

BY THE COMPTROLLER GENERAL

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Report To The Congress

OF THE UNITED STATES

Improving The Effectiveness Of Joint Military Exercises--An Important Tool For Military Readiness

Military exercises provide essential training for U.S. Forces. They are the best means, short of war, for testing our forces' capabilities to perform their missions effectively.

Joint Chiefs of Staff exercises vary in size--up to large, complex maneuvers involving thousands of personnel. Depending on their size and location, the exercises may involve airlift and/or sealift of personnel, armament, and equipment.

Under current practices, the Department of Defense cannot be assured that the exercises achieve their full potential or are conducted in the most cost-effective manner. GAO calls for more central management over exercises by the Joint Chiefs, as well as more emphasis on realism and applying the lessons learned from past exercises.



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To the President of the Senate and the
Speaker of the House of Representatives

This report discusses opportunities for improving the planning, execution, and evaluation of the major joint military exercises comprising the Joint Chiefs of Staff Exercise Program. Discussions of joint exercise budgeting procedures and analyses of two major joint exercises--REFORGER and CRESTED CAP--are included.

We initiated this review after preliminary research indicated improvements were needed in the management of Joint Chiefs of Staff directed and coordinated exercises. The review is an aspect of our continuing examination of the readiness of this Nation's military forces.

We are sending copies of this report to the Director, Office of Management and Budget, and the Secretary of Defense.

James R. Stacks

Comptroller General
of the United States

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COMPTROLLER GENERAL'S
REPORT TO THE CONGRESS

IMPROVING THE EFFECTIVENESS
OF MAJOR JOINT MILITARY
EXERCISES--AN IMPORTANT
TOOL FOR MILITARY READINESS

D I G E S T

Joint Chiefs of Staff exercises are a primary means for U.S. Forces achieving joint (interservice) and combined (U.S. and allied forces) operations training. They are, therefore, important to the readiness of U.S. Forces and should be continued.

The Joint Chiefs of Staff Exercise Program's importance and cost (programed at \$148 million in fiscal year 1979) dictate effective planning and execution. However, GAO found serious weaknesses in the procedures for developing and executing the Joint Chiefs Exercise Program.

GAO believes greater central management at the Joint Chiefs of Staff level, coupled with improved procedures for annually re-evaluating and rejustifying the exercises, would significantly improve the program's effectiveness.

PROGRAM DEVELOPMENT

The Joint Chiefs Exercise Program is essentially a combination of the unified and specified commands' 5-year exercise plans, which are based on inherent value of exercises, types and numbers of exercises they have conducted in the past, and expected availability of funds. The plans are not supported by comprehensive annual program evaluations, alternatives analyses, or comprehensive justifications. (See p. 16.)

The Joint Chiefs' major involvement with the exercises is coordinating the commands' proposed exercises, assisting in scaling

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the exercises to expected funding, and approving the Joint Chiefs Exercise Program. (See p. 18.)

Approval of the Joint Chiefs of Staff Exercise Program is almost automatic.

Current development procedures do not assure that the Exercise Program is achieving its full potential or that the exercises are being conducted in the most cost-effective manner possible.

FUNDING PROCEDURES

The services request funds for joint exercises in their individual budget submissions on the basis of their subordinate commands' participation in the exercises.

The services' budget submissions include little exercise justification data, because

- the data is not being developed (see p. 23) and

- methods for measuring readiness have not been developed to the point that the impacts of various funding levels on readiness can be quantified. (See p. 27.)

Without adequate justification data, the Congress is placed at a disadvantage in trying to determine optimal joint exercise funding levels.

EXERCISE LESSONS LEARNED

Improvements from lessons learned are an important benefit of joint exercises. GAO found, however, that the benefits of lessons learned were not fully realized because systematic procedures for dealing with them were lacking. (See p. 29.)

For example, previously identified problems in the U.S. European Command's CRESTED CAP exercise were recurring regularly in subsequent versions of the exercise. (See p. 39.)

Various systems have been initiated to correct these deficiencies. (See p. 39.) However, the systems' comprehensiveness and the priorities given them vary.

REALISM

For the most effective possible training and testing of plans and doctrine, joint exercises should be as realistic as possible. GAO's review of two major joint military exercises conducted in Europe revealed opportunities for improving realism in several areas. (See p. 45.)

