilities to assess the adequacy of military forces in accomplishing their assigned missions. Parts of these particular studies have been ongoing for 20 months. Their principal emphasis has been: (a) attempts to reconcile differing views on the key assumptions and input information which, as in all such studies, have a large impact on the results; (b) attempts to determine the relative significance of various changes in initial assumptions; (c) attempts to determine the significance of the differences resulting from the use of various methodologies and wargame "models"; and (d) including in the analysis the contributions of our allied forces in the same level of detail as US forces.

We do believe that these ongoing studies will be among the most comprehensive concerning our military capabilities in the NATO environment. However, since the studies are not complete, they have not yet been used to explore many

realistic war "scenarios." In addition, as in all such analytical studies, many potential real-world limitations and difficulties have not been fully considered, and in many cases the interaction of different kinds of forces has not been taken into account. For instance, our present land forces studies do not yet include the contribution of tactical air forces, the constraints of available logistics, or unanticipated problems in command and control.

As you may know, Senator Nunn was recently given an informal status briefing on these studies. He correctly observed that because of the incomplete nature of the studies, and because of the uncertainty underlying many of the assumptions used, it is premature to draw any final conclusions. However, within the limited scenarios explored to date, these in-process studies are consistent with the long-standing US position that we do retain, together with our allies, a credible conventional defense capability in NATO.

In summary, we are not prepared to consider these studies complete or "authoritative," nor do we think it would be appropriate to disseminate them in their present fragmentary and inconclusive form.

Sincerely,

WILLIAM P. CLEMENTS, JR.

[The newspaper article mentioned follows:]

[Reprinted from the Washington Post, June 7, 1973]

STUDY INSISTS NATO CAN DEFEND ITSELF

(By Michael Getler)

A major new Pentagon study sharply challenges a common view that NATO armies would be routed by a massive Warsaw Pact ground attack in Europe and would be forced to escalate the battle to nuclear warfare.

"It also casts serious doubts," say top officials, on other commonly accepted ideas that Communist air forces would quickly gain supremacy over a central European battlefield and that Soviet submarines would prevent allied shipping from carrying supplies across the Atlantic.

Experienced American officials term the study "the most thorough and careful analysis ever made" on the subject.

Two years in the making and with some portions still underway, the study is expected to be an important matter for discussion at today's top level NATO Defense Ministers meeting in Brussels.

It challenges not only many previous U.S. military estimates but also the official line of NATO's European hierarchy.

It suggests in fact that to defend against the most likely—though not the most severe—threat posed by the Warsaw Pact ground forces "requires less than what we (NATO) have. That's the first time anyone has ever concluded that," says one high-ranking official.

Such a finding would appear to be an argument in favor of bringing home some of the 300,000 U.S. troops in Europe.

However, Defense officials emphasize that the study does not tackle the question of troop cuts. (If anything, Defense officials assert, by concluding that NATO can indeed defend itself, the study provides support for those who argue that current force levels be maintained at least for the time being and their readiness improved.)

The purpose of the study was to measure relative East-West fighting capability more accurately and realistically than had been done before.

The study also appears to support the administration's message to U.S. allies in Europe that future mutual and balanced East-West troop cuts can be made safely without loss to the allies' national security.

On the other hand, so much of the analysis represents a direct challenge to conventional military views in the U.S. and Europe that the study could provide significant ammunition for critics of administration defense policies.

Most experienced military analysts do not expect a war in Europe. But the status of the actual East-West power balance and the way it is perceived by both sides is the principal driving force behind U.S. foreign policy, the size of the defense budget, and the heated debate in this country about the costs of keeping U.S. troops in Europe.

Former Defense Secretary Elliot L. Richardson alluded to the new study, officials say, in a farewell press conference on May 24.

He warned then against "a tendency on the part of some people not only among our allies but within the United States to cling to the 'trip wire' theory" of quick escalation to nuclear war in Europe.

He warned also against the tendency "not only to underestimate the importance of conventional (NATO) forces, but to downgrade their capabilities."

The basic study of opposing ground armies began two years ago under the guidance of former Army Secretary Robert F. Froehlike and Assistant Secretary of Defense Dr. Gardiner L. Tucker.

Tucker, the Pentagon's top systems analyst, is soon to become an assistant secretary general to NATO.

Army officers did much of the work. Central Intelligence Agency and Defense Intelligence Agency specialists were brought in to review data and assumptions concerning the military threat posed by the Warsaw Pact.

COMPANION STUDIES

Last summer, former Air Force Secretary Robert Seamans and Chief of Staff Gen. John D. Ryan were called in to start work on a companion study—still going on—to assess the tactical air force balance.

The Navy was asked almost two years ago to do another companion study on keeping the sea lanes to Europe open.

More recently an administration-wide study by the Maritime Commission, joint staff of the JCS, and the Pentagon made further analyses of how much shipping and equipment could get through a submarine-invested Atlantic.

The studies, thus, are extremely detailed and complex. At least some are still going on and some rest on rather sharp changes in traditional assumptions.

GROUND FORCES

All told, the Russians and their East European satellites have about 216 army divisions. These include about 42 divisions strung out along the Chinese border and in positions a few hundred miles from the border.

Of the total, about 85 divisions are labeled by the intelligence community as the "designated threat," that is the forces viewed as certain to be committed to a battle in Central Europe.

These include satellite troops, Soviet divisions in Eastern Europe plus Russian troops in the three westernmost sections of the Soviet Union.

If Russia faced little threat on her European flanks and gambled on weakening her Chinese defenses—an unlikely prospect—by drawing some troops from these areas and some from strategic reserves around Moscow and Kiex, she would produce what the analysts describe as the worst or "augmented threat" that NATO might have to face. This augmented threat is about 126 to 128 divisions.

This level would be an "extreme," analysts believe, because it would put Russia in a purely defensive posture everywhere but in central Europe. Undoubtedly some reserves would also be held to keep the satellite countries in line.

Russian divisions are roughly half the size of U.S. and NATO divisions. Only about one-third of them are viewed as "Category 1" or combat ready units with 80 to 90 per cent of their men and equipment.

Another third are at half-strength. The remainder are about 25 per cent filled but with experienced men around which these divisions eventually would grow.

When these divisions are reduced for measurement purposes to the equivalent of a standard U.S. Army armored division—17,000 men and 325 tanks—defense officials say the Warsaw Pact designated threat comes out to about the equivalent of 48 to 56 divisions.

The augmented threat totals 72 to 78 divisions. NATO forces are rated at about 44 to 52 division equivalents. This includes forces already in Europe, some ready reserves in Europe, and U.S.-based reinforcements that could be brought to Europe within 90 days after a war began.

With these measurements and many other factors added in, the study suggests that NATO could hold off an attack close to communist borders in Germany by the most likely combination of Warsaw Pact forces for 90 days. That is the period which most officials believe would be necessary to produce a stalemate, avoid nuclear war, and begin negotiations.

Against the worst threat, NATO appears to need about 8 to 14 more armored division equivalents. But even here, officials say, analysis shows the allies could hold for about 70 days with "the outcome in serious doubt" because allied air power and behind-the-line reserves may be able to stem a breakthrough.

SOVIET STRATEGY

Soviet strategy is believed to call for a short land war, of perhaps 30 days. But the studies suggest that the Warsaw Pact might develop serious shortages of stockpiled supplies and munitions in any longer battle, particularly with divisions on the move.

Key differences between the new assessment and previous ones involve counting of French forces, which are not part of NATO's military alliance but which officials believe would be committed to fight after a war starts and should be counted.

Also counted for the first time is a sizeable German territorial militia which is generally equipped as light infantry "but which certainly should count for something," officials say.

All told, these forces plus other scattered European reserves add up to about 15 divisions.

In the past, NATO fed its own official gloom by just counting units committed to battle identified by member nations on an annual questionnaire.

Many past studies gave the Russians capabilities to fill up their undermanned Category 3 divisions in about two weeks. But new comparisons with similar western units indicates that even giving the Russians an edge it would still take them 12 weeks.

This is highly important, since it would determine when additional Russian divisions could be brought to bear and also how much mobilization time the Soviets would need for a successful attack.

If an attack only by Category I divisions were mounted, the studies show NATO could hold. If more full strength divisions are thrown in, in an initial attack, then it takes longer for the Soviets to mobilize and thus gives the U.S. and NATO longer to move troops and equipment from the U.S. before the shooting starts.

In the past, East-West weapons assessments also tended to give the Warsaw Pact enormous superiority because of superior numbers of tanks and heavy-caliber weapons.

But new Army assessments change that substantially when factors such as weapons effectiveness, mobility and survivability—as well as a U.S. edge in anti-tank weapons—are counted.

OCEAN SUPPLY

The study shows that the U.S. is well out in front of the Russians in producing a new generation of expensive but extremely lethal artillery and mortar shells known as Improved Conventional Munitions. These are rated as five times better than standard munitions. The Army is now about one-third of the way through equipping its forces; no similar deployments are noted thus far in Soviet forces.

The new study also sharply questions previous techniques of simply giving the Warsaw Pact the same supply and maintenance capabilities of NATO forces. And, it challenges the time it will take the Soviets to reconstitute battle-damaged divisions once withdrawn from the front lines.

Other implications of the study are substantial. It indicates armored divisions are better than infantry divisions for Europe. It suggests that the United States might take a lesson from the Soviets in switching reserve policy so that there are fewer divisions made up entirely of reservists and more like Russian Category 3 divisions that have a core of regulars that can more quickly get a unit ready for combat.

The study assumes the Soviets would need a month to get ready for an attack even with their most ready forces, and the United States would lag about a week behind. But if the Russians want to have their Category 2 divisions ready, then still more time would be needed.

The Joint Chiefs, traditionally worried about what is described as the "Pearl Harbor syndrome," fear that even if the U.S. sees signs of Warsaw Pact preparedness for war political leaders may not act upon it to set U.S. mobilization in motion.

Another major factor in past studies, officials say, was the tendency to leave out many of the re-inforcements set to come from the U.S. The assumption, dropped in the new study, was Soviet subs would stop the ships and that European ports and roads to the front would be battered.

A portion of this assessment is still underway with respect to getting the goods to the front lines once they reach Europe.

But a key Navy study shows that an all-out Russian submarine attack would knock out about 25 to 50 per cent of the ships that started across the Atlantic in the first 30 days of a war.

But as the Russians lose subs to allied anti-submarine forces, the average over 90 days comes to about a 10 to 20 per cent shipping loss. The study shows the Russians losing 70- to 90 percent of their sub fleet in this period.

The study attributes about 35 per cent of the submarine losses to the navies and air forces of NATO allies. But others worry that in a crunch these navies may just protect their own coasts and not be aggressive in doing battle with the Soviet vessels.

The study also indicates the U.S., would need some 200 cargo vessels from NATO nations to help carry the goods, a figure estimated as a modest percentage of the NATO merchant fleet by U.S. officials.

The first 30 days are critical. If the U.S. has three weeks of mobilization warning time when ships can move freely, then losses of 25 to 50 per cent in the first month of battle supposedly can be accepted. But if warning is only one week, then the U.S. could fall short. "But not terribly short," says one official. "We'd be in a little trouble but could get out of it."

A study by the joint staff indicated that the U.S. has enough heavy equipment stockpiled, such as tanks and artillery, to compensate for shipping losses, with some shortages in lighter material.

The two additional U.S. Army divisions and an independent brigade that have their equipment pre-positioned in Europe would be airlifted, so that U.S. forces could fairly quickly be built up from 4½ divisions there now to seven divisions.

The prospect for difficulties moving equipment once it reaches port suggest to some officials that the U.S. might pre-position even more equipment in Europe and spend more money on protecting depots than on some of the glossier military hardware.

AIR FORCES

Though the balance of air power study is not yet complete, officials say it already tends to discredit Warsaw Pact superiority gained after just a few days of fighting. That superiority was claimed in former studies mostly on the basis of more Communist planes and vulnerable NATO airfields.

Including all its worldwide air forces, each side has roughly 10,000 to 11,000 fighters, fighter-bombers and reconnaissance planes of all types.

Whereas previous studies showed a Warsaw Pact numerical superiority in any European battle, the new study shows that the forces would really be about even at 5,000 to 6,000 planes each.

Many past studies, officials say, left out U.S., British and French air defense forces, but counted air defense forces in Poland, Czechoslovakia and Russia as taking part in an attack.

The new analysis shows, however, that this is unfair and that with NATO's superior quality in attack planes, the Warsaw Pact would indeed need those interceptors for air defense rather than attack purposes.

While the Warsaw Pact has more fighters than NATO, the NATO fighters are viewed as better, with greater range and able to stay in the air longer. This leaves the question open as to superiority over the battlefield.

U.S. and NATO attack planes and their munitions are rated as "strikingly superior" in quality to their Pact counterparts.

NATO airfield vulnerability is being rectified in part by building shelters for airplanes. But as important, officials say, are new studies which emphasize that most Warsaw Pact planes are short-ranged and that these fields are quite far from Warsaw Pact bases.

Moving the Communist forces to more forward bases, or using long range bombers to hit the airfields, would give additional warning time to get allied planes into the air. The study has not yet taken missile attack into account.

SPECIAL SENSITIVITY

The new study comes at a time of special sensitivity in Europe about U.S. intentions.

It also comes as the NATO military command is about to issue its latest secret annual report on the balance of power which officials say—not surprisingly—describes a "strikingly inferior" position for NATO.

The U.S. would like NATO commanders to go through the same type of analysis as the Pentagon did to reduce the pessimism in Europe which many officials see as unwarranted and self-serving.

"The European allies are worried that the U.S. will back away from its nuclear commitment," one U.S. official explained. "They see the U.S. emphasis on conventional capabilities as a step toward removing the nuclear shield. That's one reason NATO commanders play it down. If the primary defense is nuclear, then the primary responsibility is U.S. If it's conventional, then they too must be responsible and the U.S. can push for a greater European share," he says.

"The tendency to do this is driven by another fear that defense programs and budgets will be cut. All the governments are looking for cuts, and if we tell them we have enough or will do well, the fear is we will be cut. There is an endemic quality here of never let it be said we have enough . . ."

But officials say, the other view of saying "it's hopeless" is even a worse tactic because that really sets the forces in motion for cutbacks.

"So many people say we can't hack it," says one official, "and they let the policy problems flow from that; when the best study ever done suggests we can do it."

Other factors may enter into the official pessimism, including the prospects that by emphasizing nuclear deense, a European war may quickly escalate to a strategic war between the U.S. and Russia, leaving Europe largely intact.

U.S. officials say that studies of the outcome of tactical nuclear exchanges in Europe "leave great uncertainty about the outcome," but no uncertainty about lots of damage.

No major change in U.S. nuclear policy—either tactical or strategic—is expected to be proposed at the major upcoming NATO meetings.

"What we are concerned with," as one official expresses it, "is that the Europeans have the courage and the confidence to face East-West questions on their merits. Military uncertainty means they have to hedge and make decisions out of fear rather than in their own interests. They have to be able to shout 'no' when they should and the important thing is the confidence they have."

Senator SYMINGTON. General Goodpaster, do you know of this study?

WASHINGTON POST ARTICLE DISCUSSED

General GOODPASTER. I know of the article in the Washington Post and I know of the study effort—I would put it that way—that is going on. I do not know of any completed study. In fact, the information that has been given to me is that there is no completed study, that this is an ongoing effort.

Senator SYMINGTON. It is our understanding that the logistics aspects of the problem in case of a war were not considered.

General GOODPASTER. I have that same information and there were other aspects as well, such as the effect of tactical air that had not yet been considered. That I would say, in our area, is a rather considerable omission.

Senator SYMINGTON. I certainly agree with that. I just say it is one more illustration of a phony study based on incomplete information. I would appreciate your comments after you have read the article and the letters in question, for the record.

General GOODPASTER. I can't comment on the letters. I have read the article. Substantially, my comment is as I indicated.

Senator SYMINGTON. If you have anything further to say, will you add it for the record?

General GOODPASTER. Yes; I will.

Senator SYMINGTON. Back to this line of questions. Have you worked out the rules of engagement for U.S. unilateral use of tactical nuclear weapons?

General GOODPASTER. Senator, I don't quite get that question.

NO UNILATERAL "RULES OF ENGAGEMENT"

Senator SYMINGTON. Let me repeat it. Have you worked out the rules of engagement for U.S. unilateral use of tactical nuclear weapons? If you have, will you describe what those rules are?

General GOODPASTER. We have no rules of engagement for unilateral use. In fact, we have no plans for unilateral use. The only thing that I can say is that our forces, of course, have their plans which are part of our overall NATO plans, and they would have the capability of performing any of the assigned operations under those plans on a unilateral basis if that should ever be directed.

But our whole procedure is a NATO, an allied procedure. As to the rules of engagement, I think the nearest to that that I would understand are the procedures that I have described, the process that we have to go through in order to develop the request, submit it, get the approval, and carry out the direction.

Senator SYMINGTON. Does that apply also to the question—have you worked out the rules of engagement with our NATO allies for the use of tactical nuclear weapons? If so would you describe that?

General GOODPASTER. That would be, I think, these procedures that I have already described, Senator.

SCHLESINGER CALLS FOR "EQUITABLE BURDEN SHARING"

Senator SYMINGTON. Secretary of Defense Schlesinger, who was confirmed yesterday by the Senate, is reported in the June 8, 1973, press as telling the NATO Defense Ministers and I quote, "That more equitable burden sharing in defense with emphasis on European force improvements is essential." He is also reported as having said, "Allies must face up to the need to help the United States address the balance-of-payments problem."

It seems to Secretary Schlesinger, as it most certainly has seemed to some of us, that these NATO allies are falling short in providing funds for their own defense.

In Europe, where have they failed and which allies can and should contribute more?

General GOODPASTER. On the general question of burden sharing, the information that I have is that if you consider defense expenditures as a percentage of gross national product in relation to per capita income, then there is a very close match between the United States on the one hand, and the total of its allies on the other hand.

That does not hold true, however, country by country. I will be glad to provide an analysis, a tabular analysis which I have, which indicates how the various countries are doing in this regard. Some of them, in fact, exceed the United States, a fair number of them exceed the United States, on that criterion.

But a fair number of them fall considerably short.

[The following additional information was subsequently provided:]

Looking at this matter from a purely statistical standpoint indicated that we are not necessarily bearing an unreasonably large portion of the financial burden of European defense. The following chart indicates the total defense expendi-

ture in millions of dollars and the defense expenditure as a percentage of GNP of the NATO nations in calendar year 1972. It also indicates the GNP per capita and an estimated cost per capita for NATO defense.