The realism of exercises held in the United States was significantly constrained by wildlife and environmental considerations. (See p. 53.)

The Department of Defense can improve the realism of exercises through improved planning. However, some constraints to realism are beyond military authorities' control.

PROBLEMS WITH REFORGER AND CRESTED CAP EXERCISES

REFORGER and CRESTED CAP, major Joint Chiefs of Staff exercises conducted in Europe, are important to the readiness of U.S. Forces. However, a review of the exercises revealed opportunities to improve their value. (See p. 56.) GAO believes reassessments of problem areas would result in more effective and economical exercises.

RECOMMENDATIONS

The Secretary of Defense should direct the Joint Chiefs of Staff to assume a stronger role in developing and managing the Joint Chiefs of Staff Exercise Program. This expanded role should include

--providing the unified and specified commands expanded procedural guidance

for developing their 5-year exercise programs,

- critically evaluating the commands' 5-year exercise program submissions,
- greater coordination with the services in budgeting for Joint Chiefs exercises,
- greater emphasis on exercise realism, and
- assuring establishment of adequate systems for dealing with exercise lessons learned.

GAO also recommends that the Secretary of Defense direct the Joint Chiefs of Staff to reevaluate current REFORGER and CRESTED CAP scenarios, considering the problems and questions discussed in this report.

AGENCY COMMENTS

On August 14, 1979, GAO sent a draft of this report to the Secretary of Defense and asked for official review and comments within 30 days. At the Department's request, GAO met with Defense officials on August 27, 1979, to discuss a few aspects of the report. The officials generally agreed with GAO's recommendations, but presented several points which have been incorporated in this report. The agency's formal comments are attached as appendix II.

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ABBREVIATIONS

FORSTAT	force status and identity report system
GAO	General Accounting Office
JCS	Joint Chiefs of Staff
NATO	North Atlantic Treaty Organization
POMCUS	prepositioning of material configured to unit sets
USAFE	U.S. Air Forces, Europe
USAREUR	U.S. Army, Europe

CHAPTER 1

INTRODUCTION

The military services are responsible for organizing, equipping, and training their respective forces. However, officials of the Office of the Joint Chiefs of Staff have stated 1/ that it is highly unlikely in today's threat environment that any necessary military action will be undertaken on a unilateral service basis. U.S. Forces will almost certainly be employed in a joint and/or combined configuration 2/ in any future crisis.

Combatant forces which have completed their initial training within their respective services are assigned to the operational command of unified and specified commanders. These commanders are responsible directly to the Secretary of Defense. The Joint Chiefs of Staff (JCS) acts as the military staff to the Secretary for operational direction of those forces.

A unified command is composed of significant forces from two or more services. A unified commander usually has a component commander from each assigned service element for operational matters. Component commanders report directly to their military departments for personnel and material support matters. The five unified commands are the European Command, the Readiness Command, the Atlantic Command, the Pacific Command, and the Southern Command. The functional and geographic responsibilities of each are described in appendix I.

A specified command is one which has a broad continuing functional mission and is usually composed of forces from one service. The Strategic Air Command, the Military Airlift Command, and the Air Defense Command are specified commands.

1/"Fiscal Year 1978 Authorization for Military Procurement, Research and Development, and Active Duty, Selected Reserve, and Civilian Personnel Strengths," hearings before the Senate Committee on Armed Services, 95:1 (Mar. 1977) part 3, p. 2217.

2/Joint configuration refers to operations combining U.S. services. A combined configuration combines U.S. Forces with allied forces.

MILITARY TRAINING EXERCISES

Exercises are essential elements of our military forces' training programs. Moreover, they are the best means, short of war, of testing our forces' capabilities to effectively perform their missions.

As noted previously, the services are responsible for training their respective forces. The unit and individual training they provide is essential to their forces' readiness. An integral part of the services' training programs is their unilateral exercises, which range from small-scale field training maneuvers to elaborate exercises involving many units and thousands of personnel.

Unilateral exercises are funded from the services' operations and maintenance funds. The services' budget submissions do not identify unilateral exercise funds separately, and the services' accounting procedures do not track the number of exercises and the funds expended annually on them.

JCS publication No. 2 entitled "Unified Action Armed Forces" authorized a unified or specified commander to "conduct such training exercises as may be required to achieve effective employment of the forces of his command as a whole, in accordance with doctrine for unified operations and training established by the Joint Chiefs of Staff * * *."

Unified and specified commands may schedule, plan, and conduct exercises employing their own forces in their respective geographical areas of responsibility without referral to JCS, except for those exercises that are included in the JCS Exercise Program.

The JCS Exercise Program consists of JCS directed 1/ and JCS coordinated exercises. JCS directed exercises are strategic mobility and unified and specified command directed exercises with which JCS is primarily concerned. JCS coordinated exercises are unified/specified command-sponsored

1/Although they have the authority to "direct" that specific exercises be held, JCS directed exercises more often are those that have originally emanated from JCS or higher authorities and recur annually without specific direction from JCS or higher authorities.

exercises which require coordination by JCS because they involve forces of more than one unified or specified command or agency. 1/

JCS directed and coordinated exercises may be "command post exercises," "field training exercises," or a combination of the two. Command post exercises involve the commander, the staff, communications within and between headquarters, and only a minimum of troop movement. The majority of the troop movement is simulated in command post exercises. Field training exercises are maneuvers conducted in the field under simulated war conditions in which troops and equipment of one side are actually present while those of the opposing force may be present or simulated.

Various combinations of exercises are often conducted concurrently to provide as much realism as possible while reducing the costs of extensive troop movements.

THE JCS EXERCISE PROGRAM

JCS directed and coordinated exercises vary in size from small exercises to large and complex maneuvers involving thousands of personnel. Depending on their sizes and locations, the exercises may involve the airlift and/or sealift of personnel, armament, and equipment. The purposes of these exercises are to

- improve JCS and the unified and specified commanders' abilities to coordinate employment of two or more services' forces in combat,
- train combatant forces in joint and/or combined operations,
- test reaction capability,

1/These definitions were changed somewhat in JCS' revised exercise procedural guidance approved in July 1979. JCS directed exercises are those which are directed by JCS or higher authorities; JCS coordinated exercises are unified/specified command-sponsored exercises, the scheduling of which requires coordination by JCS because they involve forces of more than one unified or specified command or agency, or forces of other countries.

--provide experience in delivering joint forces and firepower to the battlefield, and

--test current plans, doctrine, and procedures.

The unified and specified commands must be prepared to employ their forces in a variety of situations, terrains, and climates around the world. JCS exercises , ^{1/} therefore, encompass a variety of scenarios to achieve the types of training desired: strategic mobility, amphibious, command and control, unconventional warfare, air defense, anti-submarine warfare, command post exercises for testing general mobilization procedures, and others.

The number of JCS directed and coordinated exercises has remained at a relatively constant level over the years: from 4 to 6 directed exercises and from 30 to 35 coordinated exercises. The exercises' annual costs have risen sharply, however. JCS exercise costs were about \$110 million in fiscal year 1977, but almost \$148 million is programed for the exercises during fiscal year 1979.

The JCS Exercise Program is funded through the services' budget submissions. The following table shows JCS Exercise Program costs by service for fiscal years 1977-79.

<u>Service</u>	<u>Fiscal year</u> <u>1977</u>	<u>Fiscal year</u> <u>1978</u>	<u>Fiscal year</u> <u>1979</u>
	------(millions)-----		
Army	\$ 29.0	\$ 31.3	\$ 39.4
Air Force	75.5	86.8	103.0
Navy	<u>6.3</u>	<u>5.7</u>	<u>5.4</u>
Total	<u>\$110.8</u>	<u>\$123.8</u>	<u>\$147.8</u>

^{1/}Technically, the term "JCS exercises" includes only the exercises JCS sponsors directly. However, the term is used in this report to refer to the JCS directed and coordinated exercises comprising the JCS Exercise Program.

Defense officials attribute exercise cost increases primarily to (1) inflation, (2) airlift fuel cost increases, and (3) escalating tariff rates.

The fiscal year 1979 JCS Exercise Program consists of 5 directed and 36 coordinated exercises. The distribution of these exercises, by command, and the funds programed for them are shown below.