Country	Defense expenditures	GNP at per capita cost ¹	Total defense/ expenditure NATO defense expenditure ²	Cost per capita ³
Belgium.....	998.5	3,135	3.3/3.3	136.50
Canada.....	2,138.0	3,912	⁴ 2.5/	-----
Denmark.....	459.8	3,470	⁵ 3.0/3.0	104.10
France.....	7,193.5	3,323	⁴ 4.2/	-----
Federal Republic of Germany.....	8,995.1	3,673	4.0/4.0	146.90
Greece.....	557.2	1,190	5.3/5.3	63.10
Italy.....	3,348.6	1,955	3.1/3.1	60.60
Luxembourg.....	11.6	3,163	1.1/1.1	34.80
Netherlands.....	1,516.9	3,000	3.8/3.8	114.00
Norway.....	499.2	2,332	3.8/3.8	88.60
Portugal.....	607.7	827	⁴ 8.3/	-----
Turkey.....	690.6	372	5.0/5.0	18.60
United Kingdom.....	8,021.7	2,490	⁵ 5.8/	-----
United States.....	79,528.0	5,056	7.5/1.5	75.80

¹ Based on GNP per capita: equivalent U.S. dollars (GNP).

² Expressed as a percentage of GNP.

³ Cost for NATO defense.

⁴ Has significant defense expenditures outside of NATO; percentage unknown.

⁵ Based on 1971 data. No figure available for 1972.

A United States estimate made in December 1972, based on the "slice" concept, concluded that during FY 73 US defense expenditures which contributed to NATO defense could be estimated at about \$16 billion. When we compare the \$16 billion figure with our 1972 GNP (\$1,057,804 million), we see that our NATO defense expenditure as a percentage of GNP is 1.5%. On a comparative basis, therefore, almost all other NATO nations contributed a greater portion of their GNP to NATO defense expenditure than did the US in 1972. As a general indicator of cost for NATO defense per capita, there are a fair number of countries which exceed the US and there are some that fall short. For those that fall short, one must consider a certain floor under which it is not reasonable for poor nations to contribute as much proportionately as rich nations. The basics, food, clothing and shelter rightfully are more important to a poor man than insurance, and he budgets accordingly.

Senator SYMINGTON. What criterion are you talking about?

General GOODPASTER. If you take defense expenditures as a percentage of GNP in relation to per capita income, and of all the criteria that I have seen that has seemed to me to come closest to a fair measure of burden sharing—

Senator SYMINGTON. Am I to infer that you are satisfied with the contributions of the countries you are referring to as being successful in this regard?

General GOODPASTER. I am not satisfied with the ones that lie below the United States on the list.

Senator SYMINGTON. You are satisfied with the ones above the United States on the list on the basis of that formula?

General GOODPASTER. On the basis of that formula. Now, when it comes, however, to balance of payments, that is another aspect of the thing.

BALANCE-OF-PAYMENTS POSITION MAJOR CONSIDERATION

Senator SYMINGTON. I will get to that aspect.

In the Congressional Record of June 8, 1973, Senator Harry Byrd took note of Secretary Schlesinger's statement that the stationing of American troops in Europe costs the U.S. balance of payments about

\$1.5 billion annually. In view of the continuing decline in our balance-of-payments position, how would you reduce this drain on our resources?

General GOODPASTER. In the past, that has been dealt with by a bilateral offset between the United States and Germany principally.

I have taken the view, and I have expressed this publicly and have discussed it with my associates in the Alliance, that a more permanent and a more regular system or mechanism should be established that would neutralize the adverse balance-of-payments effect on the United States of the maintenance of its forces overseas.

I am happy to say that with the initiative given by Secretary Schlesinger at this last meeting, the June meeting of Defense Ministers, this is now a matter under consideration in NATO, and I am very hopeful that a solution can be found. I regard this as one of the most serious issues and one of the most serious elements that tends to weaken the U.S. commitment and participation in NATO.

Senator SYMINGTON. Thank you, General. I will only say this is my 21st year on the Armed Services Committee and it has been a serious problem since I have been there.

I hope we are making some progress towards at least alleviating it. Apparently, there is no chance whatever of eliminating it.

I think my time is up.

Congressman Hosmer?

Representative HOSMER. Thank you, Mr. Chairman. I have two general questions. General Goodpaster, if you have not gone through it already, you had spoken of improved modernized tactical nuclear weapons.

Could you be somewhat specific as to what kind of effects, options, yields you have in mind for that modernization?

MODERNIZATION OF ARTILLERY WEAPONS OF GREAT IMPORTANCE

General GOODPASTER. One of the improvements that I have supported I know has been a matter of recent consideration by this committee and that is the artillery weapons, the 155-millimeter and the 8-inch weapons. It has seemed to me, and still seems to me, that the modernization of these two systems is of very great importance.

Frankly, I would have to regard it in military terms as a mistake to discontinue the development and production of those particular systems.

As I have described earlier, the artillery weapons in connection with this [deleted] have a particularly great value. Now, in regard to those that we have, we are very glad to have them and they serve a useful purpose. They could be considerably improved, however, with the new weapons, the 155-millimeter and the 8-inch that have been proposed.

Representative HOSMER. You are speaking of those that have the advantage of [deleted].

General GOODPASTER. [Deleted.]

Representative HOSMER. My question is not directed to those, but to the modernization that you mentioned beyond that. You did mention, I think, [deleted].

General GOODPASTER. [Deleted.] The introduction of very accurate guidance systems which enable you to use smaller weapons for the

same military effect and thereby to eliminate the harmful collateral effects which are what cause a great deal of this problem with our other allies.

Representative HOSMER. Then you are talking about lower yields.

General GOODPASTER. Lower yields, more accurate weapons.

Representative HOSMER. Would you say that you are talking in this context in yields that may range from, say, [deleted]. Is that the range that you are speaking about?

General GOODPASTER. I am really talking in the range of, say, [deleted], I am very much interested in that range.

Representative HOSMER. [Deleted.]

General GOODPASTER. [Deleted.]

Representative HOSMER. In yield. [Deleted.]

Of course, when you crank all that sophistication in, you hit the cost barriers that were originally with the artillery shells.

Could you not devise some kind of tactic to accommodate yourself to possibly even a single yield?

General GOODPASTER. I understand that there are practical limits in this. It is also my understanding, however, that by the way in which the weapons are designed, it is possible, still with a limited use of nuclear materials to get [deleted]. I suspect I am not the best witness on that. I am keenly interested in the possibilities.

OVERSOPHISTICATION LEADS TO COST PROBLEMS

Representative HOSMER. Where we run into trouble is between the operator who lays on certain demands and the researcher who has to respond to those demands not understanding each other's problems.

In that case, sometimes we over-sophisticate our weapons, they cost a great deal more to fabricate than they would otherwise.

I just point out the problem that we face in that regard.

General GOODPASTER. Could I respond by saying that I welcome the opportunity to have a dialog in this way. When I spoke of getting off dead center in the last couple of years in this tactical field, this has been one of the ways in which that has happened. We have in fact—I have participated in some of this personally—we have had a dialog to look at these capabilities, and I am quite prepared from my side and the side of my staff to go into questions and look at trade-offs and see whether there is over-sophistication and whether this can be given away in order to get the main things that we are after without adding to it in a way that defeats the whole project.

Representative HOSMER. I am delighted to hear that, General, because I think we are getting ourselves in a chicken-and-egg situation, which came first situation, in connection with the modernized stockpile and it does deserve more conversation.

TACTICAL NUCLEAR WEAPONS FOR NAVAL USE

I have just one other thing now. As the head of Allied Command Europe, has your organization given any consideration to these tactical type weapons with respect to naval uses?

General GOODPASTER. Yes. Each year when we work up our nuclear requirements, we look at the development possibilities and give our

views on those development possibilities, and that includes air, naval, and ground use.

We have reviewed, for example, the proposals for the [deleted]. I recall this came under consideration—came under our discussion—last year.

Representative HOSMER. I am thinking even further down the line where you have to carry very heavy weapons, you have to have large ships or large airplanes to do it.

If you have a tactical weapon of a nuclear variety which is [deleted] light, you can probably put it on the end of a smaller rocket and put that rocket on a smaller vessel with fewer members of the crew and you carry out your defense duty within the limits of the expenditures.

General GOODPASTER. I regard the introduction of these more modern weapons as highly advantageous. The LANCE, I think, is a good example. By moving to a more modern generation, we are able to cut down on structure and cut down on manpower, and manpower is the thing that eats us up these days.

Representative HOSMER. There are also some other things that eat us up. On the SUBROC [deleted] we have to use a [deleted] device to knock out some ship or installation which probably could be subject to knocking out with a [deleted] device or less.

Thank you.

Senator SYMINGTON. Senator Dominick.

Senator DOMINICK. General, in this Michael Getler article referred to by the Chairman, it says in here that the study has been revised by the "conviction" that in the event of an attack France would involve its forces. Has there been any progress in getting France to agree to a NATO concept?

FRENCH PREFER TO "PLAY IT BY EAR"

General GOODPASTER. The decisions of General DeGaulle remain in effect. The French have withdrawn their forces from the NATO integrated commands. They allowed for cooperative planning, which necessarily must be on a contingency basis, insofar as their forces in Germany, are concerned. It is the number one tenet of all of that planning and all of our contact that there is no automaticity, in the term they use. There is no assurance.

Privately, many of them come and say, "You should have no doubt that France will come and stand by your side at the time."

But in terms of our ability to take that into account in our planning, we have to go by their official statement and official position, and that is what we do.

Senator DOMINICK. Has there been any change in their refusal to allow overflights of France by NATO forces?

General GOODPASTER. They permit overflights at the present time. This has to be requested. At the present time it is being requested on a monthly basis. The permission for overflights is very broad and we have had no difficulty in that.

However, they have made it very clear to us that in the event of hostilities we can have no assurance that there could be overflights of French soil or there could be any use whatsoever of French soil or French facilities.

Senator DOMINICK. So that the statement in here that we should count on French forces is certainly not backed up by official policy? General GOODPASTER. That is an assumption.

TIME NEEDED TO REACT TO SURPRISE ATTACK

Senator DOMINICK. There is an interesting question which the staff has prepared here.

Assuming a surprise attack from the East, with little or no warning, and they say similar to the Czechoslovakian invasion, but let us suppose it is in force, you have indicated that you feel in order to sustain a defense against this, you would probably have to go to tactical nuclear weapons.

Presupposing that you get authorization for this, how long would it take from the time of the authorization to get that down to the field commander so that they can actually fire the shell?

General GOODPASTER. Before responding to that last point, let me say if there was a surprise attack against us, it is less certain that we would need the nuclear weapons at an earlier time because they would be attacking with smaller forces. I don't want to try to prejudice that, but it becomes a different type of issue than the one I discussed with you earlier.

Now, in terms of these time factors—we have examined those in our exercises and we have had varying practical experiences. I would like to pull out of our exercise experience and furnish what our best timing is. Essentially, from the time an authorization reached my headquarters, if we are talking selective use, until the time when the unit would actually be ready to fire or in an exercise simulate the firing, you are talking [deleted] minimum to get that down the chain of command.

It must go down both chains of command, the custody chain which is the U.S. chain and the operational chain, which is the NATO chain. But that is the kind of time that one would be talking about.

Senator DOMINICK. What problems does that create for you then insofar as your nuclear weapons are close to the border?

General GOODPASTER. It creates operational problems and operational delays, but those are not essentially related to the question of whether the weapons are close to the border or not. However, many we have in the forward areas, if we are forced into retrograde, then that adds to our logistics burden of moving them; [deleted]. By far, the greatest significance of those delays is in the development of the operational situation and not in the logistics problem of moving our nuclear weapons.

From the tenor of some of the questions that have been asked, I have the impression that there may be a feeling that the location of those weapons has more leverage on our command decisions and on our situation than it does in fact. It is a logistical problem that would have to be dealt with, but the operational problems would far outweigh that at that time.

Senator DOMINICK. I want to say for the record that I was not going along that line. I was asking the questions on the concern that they might be overrun before you could use them. This is the thing that really bothers me.

Let me skip to another subject, if I may, for a minute. I will read the question.

[Deleted.]

[Deleted] how do you justify keeping this base?

And similarly, it would seem to me at least, from reading those facts, if they are correct; and I am sure they are, that it would take us quite a while to get any U.S. aircraft to use them. What is the reason for keeping the base and keeping the weapons there?

General GOODPASTER. Senator, that is under the responsibility and authority of [deleted]. It does not belong to me. I am not in a position to say. I would have to recommend that his views be obtained on that, or the views of higher authority.

Senator DOMINICK. Let me ask another question along the same line, in a much briefer way.

What steps have been taken to prevent [deleted]?

General GOODPASTER. We went into this, really, in the middle of last year. We made a complete new survey of this problem. Coming out of that, [deleted].

[Classified matter deleted.]

[Deleted.] I can assure you that we are the opposite of complacent on this subject. In my commanders' meetings, with my commanders in chief of Army, Air, and Navy forces in Europe, we have made a continuing review of this; it has been one of the special topics in our most recent meeting.

I have a system by which all information bearing on this or related to this issue, any incident comes to my personal attention.

Senator DOMINICK. I have two quick questions.

How many incidents or knowledge of proposed incidents have you received?

General GOODPASTER. In recent times, we have had two reports of people who showed suspicious curiosity around some of our sites. This has been evaluated and nothing really has come of it.

General GOODPASTER. But that is the kind of thing that we are alert to.

Senator DOMINICK. Thank you. That is good enough.

Senator SYMINGTON. We have to go vote. Chairman Price, will you preside?

NATO REACTION TO U.S. TROOP REDUCTION TALK

Representative PRICE. General Goodpaster, there is more and more discussion now about the cutback in forces overseas. What sort of reaction do you get from the NATO groups regarding the reduction of NATO forces and/or forces?

General GOODPASTER. There is deep and very acute concern over any possibility of unilateral U.S. reduction of forces in the area. In fact, there is uneasiness over this proposed mutual and balanced force reduction negotiation. Now, it happens that I have supported mutual and balanced force reductions for many, many years, going back 15 years to when General Norstad was in the position I now hold.

My own feeling is that if we hold to a firm principle in this negotiation, then reductions on both sides can be made without adverse

effect on the security of the two sides. But it is a complicated and a difficult issue.

It has some divisive tendencies within the alliance. It remains of the greatest importance that firm positions must be held to make sure that the reduction does not have a heavier effect on our side than on the other side.

The difficult thing is that we labor under a certain very important disadvantage on our side. The other side has concentrated on offensive elements within his force, that is, his tank force and his tactical aircraft, which greatly outnumber ours. The geographical setting is very much to his advantage. We are in a long, shallow arc, we lack depth, it is broken by water barriers. Our forces are not homogenous. We have a collection of national forces that we have put together, welded together, to a degree, into an integrated force. But on his side, there is standardization, there is interoperability, far beyond anything that we have on our side.

Finally, we have to accord to the other side the initiative. That is, he could choose how to attack. He could choose the time of the attack, he could choose the place of attack, he could choose what kind of forces to use and he can choose what weight of forces to use in an attack.

He can also, on the basis of that decision, organize his force for that purpose.

Now, that means that this gives a tremendous advantage to the other side. It is for that reason that we have to find nonsymmetrical reductions, as they term it, which compensate for these special disadvantages that we have. That, I think, is what is giving the concern among our allies in the field of mutual and balanced force reductions. They do not oppose it in principle, but they are worried about it because they know that equal reductions on the two sides would work to our disadvantage. They are deeply concerned, as I am, over any possibility of unilateral force reductions. I quote often from General Eisenhower and that was quoted by the Randall subcommittee last year, that it was the additional U.S. forces in 1951, the four divisions, that put the glue into NATO.

I genuinely believe that is still the case. If there is a significant unilateral reduction in the U.S. forces which involves combat units, then this will have a seriously and severely weakening effect on NATO and therefore, on the stable military balance that we have achieved in Europe.

As I mentioned earlier, I think we have a respectable posture of defense there. I think the Russians do respect it. But if we begin to disintegrate, if we lose the cohesion in our alliance and lose the self-confidence that has been built, then I think that they would see possibilities for pressure tactics, threats, and military actions open to them that have been denied to them since the military arm of NATO was established in the early 1950's.

COMMENT ON RANDALL COMMITTEE REPORT

Representative PRICE [presiding]. Have you read the Randall committee report?

General GOODPASTER. I did.

Representative PRICE. I know they spent some time with you on their trip last fall. What is your comment?

General GOODPASTER. I have felt that this was one of the most valuable contributions to an understanding of the security problems of this area that has come out in recent years. It has come out with a good authority behind it, that is, with the authority of a U.S. legislative investigating subcommittee.

Representative PRICE. You did not find any area where you were in disagreement with it?

General GOODPASTER. There were one or two proposals in there. I think some proposals about rotating units and some proposals for changing our arrangements regarding dependents on which I would take issue with them, out of the experience that I have had in earlier times when we tried some of those rotation methods.

But those are just details. The remaining judgments and assessments of the report seem to me to correspond very closely to the picture as I would see it.

Representative PRICE. Would you say that the NATO partners are unanimous in their concern about unilateral withdrawal?

General GOODPASTER. This is one issue on which there is real unanimity in NATO. They are deeply concerned about that. This extends throughout my command, for example.

CHRISTIAN SCIENCE MONITOR ARTICLE QUOTES GENERAL GOODPASTER

Representative PRICE. I did not get a chance to read it, but an article in the Christian Science Monitor quotes you at length. Have you had an opportunity to read it?

General GOODPASTER. I saw this. This followed a talk that I gave in Paris just a week ago. I talked to the Western European Union and took the stand that while recognizing value of this détente and of the negotiations that are going on it remains just as important to keep up the other line of policy—to keep up the strength of our forces. I was concerned, I am concerned, about what I term the euphoria that assumes because of these negotiations and because of the talk, the need for military strength is diminishing. I pointed out that in fact, on the Warsaw Pact side in each of the past 5 years, they have increased their military program and they are not decreasing their forces, they are strengthening their forces while these talks go on and my conclusion is that we must keep up the strengthening and modernization of our own forces.

[The complete remarks of General Goodpaster follow:]

[Supreme Headquarters, Allied Powers Europe news release]

REMARKS BY GEN. A. J. GOODPASTER, SUPREME ALLIED COMMANDER EUROPE,
ASSEMBLY OF WESTERN EUROPEAN UNION, PARIS, FRANCE, JUNE 21, 1973

Mr. President, Mr. Secretary General, ladies and gentlemen, I am very glad indeed to be back in Paris and to meet with this group. I lived in Paris and its suburbs for a number of years, and it has always been one of my favorite cities. Each time I return to Paris, however, I notice that a number of things have changed. I am sure many of you have the same experience. That reminds me of a story about Bernard Baruch, an extremely successful American financier who was an advisor to several Presidents. Baruch, who was then in his seventies, had just returned from a trip to Paris. A friend asked him, "Well, how did you enjoy Paris this time?" Baruch replied, "It was nothing like the old days." "Oh," said

his friend, "you mean when Paris was Paris?" "No," replied the financier, "when Baruch was Baruch."

Nevertheless, it is a pleasure to return to Paris and a very special pleasure to address the Assembly of the Western European Union. I have met many of you in your capacity as NATO parliamentarians, but this is the first time I have had occasion to address this Assembly. It is, of course, quite appropriate for SACEUR to do so. Under Article 4 of the Brussels Treaty, the Western European Union and its organs "rely on the appropriate military authorities of NATO for information and advice on military matters." Consequently several of my predecessors met with this Assembly while SHAPE was located at Paris. This is, however, the first such visit since the headquarters moved to Belgium in 1967. Hence I think it appropriate to take as my point of departure today the changes in the military security situation during the last six years. There have been a number of significant changes, and not all have been for the better.

In the first place, the growth of Soviet strategic nuclear offensive and defensive capabilities has progressively changed the strategic balance in a direction adverse to the West. From its position of strategic superiority of a few years ago, the West has dropped to a position of equality and—in some areas—of inferiority. The SALT Agreement has more or less stabilized this situation. This new strategic parity has far-reaching military implications. Some military strategies which were open to the West before are no longer feasible. In this situation nuclear weapons alone are less likely to deter the full range of possible conflicts. Consequently, this strategic parity has increased the importance of maintaining adequate conventional land, sea, and air forces—backed by a tactical nuclear capability—in order to be able to cope with the variety of challenges we face.

At the same time the problems of maintaining these conventional forces have also become more difficult. Personnel costs are rising and are absorbing an ever larger proportion of defense budgets. This trend is, of course, most pronounced in those countries which have moved toward "volunteer" forces—Canada, Luxembourg, the United Kingdom, and the United States. In the United States, for example, more than fifty-six percent of the defense budget now goes for manpower and related expenses. Although the percentage is lower in other countries of the North Atlantic Alliance, it is rising everywhere in the West. As a result, the Alliance now spends about one half of its combined defense budget on personnel, while the Warsaw Pact spends only about one quarter. These increasing personnel costs leave less money for investment in modern weapons and equipment—at a time when this equipment is becoming increasingly sophisticated and therefore more costly.

For, as you know, costs of succeeding generations of military equipment have been rising—and rising at a rapid rate. Weapons today cost, on the average, two or three times more than the ones they replace, even after allowing for inflation. For some types of equipment the increase is even greater. For example, new first-line aircraft are four or five times more costly than the older planes they replace—primarily because of their sophisticated electronics and fire-control systems. The problem is only slightly less critical with regard to modern ship and ground force systems. Moreover this sophisticated equipment is often more difficult to maintain and repair. Complexity frequently results in lower reliability and higher operating costs. As a result of these trends, we are not able to replace older weapons on a one-for-one basis. To be sure, the newer systems have higher performance, but this higher performance is not always sufficient to compensate for the severe reduction in flexibility caused by reduced numbers.

While personnel and equipment costs have been rising, popular support for military programs has been declining. Behind the protective shield provided by NATO's military forces, Western Europe has enjoyed a long period of peace and prosperity. This peace and economic well-being—obviously desirable though they are—have dulled the edge of awareness to danger. NATO and Western Europe no longer feel what General Eisenhower used to call "the impulse of fear." Defensive alliances such as NATO thrive in times of common adversity and danger and tend to weaken when the danger recedes—or seems to recede. Moreover, a new and vocal generation has grown up within our countries—a generation which has never known invasion or subjugation and one which is not yet convinced that military security is a prerequisite for the good life they enjoy. It is now twenty-eight years since the end of the war in Europe. I understand that in the U.S., the medium age of the population is now exactly the same—twenty-

eight years—meaning that just half of the people there have been born after World War II. I assume that approximately the same must be true in Europe. The first part of the report presented by Mr. Dankert contains an interesting analysis of attitudes among our people, particularly among our youth, and some concrete recommendations on what governments can do about them.

Largely as a result of this long and deeply-welcome period of peace and these changing attitudes toward defense, pressures for unilateral force reductions have arisen in almost all of our countries. Everywhere there are voices which urge—loudly if not always logically—that terms of service should be shortened, forces should be reduced, and funds should be shifted to nonmilitary purposes. Moreover, this is a virus that is highly contagious. Any actual reduction by one nation is immediately seized upon by publicists in other countries who use it as a reason—or an excuse—for similar reductions.

For nations which rely on conscription, these reductions often take the form of a reduction of periods of conscript service. But we should not mislead ourselves when we think of reducing such service. In today's military environment, it is no longer sufficient simply to train a man to fire a rifle or machine gun. If he is to take his place in an efficient, fighting unit, he must be highly trained in the use of sophisticated weaponry and equipment and constantly exercised with his unit under field conditions. For example, a soldier in a tank must be a highly skilled specialist, who operates as a member of a small well trained team. But this is not enough. He must also know how to operate his tank as part of a much larger team, in conjunction with infantry and artillery units and in cooperation with air support. The unit must be able to operate by day and night, in all kinds of terrain, in all kinds of weather. To reach this level of training takes time. Nations of the Warsaw Pact have not forgotten this lesson—most of them insist on a minimum of two years of conscript service.

Certainly manpower is an expensive commodity—but a trained soldier provides the first line of defense against an aggressor. Can we really contemplate sending our young men into battle less well trained than those they would fight against, particularly when the hostile forces would outnumber us so heavily? If we were to do so, would we be meeting our obligation to them?

In the field of diplomacy, it is often said, that we have moved from an era of confrontation to an era of negotiation, and both the tempo and the importance of the negotiations have greatly increased during the last few years. A number of these discussions impinge, directly or indirectly, on the military security situation, but one set could affect that situation drastically. I refer, of course, to the negotiations on Mutual and Balanced Force Reductions, the preliminary discussions for which are taking place in Vienna. The report presented by Mr. Critchley contains an interesting section on the political implications of MBFR, and Secretary General Luns has just brought you up to date on the latest developments in the negotiations. It may in addition be worthwhile for me to take a few minutes to outline my views on this important subject—from the standpoint of the allied military command. As I see it, MBFR is both a challenge and an opportunity. The realization of mutual and balanced force reductions is a challenging, desirable objective from the standpoint of military security, *provided* that it leads to greater stability and decreased likelihood of conflict. "Undiminished security" is the well chosen NATO formulation. Personally, I have long felt that such a pattern of reductions is a valid theoretical and logical possibility. In principle, it should be possible to provide the same level of security as now exists for both sides at lower levels of forces. But to get from principle to practice is, we have already learned, a complex and time-consuming business. The London *Economist* observed not long ago that comparing the complexity of the MBFR negotiations to that of the Strategic Arms Limitation Talks is like comparing the Spassky-Fischer chess matches to a game of dominoes. There are times when we at SHAPE feel that the *Economist*, if anything, may have underestimated the difficulties. Incidentally, this was a point on which the negotiators from both sides were in agreement from the start at Vienna. All agreed that the subject was complicated—in fact for a long while, this was the only point of agreement. The danger in MBFR is, of course, all too clear. If force reductions were not carefully balanced, they could lead to substantial and de-stabilizing military superiority for the Soviet Union and her Warsaw Pact Allies.

NATO approaches MBFR burdened with at least three major military disadvantages. In the first place, our forces are presently inferior in total numbers and

in offensive weapons to the military forces of the Warsaw Pact. The danger here is that equal reductions in unequal forces could result in forces that are even more unequal.

The geographical setting also favors the Soviet Union. Particularly since the withdrawal of France from the integrated military structure of the Alliance in 1966, our position lacks depth. We do not have as much space as we would like in order, for example, to move reserves from one portion of the front to another, to echelon our supplies in depth, and to disperse our airfields and depots to protect them against attack from the air. Moreover, the Central Region is separated from the Southern Region by the neutral salient formed by Austria and Switzerland. The distances involved also favor the Soviet Union in any "pull back" of forces. A situation in which US divisions withdraw across the Atlantic while Soviet divisions withdraw behind the River Bug is obviously not symmetrical.

Moreover, this Soviet advantage is increased by the fact that NATO is by its very nature a defensive alliance. To use another analogy from chess, NATO always plays with the black pieces. An aggressor would have the military advantages of the initiative. He could concentrate his forces at the critical points, while NATO's defensive forces—lacking foreknowledge of his plans—must prepare plans and dispose forces against many different possibilities.

Until now, no militarily acceptable and apparently negotiable MBFR scheme has been discovered which successfully compensates for the Warsaw Pact advantages in existing forces, geography, and initiative. But the development of measures to offset these advantages continue. We are looking, among other things, at so-called "mixed packages" in which the two sides made cuts in different categories of weapons, and also at military constraints which could be imposed along with MBFR—restrictions on movement, on mobilization call-up, and so forth. To be sure, we must take care not to over-estimate the effects of such constraints. In general, all they offer militarily is a means of gaining an earlier indication of a Warsaw Pact intent to attack or to threaten to attack. But even this is of considerable importance, for it forms a threshold that the Warsaw Pact would have to breach, and it should be a clear alerting signal to us.

I do not want to sound pessimistic about MBFR. In fact, I think our approach can be positive, as I think it is. At the same time, we must not overlook the need for our work to be cautious, careful, thorough, and intensive.

While the work on MBFR goes forward and while preparatory discussions for the Conference on Security and Cooperation in Europe continue in Helsinki, however, there is a psychological danger of which we should take note, since it could be damaging to NATO's military capability even in the short run. This is the temptation for a kind of euphoria to spread in our countries, and within their governments, simply because the discussions have begun—a euphoria (as former U.S. Undersecretary of State George Ball put it recently) "encouraging the wishful belief that the Cold War has indeed ended, that major military exertions are no longer needed to maintain the security of the West, and that every East-West problem can now be worked out in a spirit of mutual accommodation."

For, paralleling the talk of detente and accommodation, the last few years have been marked by a continuing growth in Russian military strength. The Soviets may be talking more quietly just now, but they are carrying a big stick, which is in fact getting bigger. An independent study conducted not long ago by Professor Erickson of Edinburgh University confirmed that there have been substantial and sustained increases in Soviet military forces during the last few years. This conclusion occasioned widespread comment and a certain measure of surprise. And this fact was itself surprising, since there had been no lack of public statements, including some of my own, about the increase that had been taking place in the Warsaw Pact forces. In each one of the last six years—since the time of the removal of Khrushchev—the Soviet military budget has increased in real terms over the previous year's budget. Some recent public estimates indicate that the Soviet military budget exceeds that of the United States—from a total national economy only half as large.

I have already mentioned the growth in Soviet strategic nuclear forces. In conventional strength, the Warsaw Pact ground forces are more than twice as large as NATO forces in terms of numbers of divisions, firepower and manpower. In addition, the Warsaw Pact divisions are steadily increasing in fighting strength as they receive new tanks, new personnel carriers, new missiles, and additional artillery.

A comparison of air force strengths in Europe reveals that the Warsaw Pact has twice as many combat aircraft as NATO. They are superior in numbers of aircraft, and they have more airfields, more shelters, better command and control facilities, and considerably more anti-aircraft defenses. And newer types of high-performance aircraft have been introduced by the Soviets into their air forces and those of their Warsaw Pact Allies.

The expansion of Soviet maritime power is a matter of particular concern. From a kind of large-scale coastal defense force of a generation ago, the Soviet Navy has become the second largest fleet in the world. It is also the fastest growing, and consequently is composed of modern ships. Only one percent of the combat vessels are more than twenty years old. This percentage stands in marked contrast to a growing obsolescence within several of the NATO navies. The Soviet submarine fleet is the largest in the world. In the event of war, it would severely threaten our sea lines of communications. Even in peacetime the Soviet Navy is making its presence felt throughout the world. Admiral Gorshkov, the Commander-in-Chief, has laid out the objectives quite clearly: "The Soviet Navy will no longer be confined to its home waters, but will exploit the freedom of the seas and through its global presence in peacetime, will spread Communist influence outside the borders of the USSR." We would heed the warning Themistocles gave long ago, "He who is master of the sea will also be master, sooner or later, of an empire."

A special note should be made of the activities of the Soviet Union on the flanks of Allied Command Europe. On the Norwegian flank, the Soviet Northern Fleet, based at Murmansk, is a powerful modern force numbering some five hundred vessels. Its frequent exercises suggest that the Soviets might operate in wartime from an advanced position between Greenland and Northern Scotland and attempt to dominate the Norwegian Sea and the North Atlantic. There has been a build-up of amphibious forces—both on the Kola Peninsula and in the Baltic ports. These forces must be used within the range of Soviet land-based fighters. Exercises off Norway suggest that they could be destined for use in the Norwegian fjords and against the Danish islands. The sizable Baltic Fleet, including Soviet, East German and Polish vessels, is concerned with operations both inside and outside the Baltic and on the high seas.

On NATO's Southern flank, the Soviet Fleet in the Mediterranean has substantially increased in recent years. It poses a serious threat to sea lines of communications which are of great importance to our Alliance for the shipment of oil and other commodities. Along with these increased deployments in the Mediterranean, there has been increased Soviet activity all along the North African and Middle East littoral. While the USSR was forced to remove their military advisers from Egypt, it still retains the use of naval bases there. Thus, the Soviet threat to NATO's southern flank has grown in recent years.

These are some of the elements of the pattern of Soviet military strength and activity. The Soviets continue on the move in many areas, particularly where they see or sense weakness, confusion and conflict that can be exploited. There is a steady trend of expansion, widened deployments and increasing presence in new strategic areas of the world.

Thus far I have concentrated on the significant changes in the military security situation in the last six years. On the one hand we see the new situation of strategic parity, the rising costs of personnel and equipment, coupled with declining popular support for military expenditures, and the preparations for the important negotiations on mutual and balanced force reductions. On the other hand we face growing Soviet forces—already the strongest military power the world has even seen.

In concentrating on these changes, however, I do not want to give the impression that everything has changed. Much, of course, has not changed. In particular, the objectives of the North Atlantic Alliance—objectives which we share in large measure with the Western European Union—have remained the same from the very beginning. Traditionally two such objectives have been recognized: deterrence and defense. But I like to include two others, which I believe have always been implicit: solidarity and détente.

The traditional objective of deterrence is today, as it was when Allied Command Europe was formed in 1951, the chosen route by which security is provided and freedom is safeguarded. For deterrence continues to mean the insuring of peace by dissuading military attacks and military pressures. I would emphasize

that the aim of deterrence is not limited simply to the prevention of an overt military attack by the Soviet Union and its Warsaw Pact allies against the area of Western Europe. As you well know, there are other and more subtle and sophisticated ways in which Communists the world over try to gain what Sir Winston Churchill once called "the fruits of war without the costs of war." The objective of deterrence includes dissuading the Soviets not only from direct military attack but also from indirect military pressures.

For this deterrence to be effective, we must convince the Soviet leaders that our defense would impose costs and risks upon them that would far outweigh any expected gains. In an apt phrase, Professor Eugene Rostow recently described this process as "the calm deployment of unacceptable risks." Thus deterrence rests squarely on the second objective, defense. We must make convincingly clear to any potential aggressor that our people have the will and means to defend their territories and to make aggression unprofitable. Thus, both to deter war and to defend if deterrence should fail, we need strong and ready defense forces.

I identify as a third objective served by NATO's military instrument: solidarity—collective action and unity in the Alliance. Through solidarity the NATO nations rise above the quarrels, the ancient hatreds and the mutual conflicts of the past which have exhausted them and twice this century have nearly destroyed them. In uniting their efforts for the collective defense, "by acting together," as General Eisenhower liked to say, "the Allies have achieved a result which, if they had acted separately, would have been beyond the reach of any or of all." Moreover, by their solidarity the Allies deny to any enemy the opportunity to take the nations on one at a time, or to play one against the other. Similarly, the meeting here together of parliamentarians from all the nations who signed the Brussels Treaty is an outstanding example of such solidarity at work.

Our fourth objective is *détente*—a relaxation of tensions. *Détente* is a word which is much used—and, it would seem, often abused—these days. Sir Alec Douglas-Home in a recent address at Bonn drew a distinction between "illusory" *détente* and "real" *détente*, and the distinction seems to me to be an extremely important one. Genuine *détente*, a meaningful and durable *détente*, must be based on reducing and removing the *causes* of tension, rather than merely the *symptoms* of tension, while at the same time preserving the security, the integrity, and the values of our societies. A reduction in tensions, if it is to be meaningful, must be coupled with a reduction in the dangers that beset us—dangers which derive from the massive military forces of the Warsaw Pact arrayed against us. A reduction in tensions without a reduction in these dangers—what Sir Alec called illusory *détente*—could give our people a false sense of security, and thereby actually increase the risks and dangers in our position.

To achieve these four objectives—deterrence, defense, solidarity and *détente*—in the changing military security situation I have described, NATO has taken a number of encouraging measures during the last few years. Some of these measures were centered in Europe; others involved both the European and the North American partners. Most of you are familiar with the decision of the so-called Eurogroup nations in 1970 to make a more substantial contribution to the overall defense of the North Atlantic Treaty area. The result was a special European Defense Improvement Program which made available an additional billion dollars over the following five years for NATO infrastructure projects and for the improvement of national forces committed to NATO.

In 1972, in a second round of added effort, the Eurogroup nations carried out a further total increase of six percent in defense effort, which amounted to an increase of over a billion dollars that year. During the meetings in Brussels last December, the Eurogroup nations undertook a third round of increases which will amount to an extra one and one-half billion dollars during 1973.

To be sure, a part of these increased funds is absorbed by rising prices. But even after allowance has been made for this factor, there remains an increase in real terms in the resources the Eurogroup countries are devoting to defense. During the course of 1973, for example, the defensive strength of NATO's armies is being increased by the introduction of almost four hundred new main battle tanks, over sixteen hundred other armored vehicles, and over two hundred medium-range anti-tank weapons. NATO's naval forces will receive new destroyer escorts, minelayers, patrol boats and eleven submarines—two of them nuclear powered—as well as patrol aircraft and anti-submarine helicopters. Similarly, Air Force capabilities will be enhanced by over one hundred modern combat aircraft, in addition to new tactical transports, and both trooplift and

reconnaissance helicopters. NATO's air defense capability will be increased by almost a thousand anti-aircraft guns and almost two thousand anti-aircraft guided missiles.

In addition to these Eurogroup activities, other bilateral and national efforts were undertaken to improve NATO's capabilities. I will mention particularly the German offset arrangements which are helping to correct the imbalance in the international monetary flow resulting from the stationing of U.S. forces in Germany. Following discussions in early December 1971 between Secretary of Defense Laird and German Defense Minister Helmut Schmidt, the program for rehabilitation of barracks for the U.S. Army and U.S. Air Forces in Germany was greatly accelerated. West Germany agreed to carry out a program amounting to 183 million dollars for this purpose. The total offset contribution for the two years that end next month was well over one billion dollars.

Nor have all the efforts come from this side of the Atlantic. During the last eighteen months, the United States has raised the manning level of its forces in Europe and increased their effectiveness by improving training and by reducing turnover of personnel in Army units. In addition, a program of reducing headquarters and thinning out some logistical units is resulting in the addition of four combat battalions—two of them tank battalions—and two attack helicopter companies with no increase in overall personnel strength. Similarly, in the U.S. Air Force, the conversion of F-100 aircraft to F-111 and F-4 is nearly complete. The aircraft shelter program is well advanced, logistic stocks are increasing, and unit manning continues to improve.

The Allied forces are not only being strengthened, they are being trained in joint exercises as well, both to maintain their high state of readiness and to improve the level of cooperation among forces of different nations. Here, I would like to cite a few examples.