<u>Command</u>	<u>Exercises</u>		<u>Fiscal year 1979 programed funds</u> (millions)
	<u>Directed</u>	<u>Coordinated</u>	
JCS, Department of the Army, North American Defense Command, and Southern Command		8	
Atlantic Command	1	2	
Pacific Command	1	7	(omitted)
Readiness Command	1	4	
European Command	<u>2</u>	<u>15</u>	---
Total	<u>a/5</u>	<u>a/36</u>	<u>\$148</u>

a/These figures refer to individual exercise series, consistent with the manner in which the Department of Defense has historically referred to JCS directed and coordinated exercises. Defense officials informed us that beginning with the fiscal year 1981-85 JCS Exercise Program schedule, JCS directed and coordinated exercises would be referred to as individual exercises (including the list of all individual exercises comprising the exercise series).

CHAPTER 2

INGREDIENTS OF A STRONG

JCS EXERCISE PROGRAM

JCS exercises contribute significantly to the training and readiness of U.S. military forces. They are a principal means of providing both interservice training and combined training with allied forces. They also provide excellent opportunities to test the plans and doctrine U.S. Forces will employ in the event of war.

The exercises' contributions to our forces' readiness are demonstrated by the following statement, given by former Chairman of the Joint Chiefs of Staff, General George S. Brown, before the Senate Committee on Armed Services in 1977 hearings:

"Joint training exercises are essential to the preparation of U.S. Defense. * * * Unless operating forces are trained and evaluated jointly, total force readiness cannot be achieved."

JCS exercises' importance to our national defense dictates that they continue. Similarly, their significance to the training and readiness of U.S. Forces dictates that they be planned and executed as effectively as possible. We believe revisions in JCS exercise development and management procedures could increase their effectiveness. The end result, in our opinion, would be improved readiness of our joint forces.

COMPONENTS OF A STRONG JCS EXERCISE PROGRAM

The remainder of this chapter discusses conditions we believe should exist in each of the following areas for the strongest possible JCS Exercise Program:

- Formulating the JCS Exercise Program.
- Planning and managing individual exercises.
- Conducting the most realistic possible exercises.
- Program budgeting and funding operations.

The remaining chapters discuss responsible authorities' procedures in these areas and opportunities for strengthening them.

JCS Exercise Program development

JCS has authorized the commanders of unified and specified commands to schedule, plan, and conduct joint/combined exercises. The unified and specified commanders may hold exercises employing their own forces within their own respective geographic areas of responsibility without referral to JCS. Their authority for JCS exercises is similar, except that the commanders must coordinate exercise scheduling with JCS.

The JCS Exercise Program is, with a few exceptions, a collation of the JCS directed and coordinated exercises included in the sponsoring unified and specified commands' individual exercise programs. JCS is responsible for (1) providing the unified and specified commands procedural guidance for developing and executing joint/combined exercises, (2) coordinating the scheduling of JCS directed and coordinated exercises within established funding limitations, and (3) approving the annual JCS Exercise Program for execution.

In developing their respective annual exercise programs, the unified and specified commands should assess their needs for joint/combined exercises and structure their programs to reflect the number and size of needed exercises. To do this, these commands must examine their forces' readiness conditions, training requirements, and the plans and doctrine that require testing and tailor their programs to these needs. Once exercise needs are identified, all available alternatives for satisfying the needs--such as field training exercise, command post exercise, or coordinated unilateral service exercises 1/--should be examined. Finally the exercises deemed necessary should be fully justified on the basis of the above studies.

JCS exercise program development guidance to the unified and specified commands should incorporate the above conditions. Further, since JCS acts as the Secretary of Defense's military

1/For example, could the individual services conduct unilateral exercises together to obtain the benefits of joint training without holding a unified or specified command exercise?

staff for operational direction of unified and specified commands' forces and is responsible for approving the annual JCS Exercise Program, JCS should conduct indepth reviews of the commands' annual exercise program submissions. The reviews would assure consistency with JCS doctrine and priorities and would provide the basis for formulating and approving the strongest possible JCS Exercise Program.

The relationships of unified and specified commands' and JCS' exercise program development procedures with those outlined above are discussed in chapter 3.

Managing JCS exercises

The importance, size, and costs of major JCS exercises dictate that they be as carefully and effectively managed as possible from the initial design stage through the final information dissemination stage.

To enable designers to plan the exercises to satisfy identified requirements and provide benchmarks for effective exercise evaluation, exercise objectives should be as specific, limited, and clearly defined as possible.