Last September Exercise STRONG EXPRESS was conducted. It took place in various parts of the North Atlantic and adjacent NATO land areas—in Norway in particular. This was the largest NATO joint exercise in history, involving more than fifty thousand men, three hundred ships and seven hundred aircraft from eleven of the fifteen member nations.

Included in these forces was the Allied Command Europe Mobile Force, or AMF—composed of well-equipped land and air units assigned to NATO by various countries. In exercises such as these, this multinational force has demonstrated its immediate availability for dispatch to any threatened area, particularly on the northern or southern flank of Europe. It functions primarily as a deterrent.

While STRONG EXPRESS was taking place in the north, Exercise DEEP FURROW 72 took place in NATO's Southern Region. This was the latest edition of an annual series of large exercises involving the employment of NATO forces in the Aegean Sea and in Greece and Turkey.

Last month, in May, Exercise DRIVING FORCE began. This was the sixth activation of NATO's Naval On-Call Force Mediterranean, which includes warships from Greece, Turkey, Italy, the United Kingdom, and the United States. The concept of such an Allied naval force, capable of being activated when the situation requires, was approved in principle by the NATO Defense Planning Committee early in 1969. In accordance with the basic concept, ships of the On-Call Force were released to national commands last week on completion of the exercise. It is possible that this force might eventually lead to creation of a Standing Force in the Mediterranean, similar to the Standing Naval Force Atlantic and the new Standing Naval Force Channel, which was activated on May 11.

This month we are conducting two major exercises in the Mediterranean. Exercise DAWN PATROL involved more than sixty warships and some two hundred aircraft from five different nations. A highlight of the exercise was a multinational amphibious landing in Southern Sardinia. Exercise ALEXANDER EXPRESS is now underway. This exercise involves the deployment of the ACE Mobile Force to northern Greece. Thus within the year this multinational force has exercised its plans in both the Northern and the Southern areas.

I have underlined some of the significant changes in the military security situation during the last six years and have outlined in very brief terms what we are doing about them. But what of the future—what remains for us to do?

The primary thing we should do, I believe is to hold fast to clear thinking. We should avoid slipping into the complacency, the irrational euphoria, that are all too widespread in connection with military needs and problems. We must

realize, and somehow make sure the public realizes, that military strength is not in conflict with the search for détente and peace. It is rather an essential element of that search. As NATO itself put it in the Harmel Report in 1967, "Military security and a policy of détente are not contradictory but complementary. Collective defense is a stabilizing factor in world politics. It is the necessary condition for effective policies directed towards a greater relaxation of tensions." I gave my opinion earlier that mutual and balanced force reductions are a promising possibility. This consideration in itself is a strong reason for NATO *not* to make any unilateral force reductions or to take any action that would weaken the capabilities or the readiness of our forces in being. There could be little incentive for the Soviets to make reductions on their side if they were convinced that the NATO countries, because of internal pressures and problems, were going to reduce their military forces in any case.

It is necessary not only to maintain the level of our forces but also to modernize and improve them. Soviet Russia, as we know, allocates large and increasing resources to research and development and to modernizing military equipment. Thus, if we in the West should stand still, we would actually soon fall behind. The net result would be the same as a reduction in strength. This we must avoid. I cannot over-emphasize the importance of modernizing and improving our present combat capabilities.

To accomplish this task while keeping costs within reasonable bounds, we should improve the cooperation among members of the Alliance in the fields of research and development and joint procurement. Frankly, NATO's record in this area has not been too good. As sovereign nations, the members of the Alliance naturally have the right to choose the weapons with which their forces will be armed. But this situation leads to problems. Within the Alliance we find such anomalies as planes which cannot re-arm at airfields other than their own, ammunition which will not fit the guns of neighboring allied units or the weapons brought by external reinforcements, and ships at sea which require additional oilers in support groups because of variations in the kinds of fuel required. In short, our scarce resources are often being spent on varieties of equipment which themselves reduce the flexibility and increase the logistic problems of our Alliance.

Consequently, if I were to be asked to select the most rewarding single area of effort for improving Alliance defense in the next few years, I would nominate cooperation—vastly increased cooperation—in the fields of military research, development and production. A high degree of compatibility, interoperability and, ultimately, a high degree of standardization could give us a most profitable return for our money.

To be sure, a start—though a small start—has been made. Examples which come readily to mind are cooperation between three European nations in the project for a multi-role combat aircraft and the improved 155 millimeter howitzer, the NATO Air Defense Ground Environmental System, and the NATO Integrated Communications System. The joint declaration of the Eurogroup Ministers of Defense at their meetings last December and two weeks ago in Brussels reaffirmed their goal of greater collaboration in the procurement of defense equipment and provided the basis for further progress in the future. So far, however, we have only looked at the tip of a very large iceberg. The possible savings in this area are very great, and the military advantages are at least as large. Much greater effort is needed in this area.

In addition to maintaining and modernizing NATO forces and greatly increasing cooperation in research and development and joint procurement, there are a number of other areas where increased effort or increased commitment by the nations is needed. Let me mention a few others that impact strongly on our common military effort:

Provision of adequate budgetary resources to support the national military forces committed to NATO.

Provision of trained military personnel, either volunteers or conscripts, in adequate numbers and with adequately long terms of service to form an effective defense force.

Support for the infrastructure and other common programs of NATO.

A constant and unreserved commitment which leaves no room for doubt to any would-be aggressor that an attack on one, in the words of the Treaty, would indeed be an attack on all, that would forthwith be met by all working together effectively under well-prepared plans and procedures.

A readiness on the part of each and of all to adjust and temper national interests and practices in order to find common and agreed solutions to military problems of every kind.

Suppression of differences and quarrels, both old and new, and subordination of lesser particular interests to large common objectives.

Efforts to achieve, to strengthen, and to make widely known the ideals, the objectives, and the accomplishments of NATO and to make the public aware of the continuing need for NATO and the necessity for supporting it.

These measures will not be easy nor will they be universally popular in an era of apparent *détente*. In this regard, I like to compare NATO's military force to a small town police department which, in more than twenty years, has not had to cope with a single major crime. We therefore find it increasingly difficult to obtain from the community budget the money for a new patrol car and to justify to the town council the employment of so many seemingly idle policemen. But I would point out that the NATO policemen on the corner—hard at work at deterrence—have had a major hand in preventing any major crimes from taking place.

This comparison seems to me to illustrate two important dimensions of national contributions to NATO. The first and most obvious one is the contribution of military forces. Here the maintenance of force levels, the conduct of modernization programs, the firm opposition to any reductions in national terms of service for those nations which rely on conscription are of great importance to the future of the collective military security of the NATO nations. But a second set of contributions are of equal importance: the efforts by national leaders to create and strengthen an atmosphere of understanding and support for the sacrifices required for the collective defense. Today a vital part of a nation's contribution to NATO is a willingness to take the political heat that is involved in meeting military obligations.

In 1951, when he addressed the Congress of the United States, General Eisenhower predicted: "The cost of peace is going to be a sacrifice, a very great sacrifice individually and nationally. But total war is a tragedy; it is probably the suicide of civilization." Today, total war seems to be much more remote than it seemed in 1951. I know of nothing, however, that has reduced the costs of peace. On the contrary, those costs and the sacrifices they demand continue to be heavy.

Today, despite inflation and talk of *détente*, it is vitally important that the nations obtain the money for the new patrol car and for more modern equipment. It is equally important for them to justify the policemen to the town council. Now, as perhaps never before, there is a need for national leadership that can and will maintain the collective strength of the nations and make clear to all the interdependence of deterrence and *détente*. Only thus can the Western nations continue successfully, in the words of the Treaty of Brussels, "to maintain international peace and security and to resist any policy of aggression."

MUTUAL AND BALANCED FORCE REDUCTIONS

Representative PRICE. Did I understand you to say at one time you sort of leaned toward the mutual and balanced force reductions?

General GOODPASTER. I still do. I still feel this is a valid proposition. I recall in the press they said because I cautioned about the difficulties that I was not really for it. The fact is that I do support it in principle but I recognize the difficulties and I point out, I quote often *The Economist* in this regard, on how much more complicated it is going to be than ever in the SALT negotiations.

Representative PRICE. What is the concern of the NATO people, that it might be done unilaterally?

General GOODPASTER. That it might be done without due concern for these advantages that the other side has and that instead of getting a truly balanced result, the result will be disadvantageous toward our side.

Senator SYMINGTON. Mr. Chairman, your time is up.

MINI-NUKES

General, there is an article in the Parade magazine called "Mini-Nukes," which has created considerable interest. I will file it for the record. Will you check it back with the Department of Defense and find out what in it is accurate and not accurate and file it for the record?

General GOODPASTER. I will do that, Mr. Chairman.
[Cited article follows:]

[From Parade, Oct. 14, 1973]

MINI-NUKES

The Pentagon is developing an arsenal of miniature nuclear weapons which U.S. officials hope will overcome the North Atlantic Treaty Organization's military manpower inferiority to Soviet forces in Central Europe.

The mini-nukes will combine low explosive power with regulated blast and radiation characteristics. They will be attached either to artillery or to laser-guided "smart" bombs recently introduced over North Vietnam.

Officials claim the new weapon will be able to explode with as little force as 50 tons of TNT within 2 or 3 feet of a target. Previously, nuclear weapons have rarely come any smaller than 100 tons of TNT.

Details concerning the new generation of miniature nuclear weapons were revealed last month in France at the end of a European-American conference on allied strategy.

One feature of the new weapon, scheduled to become operational in 3 to 5 years, is that blast, radiation and fallout could be varied. Conceivably a bomb could be dropped, with no blast, to disperse radiation, which could kill all human life in the area without affecting other surroundings.

Mini-nukes have been considered for many years, but only recently have American weapons laboratories developed the technology to make the little explosives practical.

Development was forbidden during the 1960's by former Secretary of Defense Robert S. McNamara and his adviser, Dr. Alain Enthoven. They disliked the concept of a real battlefield nuclear weapon, sensing that our allies might feel such weapons would enable them to reduce their armed forces manpower.

Contrary to McNamara's decree, the work continued secretly.

United States and European officials expect some Congressional opposition to any system which appears to bring about the immediate use of nuclear weapons. Moreover, many Congressmen question the credibility of military plans based on the use of tactical nuclear weapons.

Meanwhile, Congressional opposition to another sort of tactical nuclear weapons has emerged. Former Defense Secretary Elliot Richardson had been bypassed when the military recently ordered several thousand nuclear shells for two kinds of artillery.

Sen. Stuart Symington (D., Mo.) questioned the need for the shells which would, a Pentagon spokesman said, "provide increased simplicity, greater capability and better reliability" for the stockpile of about 7000 tactical nuclear weapons already deployed in Europe.

Apparently Richardson did not know of the order because the Atomic Energy Commission buys nuclear weapons for the military and the costs are included in the AEC budget rather than the Pentagon's.

Representative HOSMER. That is a rewrite and condensation of an article that was in the London Times about a month or 6 weeks previous. I think that previous article would be of greater value than the Parade magazine article. It might be more authoritative.

General GOODPASTER. I would be glad to look at the article from the London Times and give comments on both of them.

Senator SYMINGTON. Will you comment on the London Times article?

General GOODPASTER. I will do that, Mr. Chairman.

[Comment later supplied follows:]

The London Times article has been reviewed. My comments will be related to this article instead of the earlier Parade magazine article on which I understand M. G. Giller of the AEC provided some very good comments.

First, I would like to address the term "mini-nukes." I agree with Secretary of Defense Schlesinger. In clarification of the term he defined it to mean "technical improvements to our tactical nuclear posture" and said that this could serve to improve the overall defense posture of the Alliance. The modernization of tactical nuclear weapons can enhance the deterrence of a potential conflict in Europe especially as the opposing strategic forces approach parity.

The London Times article's central issue appears to be that "mini-nukes" have been secretly developed by the United States, will soon be used in Europe (3-5 years) to offset manpower reductions and will cause great controversy with our Allies over their potential use, both political and military.

Small-yield nuclear weapons are not new. Subkiloton weapons have been in the stockpile for almost 20 years and have been deployed in NATO Europe. It is the feasibility of improving delivery system accuracy which makes them currently important. Current available technology applied to our weapon systems would permit the delivery of warheads on targets with much improved accuracy. With the use of this technology, smaller nuclear warheads can be used with attendant reduction of collateral civilian casualties with little, if any, loss in military effects. There has been continuing emphasis on the need to increase military effectiveness and the corresponding deterrent value of tactical nuclear weapons in Europe. The significant advance in nuclear weapons system technology is the potential to incorporate small-yield, small-size nuclear warheads into delivery vehicles that are highly accurate which can effectively destroy military targets with less collateral damage.

The Flexible Response strategy requires the capability to defend at all levels of aggression. A credible deterrence can best be maintained by providing sufficient forces for conventional and nuclear operations. A reduction in conventional manpower brought about by modernizing tactical nuclear weapons could increase the possibility of conventional aggression.

The NATO political control process and the procedures for the possible use of nuclear weapons in NATO have been well established. Guidelines on their potential employment have been agreed upon. This system includes the provision to use subkiloton nuclear weapons currently in NATO. Improvements to current nuclear weapons in NATO should not be cause for a disruption of the current system which provides for political control and military planning.

FORWARD-BASED AIRCRAFT IN NATO

Senator SYMINGTON. Will you advise us of the number, type and range of forward-based aircraft in NATO and how many of these are quick reaction alert? You might supply that for the record.

General GOODPASTER. The total figure, I would like to give you. The quick reaction alert figure is of the order of [deleted] that we maintain on quick reaction alert.

Senator SYMINGTON. Would you identify by nation in both categories (QRA and non-QRA) how many are United States, and how many are not United States?

General GOODPASTER. I had better provide that for the record, Mr. Chairman.

[The information supplied follows:]

There is a total of [deleted] forward-based aircraft in NATO. Of this total, there are [deleted] dual capable nuclear/conventional aircraft, of which [deleted] are quick reaction alert (QRA), ([Deleted] percent) of the [deleted] aircraft are U.S. Of the [deleted] on QRA, [deleted] (or nearly [deleted] percent) are U.S.

Approximate aircraft ranges (statute miles at altitude)

Type of aircraft :	
A-6 -----	[Deleted.]
A-7 -----	Do.
Buccaneer -----	Do.
F-4 -----	Do.
F-5 -----	Do.
F-35 -----	Do.
F-84 -----	Do.
F-86 -----	Do.
F-100 -----	Do.
F-102 -----	Do.
F-104 -----	Do.
F-111 -----	Do.
G-91 -----	Do.
Harrier -----	Do.
Hunter -----	Do.
LIG -----	Do.
Mirage -----	Do.
Vulcan -----	Do.

Senator SYMINGTON. In the case of non-United States aircraft, [deleted] its units to fly its combat missions once the release message and PAL release has been given?

General GOODPASTER. [Deleted] in the circumstances described, release message and PAL release, then through our command chain and through the custody chain on the U.S. side, we would have directed the flight of these aircraft.

We would expect them to fly and to carry out their mission. [Deleted] we are at this stage of readiness, subject only to the release message and to the PAL release.

Senator SYMINGTON. If it wasn't such a case, the United States could not count on these aircraft to cover targets. Is it possible that any of the NATO countries might decide not to launch a nuclear strike?

General GOODPASTER. This is the same question that has come up before. It is conceivable that you could have that course of events, but I think we are speculating there about something that is very hard to be definite about at this stage in time.

EISENHOWER'S VIEW OF SIZE OF U.S. FORCES NEEDED IN EUROPE

Senator SYMINGTON. I want to deviate a minute and say I was very much impressed with General Eisenhower's knowledge of military matters. I was also impressed, therefore, with his statement in 1963 that we could cut our forces in Europe down to one division. Since he made that statement, France has withdrawn from the military aspect of NATO and inasmuch as 25 years ago when I ran the Berlin Airlift, you couldn't get out of Frankfurt to go to Berlin in an old C-54 without being over Communist territory, it is inconceivable to me that you could maneuver great armies without the fullest cooperation of the French.

Would you care to comment?

General GOODPASTER. Yes. I reviewed this in response to Senator Dominick's question a little earlier. There is no doubt that this is a very severe handicap and a very severe setback to NATO.

As I told him, the French continue to adhere to those decisions of DeGaulle. They made a very clear statement to us that we cannot

count on their presence or use of their territory in the event of hostilities.

FRENCH COOPERATION NEEDED

Senator SYMINGTON. If they decided they wouldn't go in my opinion, the whole conventional concept of the defense of Europe is form as against substance.

Last month, Dr. Walske, then Assistant to the Secretary of Defense for Atomic Energy, testified before this subcommittee. In this connection, he sent me a copy of a classified talk he had given in which he had discussed theater nuclear war. In developing a scenario to stop a Soviet attack against NATO, he said that there was a possibility of using nuclear weapons on the battlefield to stop a conventional Soviet attack.

In the talk, he said, and I quote:

It can be done with a limited expenditure of nuclear weapons—I'll shock you by saying a limited expenditure is [deleted] on military targets . . .

Do you agree with Dr. Walske that it would take [deleted] tactical nuclear weapons to stop a Soviet attack? If not, how many do you envisage would be required?

CONVENTIONAL WEAPONS ATTACK/NUCLEAR WEAPONS RESISTANCE

General GOODPASTER. There are certainly certain types of Soviet attacks that would require expenditure of [deleted] to stop. If you are thinking of heavy concentrations and massive attacks, many of the weapons that would be employed, however, are those of very small yield and generally when I discuss this, I try to discuss numbers of weapons together with their aggregate yield, because we are talking of very small weapons in relation to the bigger tactical weapon and certainly, in relation to the strategic weapons.

For example, one survey that I have made of the aggregate of our small battlefield weapon yield in Europe showed that the total yield is less than [deleted].

Now, these are distributed, of course, and discretely applied against the targets of an attacking force. But you would have to recognize that against these heavy attacks, you could very well be required to use weapons in that quantity.

Senator SYMINGTON. What quantity?

General GOODPASTER. Of the [deleted] that were spoken of in that article.

Senator SYMINGTON. If we replied to a Soviet conventional attack by using tactical nuclear weapons, have you any doubt that they would immediately start using nuclear weapons, themselves?

General GOODPASTER. I don't concede at all that they would. They might. But they would have to ask themselves the question that I referred to earlier and that is, what is there west of the Iron Curtain that would justify entering into a process of escalation that could involve an attack on their own homeland?

Senator SYMINGTON. Certainly they might. Is it your opinion that they probably would not?

General GOODPASTER. My opinion is, and this is, of course completely speculative—

Senator SYMINGTON. It is very important, though.

General GOODPASTER. Yes, indeed.

Senator SYMINGTON. It couldn't be more so.

General GOODPASTER. In the context that we are talking about, a large-scale non-nuclear attack against Western Europe, if we were to apply in a controlled way limited numbers of nuclear weapons sufficient simply to stop the attack and impose costs and losses on their attack echelons, my own feeling is that the probabilities would be much less than even that they would immediately carry that to all-out nuclear exchange involving their own homeland.

Senator SYMINGTON. In other words, your testimony before this committee is that we could use nuclear weapons in Europe and that the Soviets in all probability would not respond to nuclear weapons?

General GOODPASTER. I would not go so far as to say in all probability. I think you have to think probabilities but I think there is an appreciable probability that they would not.

Senator SYMINGTON. What percent?

General GOODPASTER. I wouldn't be able to make such an estimate, Mr. Chairman.

PRESENT NUCLEAR ARTILLERY SHELLS SCRAP VALUE

Senator SYMINGTON. Now, we have had expert military testimony before this committee recently that the present 8-inch and 155-millimeter nuclear shells [deleted] and if the material in them was recovered and reprocessed, it represents about \$1 billion.

In light of these facts, is it not reasonable to eliminate these two systems which have a range of only about [deleted] miles, particularly because it is understood that [deleted].

General GOODPASTER. I think that the conclusion is quite the opposite. We should not eliminate these weapons. As I indicated earlier, these weapons in relation to a situation where it is the enemy that has taken the initiative to attack across the border, gives us a capability, gives us a kind of advantage that he does not have.

My recommendation is very strongly to introduce improved forms of these weapons. I think that improvements in these two weapons have a very particular value in strengthening our security position in Europe.

COSTS OF ARTILLERY SHELLS COMPARED

Senator SYMINGTON. You say that even though the testimony is that whereas the conventional shell for the 155-millimeter weapon costs \$191 each, the nuclear shell in production costs \$452,000 each; and, whereas the 8-inch shell in production will eventually cost \$56 apiece, the nuclear shell in production cost over \$400,000 apiece?

General GOODPASTER. There are two aspects to this, Senator. One is that I do understand that the material that can be obtained from the old 8-inch shells would in fact more than pay for a one for one replacement.

The second thing, I don't want in any way to suggest this "more bang for a buck" type of analysis which, I think, is open to serious question, but if you took the TNT equivalent in the 155-millimeter conventional version versus the nuclear version and the same for the

8-inch, I think—although I have not run this out—I think that you might find that in controlled explosive power and immediately available in a short period of time, you are bringing more onto the enemy for lower cost with the nuclear than the other way around.

Now, I have not run out those figures, but that was the old, “more bang for a buck” argument that we heard about so much some years ago.

Senator SYMINGTON. When we discovered these costs, we immediately got a lot of people explaining them to us. It reminds me of what Senator Long, the chairman of the Senate Finance Committee said. That is, when we got into the question of balance of payments, every agency came up and explained that their particular agency actually improved the balance of payments. When we added up all the improvements, the pluses, agency by agency, we found that we came out with a multibillion dollar minus. I think that is reasonably applicable to what we are discussing today. In fact, somebody told me the other day that if we went to these shells we would make money instead of losing any from the standpoint of cost.

That was hard for me to swallow.

General GOODPASTER. Mr. Chairman, would you permit a brief citation off the record from a gentleman who came from our section of the country?

[Discussion off the record.]

Senator SYMINGTON. Would you provide an up-to-date list of any and all incidents that have occurred at bases where nuclear weapons are stored which would indicate that the base might have been under surveillance [deleted]?

General GOODPASTER. I will be happy to.

(See below for information subsequently provided.)

DRUG ABUSE DISQUALIFICATIONS

Senator SYMINGTON. According to a report obtained during the visit by Senator Pastore to NATO in March, 83 Army personnel who were associated with nuclear weapons had been disqualified for drug abuse during the period April 1972 to March 1973.

In the U.S. Air Force, Europe, during the period July 1 through December 31, 1972, 28 airmen were disqualified for drug abuse.

Will you provide the committee with an up-to-date record of the number of all U.S. military and civilian personnel in NATO that have been removed from the human reliability program, including the number removed for drug abuse in the last 2 years?

General GOODPASTER. I will have that provided, Mr. Chairman.

[The information later supplied follows:]

NO INCIDENTS INVOLVING DRUGS

Since 1971 the following personnel have been relieved from the human reliability program in NATO:

Command:	Number removed
USAREUR -----	512
USAFE -----	724
USNAVEUR -----	11

Those removed for drug abuse since 1971 are :

Command:	<i>Number removed</i>
USAREUR -----	193
USAFE -----	149
USNAVEUR -----	0

USNAVEUR figures are for those personnel stationed ashore. Sixth Fleet statistics are not included.

NO INCIDENTS INVOLVING DRUGS

Senator SYMINGTON. Have there been any incidents in which individuals under the influence of drugs were working directly with nuclear weapons or involved in procedures concerning PAL's or the release of nuclear weapons?

General GOODPASTER. I would like to investigate that and give you a written report on that, Mr. Chairman.

[The information later supplied follows:]

There have been no incidents of this nature.

Senator SYMINGTON. Chairman Price, it is now 12:30. I have an additional series of questions. I thought I would run for a time on those unless you have further questions.

Chairman PRICE. I have no questions.

Senator SYMINGTON. Then we have a conference on this pay situation on which the House overruled the Armed Services Committee position, at a quarter after 2.

If General Goodpaster would be good enough to come back at 3 o'clock, I think we could finish today.

General GOODPASTER. It would suit me very well.

Senator SYMINGTON. Would that suit you?

Chairman PRICE. Fine.

Senator SYMINGTON. Very well, then.

I will proceed for another 15 minutes, if that is convenient to you.

What is the NATO agreed-to estimate of the Warsaw Pact land, sea, and air forces facing NATO?

EXCERPTS FROM NATO INTELLIGENCE ESTIMATE

General GOODPASTER. I would like to supply that for the record.

[The information subsequently supplied follows:]

Excerpts below from MC 161/73, the standard NATO intelligence estimate, provide the agreed estimate of the land, sea, and air threat to NATO, MC 161 is classified within NATO as COSMIC TOP SECRET.

A. SOVIET GROUND FORCES

The Soviet ground forces are equipped and trained to fight effectively in either nuclear or conventional operations. Evidence indicates that the continuous improvement of their capabilities is directed to meet the requirements of both types of operations. The Soviet ground forces order of battle as of mid-1973 is estimated to comprise some [deleted] divisions, [deleted] oriented against NATO, [deleted] oriented against China, and [deleted] in a strategic reserve. The NATO-oriented divisions include [deleted] that are ready for early commitment and are stationed in the non-Soviet Warsaw Pact (NSWP) countries, and in military districts bordering NATO countries, and a further [deleted] divisions stationed in the U.S.S.R. and ready for commitment in [deleted]. The remaining Soviet NATO-oriented divisions would require from [deleted] for mobilization and preparation before ready for combat. The combat-ready forces are well equipped and could be committed at very short notice. They are backed not only by the large Soviet reserves which can be quickly mobilized and deployed, but also by NSWP

forces. The introduction of additional tank combat units in the Group of Soviet Forces Germany (GSFG) since 1968 and the existing stocks of equipment in some Warsaw Pact (WP) countries have increased the combat capability of Soviet ground forces and are one example of possible major reorganizational changes in those forces.

[Classified matter deleted.]

B. NSWP GROUND FORCES

The NSWP ground forces are estimated to have [deleted] divisions [deleted] as of mid-1973. Most of these units would be ready for early commitment, but few are maintained at full strength in peacetime. The majority of the ready divisions would contain [deleted] percent reservists after mobilization. Unit training in all NSWP countries is frequent and realistic [deleted] Romania it [deleted]. The quality of equipment varies from country to country. Most of it consists of the older Soviet models, but it also includes some of the most recent that the Soviets have produced, as well as some modern indigenous equipment. For any protracted operations, NSWP ground forces would require Soviet combat and logistic support.

C. SOVIET NAVAL FORCES, INCLUDING NAVAL AVIATION

The main strength of the Soviet Navy lies in the large number and variety of modern units with sophisticated missile systems and electronic countermeasures (ECM) equipment. It is estimated that the Soviet Navy will have by mid-1973 a total of about [deleted] operational submarines; about [deleted] cruisers, destroyers, and escorts; about [deleted] missile patrol craft; and about 1,000 naval aircraft (including [deleted] medium bombers equipped with air-to-surface missiles. These forces are supported by an extensive shore establishment, improved command and control facilities, and effective intelligence/surveillance networks. A large part of these forces is maintained in a high state of readiness and efficiency.

The submarine force is characterized by an increasing proportion of deep diving and fast nuclear-powered units, and a great variety of strategic and tactical nuclear weapon systems. The strategic ballistic missile component of this force will be quantitatively and qualitatively improved with the introduction of the Delta class submarine fitted with the SLBM SS-NX-8 having a range of about 4,000 nm. With the advent of this SLBM system, the Soviets have the capability to cover virtually the whole of the NATO land mass, from, for example, the Northern Norwegian or Barents Set. The introduction of improved short range tactical missiles on cruise missile submarines will enhance their antiship strike capability. [Classified matter deleted.]

The Soviet surface fleet has a large number of relatively new, well-armed high-speed ships having good communications and electronic warfare capabilities and equipped with weapons, both nuclear and conventional, which far out-range any surface ship gunnery system. The continuing improvement of missile flight characteristics will enhance the already formidable threat. [Deleted.] Although the growing shipborne surface-to-air missile (SAM) and AA gun capability increases the effectiveness of surface combatants when operating beyond the defensive cover of land-based aircraft, the lack of shipborne fighter aircraft is still a weakness under certain circumstances. This deficiency could be alleviated to some extent by the mid-1970s when the first aircraft carrier, now in the final building stage, will be introduced. Soviet antisubmarine warfare (ASW) capabilities in the open oceans remain limited. However, more general purpose ships with modern sonars and antisubmarine weapons are being introduced, and strong emphasis is being given to ASW training.

Soviet Naval Aviation has a large number of aircraft equipped with a variety of stand-off weapons. The strike capability of this force has been improved by the introduction of the newer air-to-surface missiles (SAM's), but the age of the aircraft is a potential weakness in the system. [Deleted.]

The Soviets are capable of carrying out local amphibious assault operations in all fleet areas. Lack of shipborne air cover, however, and inadequate logistics still restrict the Soviet distant amphibious capability against a determined and capable opposition.

D. NSWP NAVAL FORCES

The NSWP navies are best suited for coastal defense and amphibious operations. Their main combat strengths lie in guided missile patrol boats and amphibious capability. [Deleted.] Poland has a small naval air component, while Romania, Bulgaria and the GDR each have the nucleus of a naval helicopter force.

E. SOVIET AIR FORCES

Long Range Aviation (LRA).—It is estimated that in mid-1973, there are [deleted] medium and about 200 heavy bombers in LRA. [Classified matter deleted.] Almost all of LRA's aircraft are old, but their utility has been increased by the introduction of ASMs, and diversification of tasks in support of Naval Aviation and Frontal Aviation. The introduction of Backfire, which is expected to start entering service by late 1973 or early 1974 will significantly increase LRA capability. There will still be a considerable bomber force well into the 1980's.

Frontal Aviation (FA).—As of mid-1973, FA is estimated to consist of more than [deleted] fixed wing combat aircraft. [Deleted.] FA comprises a formidable force of aircraft, many of which have dual roles [deleted].

[Classified matter deleted.]

Military Transport Aviation (VTA).—In mid-1973 it is estimated that VTA has about [deleted] medium and [deleted] heavy transports. [Deleted.] In addition, use of Soviet civil aircraft (*Aeroflot*) can provide the Soviets with a significant increase in total airlift capacity.

Air and Missile Defense Forces.—Soviet homeland strategic defense systems include an antiballistic missile system around Moscow, [deleted] SA-1, -2 and -3 sites and [deleted] of SA-5 sites and [deleted] interceptor aircraft, all supported by an extensive radar and command and control network. Air defense of the Front is provided by fighter aircraft of FA, anti-aircraft artillery (AAA) and SAM's, including mobile SAM's and AAA.

F. (TS) NSWP AIR FORCES

NSWP countries have tactical and air defense forces with about [deleted] operational aircraft of which about [deleted] are Soviet fighter and light bomber types. The air defense forces form an extension of the Soviet air defense system. Tactical air forces augment the Pact's offensive capabilities. [Deleted.]

National air forces will continue to be improved by the delivery of newer types of Soviet aircraft, radar, missiles and communications equipment.

SOVIET-BASED MISSILE FORCES TARGETED ON NATO

Senator SYMINGTON. What is the estimate of the Soviet-based missile forces targeted on NATO? Will you supply that for the record?

General GOODPASTER. Yes, sir.

[Information furnished later follows:]

[Classified matter deleted.]

Senator SYMINGTON. Also, indicate the composition of the NATO forces by land, sea, and air.

General GOODPASTER. I will do that.

[Information later furnished follows:]

[Classified matter deleted.]

Senator SYMINGTON. How many non-U.S. NATO forces have nuclear capability? Would you rather supply that?

General GOODPASTER. I would like to supply that. I will do that.

Senator SYMINGTON. Also, what nuclear systems do they have and where are they located?

General GOODPASTER. Yes.

[The information later supplied follows:]

The U.S. provides nuclear weapons support of non-U.S. NATO forces in accordance with approved bilateral programs of cooperation. Each country has

received the information directly relevant to those weapons on their territory manned by NATO nuclear delivery units in the defense of NATO.

Senator SYMINGTON. Could you give us a listing of U.S.-NATO agreements country-by-country, on the weapons the United States and the ally will use in that country? For instance, the use of 8-inch and 155 millimeter shells in [deleted]?

General GOODPASTER. I will ask to have that provided. That would come from the Washington level, but I can ask to have that provided, Mr. Chairman.

(Information later provided follows:)

[Classified matter deleted.]

Senator SYMINGTON. May I say I could not imagine a more important question, from the standpoint of our knowledge of the subject.

Senator SYMINGTON. Would you please give the U.S. nuclear forces in NATO, their weapons systems and general indication of their locations?

General GOODPASTER. Yes, I will do that.

[The information later provided follows:]

[Classified matter deleted.]

Senator SYMINGTON. Also, a comprehensive breakdown of how the U.S. military forces in NATO are utilized based on the following:

(a) Army, Navy, Marines, Air Force.

(b) Front line combat (infantry, artillery, tank, aircrew, shipboard, et cetera).

(c) Technical backup (mechanic, nuclear weapon technicians, communications, et cetera).

(d) Security forces (at stockpile sites, at alert weapons, MP's for troop control, et cetera).

(e) Supporting forces (supply, medical, noncombat drivers, cooks, et cetera).

(f) Area, service, or sector headquarters (Germany, Italy, Greece, et cetera).

(g) NATO headquarters, themselves.

General GOODPASTER. Yes, we can provide that.

[The information subsequently supplied follows:]

UTILIZATION OF U.S. MILITARY FORCES IN NATO

	Army	Navy	Air Force	Marine Corps
(a) By service.....	158,000	22,500	148,800	2,100
(b) Front line combat.....	211,000	20,900	136,110	1,960
(c) Technical backup.....	215,200	225	119,400	0
(d) Security forces.....	210,600	0	5,500	140
(e) Other.....	221,200	1,350	0	0

¹ The Air Force figures do not total arithmetically. The figure of 36,100 includes all those in units such as tactical fighter, reconnaissance, tanker, tactical electronic warfare, special operations, tactical air control, aerospace rescue and recovery, aircraft control and warning, and all units which function directly related to maintenance of aircraft, and the readiness and capability of a tactical unit to launch aircraft and to place ordnance on target. The total figure of 48,800 Air Force personnel assigned to NATO is correct. If only primary duty pilots, navigators, and enlisted crew members are considered to be "front line combat," then the total Air Force entry would be 3,116. In other words, the combined entries for the Air Force for "front line combat" and "technical backup" is 43,300 (48,800 minus the security forces: 5,500). The particular number attributed to either of these entries depends upon the definitions of terms.

² The Army strength figures do not include non-NATO U.S. combat forces or certain U.S. dedicated support elements, e.g., hospital, engineer support districts, construction battalions, military intelligence units, training centers, etc.

³ The breakdown for technical backup personnel for forces afloat with the 6th Fleet is not available.

⁴ These marine security forces ashore include 41 marines at NAF Sigonella.

Senator SYMINGTON. Could you also tell us the number of people in the following categories?

- (a) U.S. civilians in NATO.
- (b) U.S. civilian and military dependents in Europe.
- (c) Schoolteachers and so forth on U.S. payrolls to support dependents?

General GOODPASTER. Yes.

U.S. CIVILIANS IN NATO

The first one was U.S. civilians in NATO?

Senator SYMINGTON. Yes.

General GOODPASTER. I will provide the best information that is available to us on that.

[The information later supplied follows:]

a. There is a total of 211 U.S. civilians at various NATO headquarters throughout ACE. There is a total of 23,100 U.S. civilians in Europe: 19,800 in the USEUCOM organization and 8,300 in non-USEUCOM organizations (as of 31 Mar 73).

b. There are approximately 262,600 dependents in Europe: 244,100 military dependents and 18,500 dependents of U.S. civilians (as of 31 Mar 73).

c. At the end of the school year there were 6,797 U.S. civilians and 851 local nationals in the dependent school system.

Senator SYMINGTON. Would you describe the NATO war plans in terms of:

(a) The general strike program and its subsidiary parts, the primary and tactical programs.

(b) The philosophy of target selection.

(c) The philosophy of weapon selection with regard to the choice of conventional versus nuclear weapons, nuclear yield, and number of nuclear weapons per target.

General GOODPASTER. Yes.

May I say there, Mr. Chairman, I think, as I understood that, it is not the specific content of the plan, but the general description of what the plans are?

Senator SYMINGTON. That is correct. We do not want to get into detailed war plans.

(d) Also, the authors of the various plans, how they originated, and when.

General GOODPASTER. Yes.

Senator SYMINGTON. And (e) the approving authorities incident to the decisions of the plan.

General GOODPASTER. Yes.

[The information subsequently supplied follows:]

[Classified matter deleted.]

MILITARY SUFFICIENCY DEFINED

Senator SYMINGTON. The expression "military sufficiency" is a relatively new way of describing a measure of the capability of armed forces to deter or conduct a war.

Would you please define "military sufficiency" and indicate the standards used to gage sufficiency or insufficiency?

General GOODPASTER. I will be happy to do that to the best of my ability, Mr. Chairman.

[The information later supplied follows:]

MILITARY SUFFICIENCY

Military sufficiency is not a term which signifies any agreed NATO concept of military strategy or doctrine which can be directly translated into programs, plans or operations.

a. The term "military sufficiency" refers to our ability to execute our present strategy with the forces assigned. In measuring this ability we consider NATO's forces vis-a-vis those of the Warsaw Pact. In the military sense, sufficiency means combat power that is capable of inflicting an unacceptable degree of damage thus deterring a potential aggressor from attack. In a broader, political sense, sufficiency means the maintenance of forces adequate to deter attempts at coercion. Thus the desired relationship between our forces of the Warsaw Pact is one where our ability and resolve to protect our vital security interests is not underestimated. It can be seen then, that "sufficiency" or "insufficiency" depends upon the threat. Forces required must be adequate in both quantity and in quality to maintain a military balance in the course of technological changes. It is necessary that NATO's forces be maintained at a level which makes it clear to the Warsaw Pact that a surprise attack against the Alliance will not cripple our capability to retaliate. Our forces must therefore be capable of flexible response. We must be able to respond at levels appropriate to the situation. Thus, "military sufficiency" cannot always be defined in finite terms. At any given time, our military sufficiency relates directly to the combat capabilities of potential aggressors. It is both a political and military value judgment which considers the crucial variables which constitute combat power, the most important being the quantity and quality of men and weapons and the political will to order their use. (Based on the President's Foreign Policy for the 1970s).

b. Equating or weighing the conventional/nuclear mix considered necessary for sufficiency is most difficult because the factors bearing on the problem are constantly changing. Basically, our force structure considers relative force capabilities and seeks to provide the military commander a sound and realistic deterrent posture. A basic consideration which applies is that we have adopted a defensive and deterrent posture. In support of this posture, there is a real need for theater nuclear weapons to provide a capability of flexible response which we believe is essential, first to deter, and failing that, to defeat aggression. These weapons are absolutely required when confronting an opponent who possesses similar capability. They are the key element required to avoid the necessity of choosing between acceptance of conventional defeat or escalation to all-out nuclear exchange.

Based on my analysis of NATO strategy and our present means for its execution, I consider we need both a conventional and nuclear deterrent. These capabilities complement each other. Without a full range of options in NATO and associated NATO plans, a potential aggressor is relieved of a large degree of uncertainty in estimating NATO reaction to aggression. The rationale for our nuclear stockpile size and composition is reviewed annually, both by SHAPE and USEUCOM staffs, and the quantity and quality of our conventional forces is under continuous review.

Senator SYMINGTON. How are conventional and nuclear arms equated or weighed in the evaluation of military sufficiency? Will you comment on that?

General GOODPASTER. I will include that in my comments on military sufficiency.

May I just say there, Mr. Chairman, that normally, we would not talk about a relative weighing of the conventional and nuclear weapons, but the conventional and nuclear forces. I think that we can provide something in that regard. [See preceding information supplied.]

Senator SYMINGTON. The President stated in his 1973 Foreign Policy Statement that in an era of near strategic parity, more reliance must be placed on conventional weapons.

Has this concept forced NATO to start thinking of changes to the General Strike Plan?

GENERAL STRIKE PLAN NOT MODIFIED

General GOODPASTER. No. Our General Strike Plan is the plan that governs the use of our full tactical nuclear capability. That has not been modified. What the development of the situation has done as this near parity has come about is to put more emphasis, I think, on the nonnuclear, the conventional, and the tactical nuclear weapons that can be used for selective purposes.

Senator SYMINGTON. Has this concept caused a reevaluation of NATO's military sufficiency?

General GOODPASTER. In the sense of focusing attention on our conventional forces and on their adequacy, the development of parity has certainly been reflected in that increased emphasis.

Senator SYMINGTON. What would be the effect on NATO's military sufficiency if there were significant qualitative improvements to some NATO weapons, such as better guidance, accuracy, and fusing, coupled with significant quantitative reductions of obsolete systems?

General GOODPASTER. The improvement, I think, would strengthen our nuclear capability. As in the case of LANCE, for example, we are finding that with the LANCE replacing the HONEST JOHN, and the SERGEANT, it is possible to do the same job, do it better in fact with less structure than previously.

There may be some reduction and this would vary case by case, with the introduction of the improved new weapons.

In general, however, the gain is in effectiveness, in the effectiveness of the force and because of the requirement for broad deployment and accessibility, we would not be able to make substantial reductions in my opinion, in the numbers of weapons deployed.

Senator SYMINGTON. We have been over this before, but I would like to ask it for the record, and this will be the last question at this time.

NATO CONVENTIONAL CAPABILITY

This article referred to in the press stated the U.S. authorities conceded that NATO could defend itself by conventional arms. Dr. Schlesinger, appearing before the Senate Armed Services Committee at his confirmation hearing on July 18, agreed that NATO's conventional capability has been underestimated.

Would you please indicate whether new information or rework of old information led to the above-stated conclusions which presumably he got as a result of visiting with you in Europe recently.

General GOODPASTER. We have what I think can best be described as an intermediate conventional capability. It is much more than the so-called "tripwire," but it is not as much as what I would call a full and assured conventional capability against the full forces that could be brought against us.

Now, because it is intermediate, it is not an all or nothing affair. I have no doubt that some estimates tend to overestimate this, some tend to underestimate it. With the improvements that have been intro-

duced in the last few years, specifically, for example, the antitank weapons and the improved tanks and certainly, the qualitative improvements that we have introduced, I feel that we have a substantial conventional capability.

The difficulty here is that it is hard to find a quantitative way of expressing that intermediate capability. Some of the points that have been brought out here, I think, have great validity.

The danger, though, would be in a conclusion that went too far, that somehow assumed that we could do with conventional forces things that are beyond their capability, things that really need the reinforcement of the tactical nuclear forces.

I will just say one more thing. I think it is a good issue to have posed because it is requiring people to rethink and reevaluate just where we do stand in this regard.

Senator SYMINGTON. Inasmuch as Dr. Schlesinger has brought it up, how could this conclusion affect the numbers and kinds of nuclear weapons that are now in the NATO stockpile and those under study, research and development for possible NATO use?

SOUND ECONOMY VITAL TO NATIONAL SECURITY

When you answer that, I wish you would give consideration to the following: I am now certain of one thing which I didn't really appreciate adequately until I came into the legislative branch of the Government, and that is, that a sound economy with a sound currency is the second component part of true national security.

Today, in this world of superpowers, we can only have one form of physical security, which is the capacity to destroy any enemy that attacks us, and the certainty that he knows that we can. In that category, the first component of security, we are in good shape.

On the economy, we are in poor shape and it is getting worse. I submit to you the fact that in 1950 when I left the Pentagon to take over the job of mobilizing for the Korean war we had \$29 billion of gold, roughly, and we owed \$7 billion redeemable in gold.

GOLD RESERVES DOWN, LIABILITIES UP

Now, we are down to between \$10 and \$11 billion in gold and we have over \$40 billion in current liabilities.

From the standpoint of a corporation, we are totally bankrupt, no question about it. That, in my opinion, is the primary reason the dollar is being hit so hard by the financial experts of Europe and the Middle East and the Far East in the highly industrialized countries like Japan.

FAITH IN GOVERNMENT ESSENTIAL

The third aspect of national security is credibility, faith of the people in their Government. Because of the constant spending of more than we are taking in, I think it is fair to say, along with a lot of other problems, that that faith is getting rocked.

If the assertion of the new Secretary of Defense is true, my question is: How would this conclusion affect the numbers and kinds of

nuclear weapons now in the NATO stockpile and those under study, research and development for possible NATO use? If you are going to consider that true concept of national security, is there any possibility of reducing substantially the nuclear stockpiles with the premise of the greater clout, you might say, of the conventional weapon?

EISENHOWER VIEW ON SECURITY

General GOODPASTER. Mr. Chairman, first, on the general matter that you raised. As you know, I served with General Eisenhower for many years. It was a thesis of his that security had to be looked at in all three of these terms, the military component, a sound economy, and the psychological, as he termed it, the spirit of the people. All three of those enter into it very strongly.

I don't disagree with that at all. In fact, I believed it then, I believe it now. But all three are necessary.

The heart of the requirement is to find the solutions that provide adequately for all three. On the military side, we understand the constraints that we necessarily work under, the budgetary pressures, and within those pressures, within those parameters, we try to work out solutions that seem to be in the interest of our country.

Senator SYMINGTON. I understand that, General. I am not trying to shorten your answer, but I am asking, do you think that the increased conventional capability that we have discovered recently, as against what we thought that conventional capability was, will make it possible for us to reduce our nuclear position in Europe?

General GOODPASTER. There has been some rise in our conventional capability on our side. On the other hand, the other side has been strengthening. The perception of our conventional capabilities that I have had over the past 4 years in which I have had this command responsibility has not greatly changed.

I think we will be doing well to keep the level and make moderate improvements in the level of our conventional capability. I think that it simply must be buttressed by a modern and a valid tactical nuclear option and capability.

I am not proposing any crash program or radical program of change. In fact, I think a steady and sustained program of modernization is what is very much indicated. I would want to support the idea of a stable program of steady modernization of our conventional capability and our tactical nuclear capability as well.

Senator SYMINGTON. Thank you, General.

I will see you at 3:30.

General GOODPASTER. Yes, sir.

[Whereupon, at 12:50 p.m., the hearing recessed, to reconvene at 3:30 p.m., the same day.]

[AFTERNOON SESSION]

Senator SYMINGTON. The committee will come to order.

General Goodpaster. I will now proceed with the next question.

Major factors in NATO planning are stated to be forward deployed forces and flexible response, since it is assumed that the adversary will initiate the attack when, where, and in what strength he deems necessary.

FLEXIBLE RESPONSE

You have addressed the strategy of flexible response in your statement and we would ask these questions against the additional details of this strategy.

Is there a finite number of responses and degrees of retaliation?

General GOODPASTER. No, Senator. In our planning, our concentration is on developing the widest possible range of responses from which we could draw, depending on how the situation would develop, and that extends from the conventional end of the spectrum to add force right on up to whatever is required.

Of course, there are many established modes of operation. The covering operations, the initial delaying operation, the direct defense on the main battle positions, the mobile defense in that area. But then, over and above that, we would add, if needed, and if approved, the controlled battlefield use of nuclear weapons, possible air defense use of nuclear weapons, possible use at sea, going from there into the use in a more extended battle area which might include use of close-in interdiction purposes, extending even to counter-nuclear, counter-air, always in a tactical role against military targets and beyond that we have plans, prepared plans and capabilities for conducting the full-scale use against fixed targets of military significance and the threats against our command extending throughout the Warsaw Pact area.

PREPLANNED RESPONSES

Senator SYMINGTON. Does NATO preplan responses?

General GOODPASTER. The categories that I have just described, starting from the top down [deleted] are very fully preplanned.

Below that, our operations are partially preplanned because, in many cases, they would be directed against nonfixed targets, against mobile targets, or against logistic support facilities that had come into play because of the way in which the attack had been developed.

The remainder of that planning would have to be done in the situation as it developed. So, we have a range that extends from fully preplanned to partially preplanned options.

Senator SYMINGTON. Do preplanned responses contemplate the use of nuclear weapons?

General GOODPASTER. Yes. The preplanned responses that I have described do that. Now, we do not use the term "preplanned" in relation to the operations of our conventional forces, for example, on their main battle positions but those, too, are planned in our general defense plan and in the general defense plans of the subordinate echelons.

Senator SYMINGTON. Which nuclear weapons do you plan?

General GOODPASTER. For the full range of nuclear weapons available to us. We have done preplanning at the higher end of the spectrum. [deleted] weapons, PERSHINGs, SERGEANTs, that type of thing, against [deleted].

Then, we have the ADM's, of course, that have been planned on a contingency basis, if directed, against identified locations for the creation of obstructions.

Then, for the small nuclear weapons, we have the partial preplanning for their use against mobile targets.

PRESIDENT ALONE CAN GIVE "GO"

Senator SYMINGTON. At what level of political authority or at what military command level is the "go" message for the use of nuclear weapons originated?

General GOODPASTER. The true "go" is given in the case of American nuclear weapons, by the President. That could be upon his direction or it could have been initiated at the level of the command authorities, national command authorities, or under the NATO procedures it could occur as a result of a request which was submitted to the President by SACEUR.

[Deleted.]

General GOODPASTER. [Deleted.]

WHEN WOULD NUCLEAR WEAPONS START TO MOVE

Senator SYMINGTON. Under what circumstances would nuclear weapons be moved from storage to the proximity of the delivery systems?

General GOODPASTER. As the stages of alert proceeded, and as we move into our actual combat posture, one of the steps that would be taken would be to move certain numbers of these weapons into their field and dispersed storage sites.

So, it would come in connection with the rising stages of alert given to the force.

Senator SYMINGTON. What authority is required to move nuclear weapons from rear areas to forward areas, or from stockpile sites to forward areas?

General GOODPASTER. So long as the custody is retained in U.S. hands, that authority lies within the scope of authority of the field commanders, the U.S. field commanders, that is, specifically SACEUR and the U.S. Commander in Chief, Europe, myself, in my U.S. capacity.

Senator SYMINGTON. Who would be the deciding factor between those two?

General GOODPASTER. It would require the decision of both. Since it is the same individual, there would be no point—it is something that would have to be resolved.

Senator SYMINGTON. What security measures are used when weapons are on the move or deployed in forward areas?

General GOODPASTER. There is a set of procedures that has been laid down, issued as instructions to our forces, [deleted].

Senator SYMINGTON. Do you believe that forward movement of nuclear weapons would be considered provocative by the Warsaw Pact allies?

General GOODPASTER. First, I want to say that the task of observing and identifying forward movement of nuclear weapons would be a very difficult one for them. The logistic movement can be and would be included in a great number of movements. It would be difficult for them to identify.

If they identified it, it would have much the same significance as a whole range of other alert and preparatory measures which dispose the forces in a field deployment to improve their readiness and lessen their vulnerability.

ARE PEOPLE ALERTED WHEN WEAPONS MOVE?

Senator SYMINGTON. Is it possible to start weapons movements without alerting the local populace?

General GOODPASTER. [Deleted.]

Senator SYMINGTON. Will you correct that for the record if it is wrong?

General GOODPASTER. I will do that.

Senator SYMINGTON. During a period of rising tensions, are there any preplanned antipanic measures to keep the local populace from rushing toward the rear areas?

General GOODPASTER. This is reserved by the nations in NATO as a national responsibility and a national authority. [Deleted.]

[Deleted.]

Senator SYMINGTON. Re the deterrent value of the NATO nuclear weapon stockpile, probably the most important concept associated with these weapons is credibility, that is, would they or could they be used as postulated in war plans and war games?

A typical example is the atomic demolition munitions, the ADM's.

First, how many ADM weapons are in NATO, and where are they located? Will you supply that for the record?

General GOODPASTER. I will supply that.

[The information later supplied follows:]

There are [deleted] ADM's in Europe, [deleted]. They are stored in approved depots and special ammunition storage (SAS) sites under U.S. custody.

USE OF ADM'S

Senator SYMINGTON. Second, how would ADM's be used in NATO? I think you covered that pretty well this morning.

General GOODPASTER. Yes. In a great many cases, it is to create obstructions and particularly to break up the fast approach routes that could endanger our position.

Senator SYMINGTON. Are there any prechambered sites in existence?

General GOODPASTER. [Deleted.] There are chambered sites prepared for conventional explosives which could be used for ADM purposes. In other areas, there are prechambered sites that have been prepared, in some cases for conventional explosives and in some cases, with the idea that they could be used for ADM's.

Senator SYMINGTON. Could an ADM be used as a surface burst weapon?

General GOODPASTER. It could serve the purpose as a surface burst weapon in many cases, creating craters or destroying approach routes and that kind of thing.

In many cases, however, the price that you pay in terms of fallout would be much greater and you would want to use it in a buried mode if at all possible.

Senator SYMINGTON. Can a captured ADM be detonated by a knowledgeable person in a relatively short time after capture?

General GOODPASTER. My own impression, and I would like to verify this, is that a good deal of technical knowledge would be required

before this could be done. It would depend, in part, also, on the condition of the ADM when it was captured.

I think that the requirement to analyze this weapon and to discover how to use it properly would take a very considerable time if it were captured.

Senator SYMINGTON. Would you supply more detail as to the question itself, and the time involved?

General GOODPASTER. I will be glad to give a more thorough answer than that.

[Information later furnished follows:]

[Classified matter deleted.]

ADM REMOVAL EFFECT ON GENERAL STRIKE PLAN

Senator SYMINGTON. What would be the effect on the general strike program if all NATO ADM's were returned to the United States and retired?

General GOODPASTER. I would like to enlarge that not only in the general strike plan with which use of ADM could be associated, but in our whole concept of tactical use of nuclear weapons and nuclear munitions.

It would remove from us a capability for rapid demolition of important facilities and for the rapid creation of craters and obstacles in some of our high-speed approach routes. That is where the concern would be greatest to me.

Also, in some narrow defiles in more mountainous areas, we have the capability of imposing significant delay through the use of these weapons if their use should be approved at that time.

COLLATERAL DAMAGE

Senator SYMINGTON. Another factor strongly influencing credibility is collateral damage.

Is there any yield below which collateral damage becomes a negligible factor?

General GOODPASTER. I think we are concerned about collateral damage in every case. We can minimize it in the case of ADM's by burying them at the optimum depth. We minimize it in the case of most of our weapons [deleted].

[Deleted.] That cuts down the fallout factor. We minimize it greatly by using those small weapons.

This is one of the purposes of our modernization program. Also, in terms of future technology, the use of [deleted] could give us advantages in the same way.

So, I think that it will always be a consideration and you are weighing the necessary military effects against the means of obtaining them with minimum collateral damage.

Senator SYMINGTON. How is predicted collateral damage from blast, thermal, prompt radiation, fallout, et cetera, factored into targeting decisions?

General GOODPASTER. This is part of the analysis that is conducted by our nuclear activities staff branch. In the presentation of proposals

to me, for example, I require an analysis and recommendations with regard to the collateral effects expected. They have set techniques and manuals by which all of this can be prepared.

Then, in my procedures, I cover this point as part of my message of request that I would submit to higher authority.

So, it is an inherent part of the technique of planning and then requesting nuclear weapons.

Senator SYMINGTON. Could you cite an example of the tradeoffs involved when considering target destruction versus possible civilian casualties?

General GOODPASTER. Yes. In our last exercise, for example, in order to sharpen our tools in this regard, on several occasions I imposed particular constraints as to the yield of weapons, as to how close they could be to populated areas and the like, in order to keep down the collateral effects and in order to improve the handling of this factor within our command.

In fact, in some of the key uses that we practiced, my headquarters analyzed this and we required a displacement of the intended point of impact in order to reduce the expected collateral effects.

PURPOSES OF HIGH-YIELD WEAPONS

Senator SYMINGTON. What is the purpose in the NATO stockpile of high yield weapons deliverable to long distances by missiles or aircraft?

General GOODPASTER. One of the purposes is for use against enemy airfields. Another for use against enemy nuclear delivery means, rail concentrations. [Deleted.]

Senator SYMINGTON. Is the role of the high yield weapon considered to be defensive, retaliatory, punitive, or preventive?

General GOODPASTER. In terms of the use that we would make of it, it is a defensive use in that we are trying to destroy the enemy's military capability that he is either employing or that we calculate he may employ against our forces.

Senator SYMINGTON. My time must be about up, but I would like to ask this question and then I will yield.

What would be the value to NATO of another [deleted]?

General GOODPASTER. I think we are talking here about the [deleted] type of weapon. The particular values of the [deleted] of course, [deleted].

The other advantage is that in terms of its aerodynamic qualities, it is capable of being delivered by supersonic aircraft.

Senator SYMINGTON. I think we were talking about the [deleted].

Colonel SCHWILLER. This would be the follow-on to the [deleted]. This would be the one in the [deleted].

General GOODPASTER. Then I had better supply the answer on this. I am not directly familiar with that.

[The information supplied follows:]

[Classified matter deleted.]

Senator SYMINGTON. What are the NATO rules or standards for designating a target tactical or strategic?

To me, that is a very important question.
General GOODPASTER. [Deleted.]

CONCEPT OF ASSURED DESTRUCTION

Senator SYMINGTON. My next to the last question: Is the concept of assured destruction applied to tactical targets?

General GOODPASTER. The concept of assured destruction with which I was familiar a few years ago was related to assured destruction of urban industrial targets. Of course, in terms of tactical targets, we set a designated destruction limit or percentage of destruction against which we planned. But that is not the same use of the term "assured destruction" as is used in connection with the strategic targets.

Senator SYMINGTON. Would you not say an industrial plant would be a tactical target as well as a strategic target?

General GOODPASTER. An industrial plant is not a tactical target in the sense of my commands [deleted].

Senator SYMINGTON. That is the only aspect you have?

General GOODPASTER. Yes, sir.

Senator SYMINGTON. Could you supply the predicted collateral effects from using a weapon with the yield of SUBROC [deleted]?

General GOODPASTER. I would like to provide that. We have run exercises which involve that use and in the particular uses that we have made of it, it has not had collateral effects, but I would like to make a fuller examination of the problem and see whether there are any exceptions to that.

COLLATERAL EFFECTS FROM USING WEAPON WITH YIELD OF SUBROC

An underwater nuclear explosion is characterized initially by the formation and propagation of an underwater shock wave. The dissipation of heat at the shock front causes the water to vaporize in the vicinity of the explosion and results in the formation of a large bubble of steam. The interaction of this bubble and the shock wave produces various surface phenomena, including spray domes, columns, plumes, base surges, radioactive pools and surface waves. An underwater explosion also can result in thermal, nuclear, and electromagnetic radiation above the surface but these phenomena are insignificant except in the case of a very shallow burst and are treated in the same manner as surface bursts.

Predicted collateral effects caused by underwater burst of a weapon [deleted] would vary with burst location, burst depth, water depth, prevailing weather conditions, sea bottom topography and water characteristics. In general terms, underwater nuclear explosions release large amounts of thermal and nuclear radiation, essentially all of which is absorbed by the surrounding water within several feet of the explosion. The ensuing radioactive base surge will have visible clouds to a height of [deleted] feet followed in time by an invisible cloud of fission debris. As the water droplets which make the base surge visible evaporate and disappear, the radioactive particles and gases remain in the air and continue to move outwards as an invisible base surge. There may well be some fallout or rainout on the surface of the water (or ship or shore station) from the radioactive base surge, but in many cases it is expected to pass over without depositing any debris. The length of time the base surge remains radioactive will depend on the energy yield of the explosion, the burst depth and the nearness of the sea bottom to the point of burst. As a general rule, it is expected that there will be a considerable hazard from the radioactive base surge within the first 5 to 10 minutes after the underwater explosion and a decreasing hazard for a half an hour or more.

[Deleted.]

Senator SYMINGTON. Thank you.
Congressman Price?

NO ADVERSE REACTION TO NUCLEAR STOCKPILE

Chairman PRICE. General Goodpaster, do you ever have any problems at all with the NATO counterpart, the NATO officers under your command and so forth, in relation to your nuclear stockpile? Did they ever question the advisability of having these weapons in their area or in their home countries?

General GOODPASTER. Not at all. As a matter of fact, I used the NATO subordinate chain of command under the technique that I had described for the development of our requirements. Those are then submitted to me by the subordinate NATO commanders, they, in turn, having had the same operation performed by their subordinates and their staffs.

Within my headquarters, this is prepared on a completely integrated basis. In fact, the document is submitted to me by my deputy Chief of Staff of Plans and Operations, who is an officer of another nationality. I know in fact that they put high importance on the participation by the delivery system of other NATO nations in the nuclear plans and nuclear programs.

They feel that it gives them a very definite reassurance to be participating, to know what the planning is and what the targeting is.

They feel, also, that the fact that our command does this planning and is prepared in this way, serves as a major deterrent to the other side, that it is not something in which solely one country has the entire role and function.

They regard their role as very valuable.

Representative PRICE. Since you have been over there in command of NATO, have any of the representatives of the various other countries ever expressed the concern of their governments as a result of any questions to their government by people in the country about the storage of weapons?

General GOODPASTER. On storage of the weapons I have never had concern expressed to me by any representative, whether within my command or outside. I have had concern expressed on other aspects of the nuclear problem by national representatives in their ministries of defense, for example, where they give their views and express their interest as to what the guidelines should be, what the constraints on use should be.

I have never had any of that from officers within my command or my subordinate headquarters.

STORAGE OF WEAPONS ACCEPTABLE TO NATIONALS CONCERNED

Representative PRICE. So you think, in general, the storage of these weapons on foreign soil, particularly the NATO countries, is accepted by the government and by the people of the country?

General GOODPASTER. I am certain that it is accepted by the governments as being something of very net value because, of course, it is only with their agreement that the weapons can be deployed in those countries.

Within their countries, I have had no reflection of any substantial concern on the part of their citizenry about these weapons in a way, for example, as we have sometimes heard about chemical weapons.

We have heard concern expressed about that, but we have not heard the same thing about the storage there of nuclear weapons.

Representative PRICE. Do you feel there is local knowledge of the storage in different areas, people in the area know about them?

General GOODPASTER. This varies. I think in a number of areas, people are generally aware, or strongly believe that there are nuclear weapons stored in a particular area.

In many other areas, they have no knowledge. These often, in many cases, are isolated. Access is very much restricted. It is not unique because there are restrictions on access to other types of facilities. In terms of general knowledge, that there are nuclear weapons stored somewhere in their country, I think there is a general understanding in most of the countries, the countries where they are stored, that somewhere in the country there are nuclear weapons stored; but it is no more specific than that in a great majority of the cases.

Representative PRICE. That is all I have, Mr. Chairman.

Senator SYMINGTON. Congressman Holifield?

Representative HOLIFIELD. I don't think I have any.

Senator SYMINGTON. General Goodpaster, another factor involved in the credibility argument is the contention that the United States must use nuclear weapons even though it could lead to a U.S.-U.S.S.R. strategic exchange.

CONCEPT OF "COUPLING"

First, would you comment on the concept that the "coupling" between tactical and strategic nuclear options is a vital element of deterrence since it reassures NATO's European members that a nuclear war could expand beyond Europe's shores?

General GOODPASTER. Mr. Chairman, the terms "coupling" and "linkage" are sometimes used. There are aspects in which that does apply. It can lead to a misunderstanding, a sense that there is an automatic type of relationship between any use and a full-scale use.

I think I mentioned earlier that a very limited use in Western Europe, which would be quite obviously designed to deal with a particular concentration of force which posed a particular threat to our position, well confined to that area, delivered with near simultaneous effect, would not necessarily have that kind of automatic linkage.

So, the term, I think one should look beyond the term of linkage or coupling to see just in what sense the Soviets might assess a possibility that the initial use could be followed by fuller-scale use if they do or if they do not respond in kind.

What is stressed among the Europeans is that they are opposed to any idea of a policy of decoupling, that there would necessarily be a prohibition against that further escalation if the situation should so demand. They want the whole issue to be kept open.

Senator SYMINGTON. Thank you.

What is your definition of coupling?

VIEWS ON "COUPLING"

General GOODPASTER. Mr. Chairman, as I just said, I think it is a term that is susceptible of many meanings. I prefer to go to an assess-

ment of our view of the possible consequences of a particular use and the likely Soviet view of the possible consequences.

To the extent that they see a probability that a response in kind would tend to escalate further, I would say that that is a form of coupling. But the notion of an automatic and certain connection, such that any use would certainly be followed by use at the full scale—that concept of coupling, I think, goes too far.

Senator SYMINGTON. That is interesting. Thank you.

What are your personal views on how the 13 European member countries might individually view the uses of tactical nuclear weapons and “coupling”?

General GOODPASTER. We have had exercises, we have had a series of exercises on an annual, semiannual, and biannual basis in which we go through the development of military situations and then where necessary, plan and go through the procedures of requesting the authorization of nuclear use. In that regard, and in the policy documents in NATO, these countries have all recognized the possible necessity in time of hostilities to resort to the use of nuclear weapons [deleted]. So, they do foresee the possibility of the use of these nuclear weapons.

On the coupling, I think I reflected in my earlier remarks the range of views there. I don't think that any of them believe that coupling is automatic. I think they will understand that our President retains the prerogative of decision as to whether to proceed to higher escalatory steps.

Senator SYMINGTON. What is the attitude of countries like [deleted] about having nuclear weapons on their territory in times of rising tension?

General GOODPASTER. [Classified matter deleted.] In general, what we have to think of is air-delivered weapons in circumstances of that kind.

CREDIBILITY RANKING OF NATO NUCLEAR WEAPONS

Senator SYMINGTON. Would it be possible to assign a credibility ranking to the NATO nuclear weapons?

General GOODPASTER. I have a little difficulty getting hold of that. I think, however, if we try to look at it from the Soviet's eyes, I think they have to respect all types of nuclear weapons that we deploy there, and I think they have considerable respect for these nuclear weapons, particularly as they have proceeded with the development of the weapons on their own.

If we were talking about the likelihood of having to use weapons, I think that there we would recognize that those that carry the highest escalatory effect are the ones that we would be the most reluctant to put to use.

Senator SYMINGTON. What could be done to enhance the credibility of the NAO nuclear stockpile?

General GOODPASTER. I think we should continue to modernize it, to have broader recognition of the role of the weapons that this option plays. I believe the stockpile carries a considerable degree of credibility with the Soviets at the present time and it does within the Alliance as well. It was one of the measures that gives confidence to the allies. They think of the weapons principally, I believe, in their de-

terrent effect, but they recognize very fully the effectiveness of these weapons.

Senator SYMINGTON. Do you consider it realistic that the blast from a nuclear weapon should always be considered the dominant destruction mechanism?

General GOODPASTER. I think we are coming now to the time and particularly as we get to these newer weapons, of better controlled effects and smaller weapons, that we can broaden this and take account of some of the other effects.

In fact, I have work underway within my command at the present time to familiarize ourselves with the other effects instead of relying almost exclusively on blast as has been the general practice.

Senator SYMINGTON [presiding]. Congressman Price, do you have any questions?

Representative PRICE. I have no questions.

Senator SYMINGTON. Would the credibility and efficacy of the NATO nuclear stockpile increase significantly if it were restricted to a "defense only" capability, using only low yield, [deleted] short-range weapons?

General GOODPASTER. I think there are two questions in that. The first question, I think that the credibility will be improved as we introduce weapons of that kind.

Now, if we restricted ourselves to weapons of that kind, then we introduce another effect which works in the opposite direction, that is, that we lose the capability for deeper interdiction, for attack against airfields and the like.

So, you are gaining in credibility on the one side, but I think you would be losing in credibility on the other. Both parts of this are very important, I feel.

Senator SYMINGTON. May I say that I know the distinguished chairman will agree with me that we can only be really impressed with your knowledge of this subject. You talk like one of the better nuclear physicists who, unfortunately, does not have your military experience.

General GOODPASTER. I don't claim to have those talents, Mr. Chairman.

Senator SYMINGTON. I know you don't claim it. I was just observing that you have them.

LOW-YIELD WARHEAD DEVELOPMENT EFFORT DESIRABLE

Do you believe that a special effort should be made to develop a low yield [deleted] warhead that could be delivered by at least several different delivery systems?

General GOODPASTER. I do, Mr. Chairman, for the reasons that I previously indicated.

Senator SYMINGTON. Would you comment on the Army's reluctance to consider the use of the [deleted] as a primarily kill mechanism against battlefield personnel?

General GOODPASTER. I would rather comment on the issue, itself, and say that I think that these are possibilities that are very important and I am hoping and I know that the Army is in the process of

valuating this. I cannot foretell the outcome but my people are in touch with others who are looking into this very possibility.

I will say that I, for one, hope that if the results of our analyses and operational studies come out as I anticipate, I hope that the Army will be prepared to go forward with us in supporting weapons of that kind.

Senator SYMINGTON. Would you recommend that research be started to determine, if possible, the lowest possible [deleted].

General GOODPASTER. Very definitely. I think that research in this area and further analyses of the research data that have been developed are very important.

I do not think that we have full knowledge here, but we have already seen enough to show us that this is a very significant area that ought to be explored further.

Senator SYMINGTON. Thank you.

Would you recommend the use of [deleted] to enhance the security of NATO's nuclear weapon systems?

General GOODPASTER. I support those devices. I think that some of them have yet to be developed and tested as to their utility, their dependability in operational circumstances.

But the move in the direction of attaining greater security for our weapons through devices of this kind, that move has my full and firm support.

Senator SYMINGTON. Thank you.

NUCLEAR WEAPONS CUSTODY

Assuming that NATO weapons incorporate the latest [deleted]. First, do you believe that such weapons could be dispersed with allied forces without U.S. custodians, if U.S. custodial requirements were met by [deleted] by U.S. personnel?

General GOODPASTER. Mr. Chairman, I do not want to anticipate or to prejudge policy determinations that might be made by the people having higher responsibility than I do, but I would just want to say that I would hope that we would keep U.S. custodians there with U.S. weapons.

Senator SYMINGTON. Second, under that heading, do you believe that dispersal to allied forces, would increase survivability and security because of greater, increased mobility?

General GOODPASTER. If the choice were posed that you could only get dispersion and mobility by that means, in other words, that we couldn't have U.S. custodians in a dispersed setup, then I suppose that would be the consequences.

But the values of having that U.S. custodian—here, I am talking about the situation in peacetime, the long years that we have to anticipate, I would want to see, and here, I am speaking personally, I would want to see U.S. custodians where there are U.S. weapons.

But I would hope that we would continue to keep arrangements in effect that give us dispersion of these weapons with the U.S. custodians there.

Senator SYMINGTON. Third, would you comment on how communications could be simplified by [deleted] or other preplanned concept?

General GOODPASTER. I would like to study that and respond to that later. That is a little too complicated.

[The information later supplied follows:]

[Classified matter deleted.]

NATO DEFENSE-ONLY REQUIREMENTS

Senator SYMINGTON. Assuming that NATO went to a defense-only posture with short-range nuclear weapons that contained protective systems, the latest PAL devices, and used [deleted] low yield warheads: With those premises, I will ask two questions.

First, how many nuclear weapons do you think would be required for the defense of NATO? Will you supply that for the record?

General GOODPASTER. I would much prefer to do that.

Senator SYMINGTON. Second, how many U.S. troops do you think would be required on NATO soil?

General GOODPASTER. I would like to provide that separately, sir. [The information later supplied follows:]

NATO DEFENSE-ONLY REQUIREMENTS (WITH SHORT-RANGE WEAPONS)

a. Nuclear Weapons.—The development of [deleted] low yield tactical nuclear warheads would not appreciably decrease the number required for the defense of NATO. [Deleted] lower yield weapons, delivered more accurately, can be employed against a larger variety of targets than larger weapons with high residual contamination in most limited conflict situations we can envision.

The military aspects of lower yield, smaller delivery errors, and dominant battlefield kill mechanisms, however, are not the only reasons for seeking modernized warheads. The employment of tactical nuclear warfare in the populated areas of Europe would likely inflict a number of civilian casualties. Lower yield warheads, with [deleted] could allow the use of these weapons in a given situation with greatly reduced collateral damage and casualties. The overall military and political advantages to be gained by such modernized weapons is that their use in plausible scenarios in Europe would appear more suitable and credible to our allies and potential enemies alike. Our allies would find these weapons as more acceptable modes of defense because of the expected resultant reduction in civilian casualties. The enemy's knowledge of our deliberate steps to reduce collateral damage cannot fail but suggest to him our determination to use tactical nuclear weapons if necessary. The establishment of a modernized tactical nuclear weapons stockpile in Europe enhances the flexible response doctrine of NATO.

The receipt and installation of the latest PAL devices would not affect the required number of nuclear weapons for the defense of NATO. These devices are designed to preclude the unauthorized use of nuclear weapons—either by design or by accident. The latest PAL devices will provide better security and more flexibility [deleted].

b. U.S. Troops.—The number of U.S. troops required on NATO soil is not directly determined by the number of nuclear weapons deployed. Under the flexible response strategy of MC 14/3, all elements of the defense are necessary and relied upon to achieve the NATO goal of credible deterrence. Should the strength of U.S. forces be reduced, their successful defense against lesser aggressions could require an earlier response with nuclear weapons. With sufficient troops, the response flexibility of NATO commanders is thus supported, and the need for rapid nuclear escalation is thus delayed. In this way, tactical nuclear weapons (whether modernized or not) are complementary to NATO conventional forces, not a substitute.

Senator SYMINGTON. Do you believe that a defense-only posture would provide a credible deterrent in NATO?

General GOODPASTER. I would put it that it provides part of the credible deterrent. I don't think it would be sufficient in and of itself. I think the necessity to impose a threat, a deeper threat, is a very important part of our deterrent.

Senator SYMINGTON. I agree. In the news account of your talk in Paris on June 21, to the Western European Unions Assembly, you

were quoted as not being favorably disposed to the concept of mutual and balanced force reductions in Europe; is that correct?

General GOODPASTER. That is not correct. I covered that in discussions this morning. I support that in principle and I have supported it for many, many years. Because I am serious about it, I have pointed out the very important factors that must be dealt with if indeed it is to be mutual and balanced force reductions, that is, force reductions that leave us with undiminished security on both sides. I do not think that you support mutual and balanced force reductions by overlooking or neglecting those complicating factors. In fact, I would anticipate that it won't be achieved if we are not willing to really work through all these complicated factors.

I am familiar with this particular report, but I think the reporter drew the wrong conclusion. I might say that I am going to take another look at that speech if I give that part of it again, to make sure that I help the people to the conclusion that I really intended.

HOW MUCH LONGER FOR PRESENT NUMBERS

Senator SYMINGTON. With that premise and in that general context, how long do you think the United States must keep 300,000 troops and about 7,000 weapons in Europe?

General GOODPASTER. Mr. Chairman, I think they are there to deal with the situation and they are dealing with that situation successfully and very effectively. It has meant a great deal to our country to have had the contribution that they have made. If the other side continues to maintain the kind of threat to Western Europe, the threat of pressure tactics and of military action, if our Alliance does not continue as it does today, then it seems to me that we must continue to maintain our forces there. I regard it as a good investment in behalf of the interest of our country as long as that condition exists.

Now, if and as the Europeans come together and make of themselves a military force, they should increasingly take over more of that responsibility. But so long as the primary nuclear power is held by the United States and we are facing a threat of the kind that we do face there, I think a combination of contributions, much as we have today, ought to be continued.

In very large part, the answer to that lies in what others do and, particularly, in what the Russians do.

Senator SYMINGTON. If the Russians stay there the way they are forever, then you think we should stay there forever; is that correct?

General GOODPASTER. Mr. Chairman, barring this improvement in strength in the military force in Western Europe, then my own very deep feeling is that the security interests and needs of the United States are best served by keeping this kind of contribution there. We can squeeze it and improve on it and achieve a gain in efficiency. I hope we can continue the process, as modernization and new technology make it possible to decrease the size of our force without losing the security that it gives us.

RETENTION OF PRESENT NUMBERS WORTHWHILE

Essentially, I think that those $4\frac{1}{3}$ divisions there are giving us in military effectiveness a really tremendous return for our country.

Senator SYMINGTON. Because of unfavorable trade balances and the billions upon billions we have supplied the Middle East oil people and the gigantic number of Eurodollars incident to the multinational corporations and so forth, as well as the fact the dollar is disintegrating further every day—and this will require the boosting of living expenses of our troops in Europe—under all those conditions—do you stick by what you have just said and you have no additional thoughts as to what should be done?

General GOODPASTER. I have additional thoughts, Mr. Chairman. I very strongly support the need for action on the monetary and commercial side to gain control over those aspects of the problem. I am deeply concerned that the difficulties in that area—and I have been concerned for years, with growing intensity—that those difficulties are going to have an effect even on the security side that will impair the whole basis of the stability, military stability, and security condition that we have been able to achieve and maintain in the Atlantic area over these years.

I would regard it as a tragedy for the West, including the United States, if our inability to resolve these financial and commercial problems were to result in damaging the structure of peace and security that we have established there.

Senator SYMINGTON. You are getting into the question of which comes first, the chicken or the egg.

GUNS/BUTTER ARGUMENT GOES ON

Now, you have a lot of people in the Congress, especially in certain localities, who will vote for all the guns before any butter. Then, you have a lot of people in the Congress who will vote for all the butter before any guns.

Then, you have a lot of Congressmen—probably the greater number—who say, “Nothing can happen to us, so we will vote for all the guns and all the butter.”

Then finally, you have Members, and I hope I am one of those, who say, “We have to establish priorities on the pie chart of increasingly limited treasure.” Under those circumstances, in my opinion, it is very well to talk about the structure in Europe, but Europe is not the United States. You do have missiles that you can fire from this country on any city in the world, certainly any city in the Soviet Union; and counting your Polaris submarine and your forward-based aircraft, you can drop megatons on any city in the world.

EFFECT OF DÉTENTE

Inasmuch as this great détente with both China and the Soviet Union is developing at the instigation of this administration, which I fully support, doesn't that have any effect on your thinking with respect to what the basic threat is, or do you think it is just all a facade, that it does not really amount to anything from the standpoint of improving our relations?

General GOODPASTER. I think it is very important, Mr. Chairman, and it has been a contribution to a more stable relationship: as the

saying is, "to shift from an era of confrontation to an era of negotiation." But the other side of the coin on the Soviet and Warsaw Pact side, is that they have continued to maintain this great military force. They continue to improve it, to enlarge it in some respects, and to put it forward into other areas of the world.

There is a condition of peace. It is a peace that I think has a greater depth to it now than has been true in the period since the war. But so long as that great force exists there, it has to be balanced in some way. The way we developed to balance it has been effective and can continue to be effective.

THEY ARE TESTING US

They are testing us, they are testing us in every area of the world now, where they can find some means of entry, through discord or conflict or confusion or regimes that are friendly to them. In the Middle East, for example, even in the Southern Hemisphere. They are not making headway in the Atlantic area, and I think our investment of effort is preventing that. Our forces which do impose certain balance-of-payments costs, I think are performing a valuable function there.

As I mentioned this morning, I have strongly supported a project to offset those balance-of-payments costs to neutralize them, overcome them, on some permanent and regular basis.

SIZE OF PRESENT FORCES VALID

In terms of the budgetary outlays for military forces, the forces that we have there are limited in size. I am not going to try to compare them in their value and validity to the strategic nuclear forces, because I think they are absolutely indispensable to the threat they pose to the other side at this time. But I believe that the value and validity of the forces that we have in Europe stand right up in the first order of priority along with our major strategic forces. The difficulty in relying on the strategic forces alone is the difficulty of this "trip wire" theory that was current some years ago. It is still entertained by some people. There, you become vulnerable to pressure tactics, to division, and even to small-scale operations that the other side might attempt.

At the present time, I think they are dissuaded from anything of that kind by what they see there.

So, the role performed by those forces, I think, contributes very directly and essentially to the security and well-being of our own people.

It is for that set of reasons really that I continue to feel that this is the right solution, and frankly, I am proud to have a part in it because I think it has done a lot for our country and can continue to do so.

I say that with all respect, Mr. Chairman. It is my point of view, but it is a matter to which I have given much thought over many years.

Senator SYMINGTON. I have great respect for your opinion in this field. You will agree that General McArthur was one of our more intelligent military commanders; that is a fair observation, is it not?

General GOODPASTER. I would want to go considerably beyond that, Mr. Chairman.

Senator SYMINGTON. He told me personally that in his opinion, the words "tripwire" and "shield" were unnecessary because if the Russians really moved across the plains of northern Prussia, it would not be tripwire, it would not be shield, it would be a parade to the English Channel.

I only mention that because as we look at the continued deteriorating economy, we naturally look like some kind of animal in a trap or a cage, trying to get out of this embroglio.

General GOODPASTER. Mr. Chairman, could I say one word on your point about General McArthur, who certainly is one of the great Captains of American History. I don't recall exactly what the time was that he said that—

Senator SYMINGTON. Late 1950's.

General GOODPASTER. We now have 6,000 tanks and there are some pretty good ones. M-60's, Leopard, Chieftains, and so on. That will be one of the liveliest parades that those people have ever participated in.

Senator SYMINGTON. I am sure of that. I am also sure, based on what you have told me, that the Soviets are stronger today, too, than they were when he said it.

General GOODPASTER. They are, and they continue to maintain their strength. My real point is that they would have a terrific fight on their hands.

Senator SYMINGTON. They sure would.

Do you think, now that we have gotten away from damage limitation by agreeing to limit ABM's and thus we have gone to assured destruction.

Do you think that, in anyway, reduces the threat?

SOVIETS AWARE OF OUR CAPABILITY

General GOODPASTER. Mr. Chairman, I have always had, and still have, a reservation about these capsule terms of that kind. I don't think that they enable you to see our capabilities and the interplay of these possibilities with the Soviets in full scope.

I think that the Soviets make calculations of what we could do against them if we employed our forces in various ways. I think they make calculations also of what the effect of a Safeguard system might be around our missile deployments.

They know, also, the strength of our submarine force and they see what is coming on over the years.

I am sure that they have to calculate that if they were to attack the United States in strategic terms—that is trying to destroy the sinews of American strength—they would undergo utter devastation themselves. It would embrace their military strength, their every element of national authority, their industrial potential—everything they have been able to build in their country industrially, and so on.

Senator SYMINGTON. Maybe people already think they are destroying our basic sinews by destroying our economy. What is your reaction to that?

General GOODPASTER. I am sure our economy has many problems and there is enough challenge in this to take the attention of our best leaders and best economists, but our economy is still beyond anything else that the world has got. You put all the rest of it together and we stand up very, very strong. That does not say that the problems aren't

there and that there are not trends that will have to be corrected before they do very heavy damage to us.

But we have gone from the depression times that I knew when I was a young man to a tremendous expansion of real strength across our country.

I can only say that I have a lot of confidence in what our people have built and I have a lot of hope that those who guide our monetary affairs can guide them in such a way that that basic strength won't be impaired.

Senator SYMINGTON. First, I wish that the people who guided our monetary affairs guided them as well as you guide our military affairs. Whereas, you find that 9 out of 10 military men agree with the military situation, whether or not they are looking at it in a paradoxical way, they agree.

On the question of the monetary and fiscal fields, you won't find 5 out of 100 who agree. That is what worries me, especially when we are keeping our military strength to the point that we can destroy anybody who would dare to attack us, but at the same time our economy is falling apart.

General GOODPASTER. Mr. Chairman, as I stated earlier, of course I tend to look at problems from the security side, but I express the concern that I feel that the problems in the economic and monetary field may have effects that would damage us in the security field.

It is certainly my deep hope that solutions can be found that would not have that effect.

Senator SYMINGTON. Thank you, sir.

General, do you know why Dr. Kissinger omitted the word "balanced" when addressing possible force reduction talks with the Soviets?

General GOODPASTER. I do not have knowledge in that particular use.

Senator SYMINGTON. What effect will the withdrawal of Iceland from NATO participation have on the NATO structure particularly the loss of bases?

ICELAND ISSUES OF DEEP CONCERN

General GOODPASTER. I think I responded to that question, at least in part, this morning by quoting my NATO colleague, Admiral Cousins, as saying that Iceland is the cork in the bottle of the North Atlantic. This whole issue is of very deep concern to us.

Senator SYMINGTON. You said this morning as I understand, that the developments under Papadopolous have not, in your opinion, affected Greece's contribution to NATO; is that correct?

NO REPORT OF GREEK FORCES LOSS OF EFFECTIVENESS

General GOODPASTER. I would like to split that into two parts. First, the information that I have concerning the effectiveness of the forces of Greece, in that regard, I have had no report that would indicate a measurable loss in the effectiveness of those forces.

However, at the same time, I would want to say that the experience of discord within military forces is one that must not, of course, be

overlooked and the fact that responsible officers have decided to leave their ships and leave their commands is a matter that must be of serious concern.

Senator SYMINGTON. But you don't think it has affected the position of Greece in SHAPE?

General GOODPASTER. In terms of the commitment of their forces to NATO and in terms of the general level of effectiveness of forces, I have seen no evaluation to suggest that that has been appreciably or significantly lowered.

Senator SYMINGTON. General, a recently retired Army colonel who served for 3 years on the staff of the Joint Chiefs of Staff testified in open session before the Senate Armed Services Committee in connection with our hearings on the defense posture statement.

In his testimony, he cited the following Department of Defense official threat statement for Europe:

While we do not consider aggression by the U.S.S.R. likely in the present political climate, the fact remains that the Soviets have a vital interest in preserving the status quo in central Europe and in retaining their hold on Eastern Europe. The crisis that could lead to conflict could arise if the political situation substantially changed in a way that threatens the U.S.S.R. or its hegemony over Eastern Europe or if the Soviet Government saw an opportunity for other ways to apply political pressures on the cohesion of the Alliance. Such a crisis could escalate to hostility.

The colonel in question, Col. Edward King, stated that he had researched the history of this threat statement and found that over the past 11 years, the substance of that statement had not changed. Yet, the United States had increased the number of troops committed to NATO by some 20,000.

If the threat has not changed, what is the reason for the increase in U.S. forces in Europe?

General GOODPASTER. First, in regard to this statement regarding the threat, I would have no particular trouble with that statement. No short or single statement of that kind, of course, can begin to show the dimensions and all the elements of the threat and the ways in which it might come more actively into play.

NATO BUILDUP HIGHER IN 1961

Now, with regard to the 20,000, I think what you have to do is go back to 1961, at the time of the rising threat to Berlin and the buildup of force there that was carried out by President Kennedy.

The figure of 20,000 is not the figure that I am familiar with. I recall a buildup of 40,000 at that time. I think that there were perhaps 20,000 in units and 20,000 in support elements—I am here speaking from memory—during the period of 1961 and 1962. I happened to be in Europe during that time. We went up in strength during this period from the late 1950's or beginning 1960's to a peak of about 400,000 or 410,000, as I remember, 1961-62.

We reinforced Berlin and other reinforcements of our forces there. Since that time, we have been progressively coming down in strength. The buildup units have been withdrawn. Then, in 1967, two-thirds of a division plus a separate regiment were withdrawn. There have been

squeezes, a kind of squeezing process repeatedly to cut back on support elements and the like, until now we are down to a figure of somewhat over 300,000, in the range of 300,000 to 319,000.

So, I think you would have to go back to that period of 1961 to find the most recent buildup.

Mr. Chairman, if I may, I would like to have an opportunity to review my answer and add to it if I haven't identified the particular reference that he was making there.

Senator SYMINGTON. Of course you have that opportunity. I might say your answer is an impressive one. Do you know what the basis for the preparation of this threat statement is that I read to you?

General GOODPASTER. Yes. Each year, in connection with the major plans prepared in the Defense Department, that is a capability plan for the employment of our forces and an objectives plan which attempts to lay out the direction in which our forces should be built, and the improvements and the new capabilities that ought to be obtained. The starting point for that is a reviewed and sometimes revised intelligence assessment that is provided by the intelligence community.

The Joint Staff then takes this, and it is the basis for their annual reworking and revision of the plan, which is then submitted for the review of the Joint Chiefs of Staff. They then provide that to the Secretary of Defense as an input into the program documents that he prepares. Ultimately, his program documents then become the basis for his budget submission.

Senator SYMINGTON. If the Soviets have a vital interest in preserving the status quo in Europe, why should there be concern about their invading central Europe and upsetting the status quo?

General GOODPASTER. I am not sure I quite got the question. Why should there be concern about their invading—

Senator SYMINGTON. Central Europe if they want to preserve the status quo?

SOVIET INTENTION TO MAINTAIN PRESENT HOLD

General GOODPASTER. In central Europe, the only invasion really that they have carried out to preserve the status quo was their invasion of Czechoslovakia and prior to that, of course, their invasion of Hungary. I think they have made quite clear that they intend to maintain that kind of hold over the nations of central Europe.

Senator SYMINGTON. That is thus preserving the status quo?

General GOODPASTER. Thus preserving the status quo wherever it is threatened behind the Iron Curtain.

If the significance of the question was an invasion west of the Iron Curtain, in present circumstances, given the balance of force and given what they see west of the Iron Curtain, I just can't believe that that holds much attraction to them.

So, their efforts there, I think, are directed more to creating division and trying to advance an erosion in NATO and also trying to create a mood within which there would be relaxation of effort on the NATO side.

Senator SYMINGTON. I want to thank you very much for your courtesy and tolerance in answering these questions.

I hope to have the privilege of visiting you again at your headquarters.

We certainly had an interesting and enjoyable visit the last time we were there.

General GOODPASTER. May I extend an invitation to you and to the members of your committee. I am sorry that Mr. Holifield, in particular, is not here, because I know that members of one of his other committees were hoping very much that he would make a visit over our way. But I would like to extend the invitation to all of the members of the committee and I would like in all seriousness to say that I welcome the opportunity to appear here and to discuss these issues.

I assure you that I will give thoughtful consideration to the observations that you have made during this discussion. I feel that this is indeed a subject on which we share concern.

From my standpoint, my sole interest is to find the best answers in the interest of the United States.

Senator SYMINGTON. Knowing you, I know that is true. I was impressed with something that you said much earlier today and that is that you would like to see much of this information released to the American people. I think one of the great tragedies in the whole way we handle these things is the secrecy, the number of documents that really don't affect our security that are classified and kept from the people.

If we don't get this information out to the people so that they can have a chance of deciding, you may find many babies going out with the bath water because of concern about excessive Government spending and increasing inflation.

You cannot have people making economic sacrifices in a country like this country unless they know why those sacrifices are important.

General GOODPASTER. I understand that, Mr. Chairman.

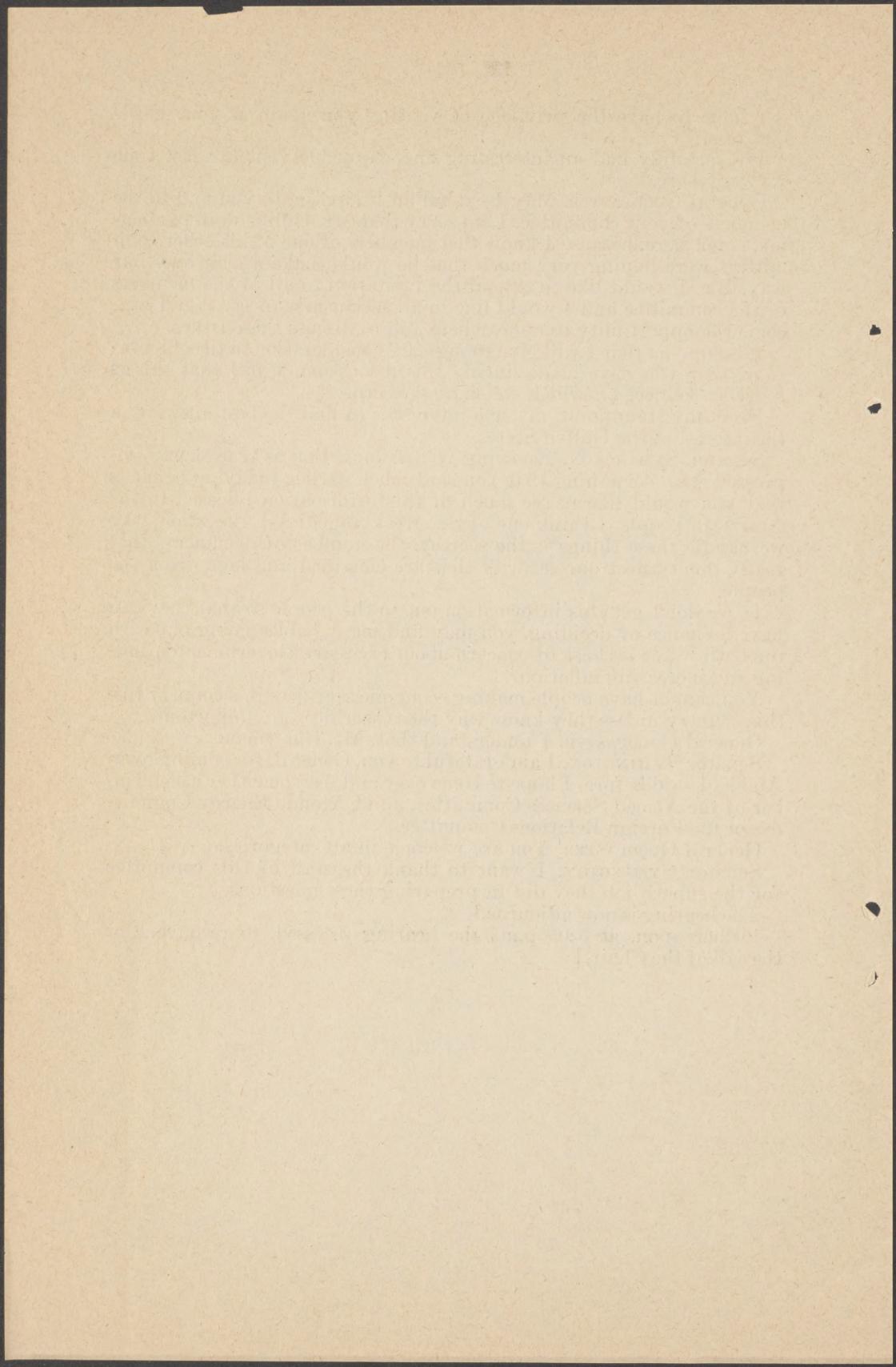
Senator SYMINGTON. I am grateful to you, General, for coming over. And as I said before, I hope to come over and see you either as a member of the Armed Services Committee, Joint Atomic Energy Committee, or the Foreign Relations Committee.

General GOODPASTER. You are welcome in all categories.

Senator SYMINGTON. I want to thank the staff of this committee for the superb job they did in preparing these questions.

The hearing is now adjourned.

[Whereupon, at 5:05 p.m., the hearing recessed, to reconvene at the call of the Chair.]



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