JCS exercises provide excellent opportunities for identifying and correcting weaknesses and deficiencies in joint forces' readiness, plans, and doctrine. To take maximum advantage of these opportunities, the exercises should be carefully and methodically evaluated. Resulting lessons learned should be adequately addressed and improvements incorporated into ongoing operations and subsequent exercises to preclude, to the degree possible, their recurrence. The effects would, in our opinion, be more efficient operations and reduced costs.

The differing mechanisms the various unified commands employ in evaluating major joint exercises and opportunities for improvements in these areas are discussed in chapter 5.

The need for realistic exercises

Several times each year, the Air Force conducts sophisticated tactical air combat exercises--RED FLAG--at Nellis Air Force Base, Nevada. According to Nellis Air Force Base officials, these exercises provide participants the most realistic air combat training in the world.

The general concept of operations, from a 1977 RED FLAG exercise plan, states, in part:

"Studies have shown that the first 8 to 10 decisive combat missions result in the highest loss rate due to lack of experience by the aircrews in a combat environment. To improve combat readiness and reduce the early loss of crews and equipment, the Commander, TAC [Tactical Air Command], has directed unit deployments to Nellis AFB for realistic combat training against a simulated ground-to-air threat and the aggressor force."

We believe this is a vivid commentary on the need for and value of realistic training exercises. Its basic message could be easily applied to the personnel of other services thrust into a combat environment. Moreover, the message is as appropriate for multiservice, joint, or combined training exercises as for RED FLAG.

To achieve the greatest possible benefits from JCS training exercises, they should be conducted under conditions that are as close as possible to those expected during wartime. We found numerous opportunities for greater realism in major JCS exercises which, if implemented, could increase the exercises' effectiveness. Some result from exercise design and execution; others from operational, political, environmental, and/or fiscal constraints that go well beyond the abilities of the unified and specified commands to control.

Realism constraints and opportunities for improvements are discussed in chapter 6.

JCS Exercise Program budgeting and funding

Congressional concern has been building for years over Defense's requests for millions of dollars for readiness projects, only to have Defense subsequently report declining readiness rates followed by requests for more money. Congressional committees would like a better understanding of the effects of alternative funding levels on readiness. Essentially, the Congress does not know what levels of readiness Defense would maintain if funding for budget accounts, such as operations and maintenance, was increased or decreased.

The Congress has, therefore, demanded greater justification of the Defense budget request. However, a completely satisfactory justification has been difficult to obtain because Defense has been unable to relate variations in the budget to levels of readiness.

An example of a congressional attempt to determine the effect of alternative funding levels on Defense readiness was the passage of Public Law 95-79, dated July 30, 1977. Section 812 of that law required the Secretary of Defense to submit a report to the Senate and House Committees on Armed Services setting forth quantifiable and measurable materiel readiness requirements for the Armed Forces and Reserve components by February 1978. The law also required Defense, in subsequent years, to notify the Committees of any subsequent changes in materiel readiness requirements and what effect requested appropriations would have on the materiel readiness posture.

The Office of the Secretary of Defense, in a letter to the Committees on Armed Services, commenting on the proposed legislation, stated "* * * the type of information which Congress would require, though now unobtainable, is clearly desirable." Also mentioned was Defense's dissatisfaction with the current ability to define and measure readiness. The letter noted that the services had already been tasked to develop the necessary measurement, analysis, and resource programming capability for readiness measurement. While the current requirement relates primarily to materiel readiness, it is recognized that this is a first step in achieving the desired trade-off analysis between Defense funding levels and readiness. 1/ Moreover, the Secretary of Defense has recognized that this information is desirable to measure force readiness.

As evidenced by passing Public Law 95-79, the Congress desires that information showing the effect of alternative funding levels on force readiness be presented to justify individual budget items. Because the JCS Exercise Program has a significant impact on the joint readiness of U.S. Forces, requests for funding should be justified with (1) an assessment of the contribution to readiness and (2) the

1/See our report "DOD's Materiel Readiness Report To The Congress--Improvements Needed To Better Show The Link Between Funding and Readiness" (LCD-80-5, Oct. 12, 1979), pp. 2, 4, and 5.

effects increases or decreases in funding would have on force readiness. The justification data should include

- the number of exercises in the program,
- the exercises' objectives,
- the exercises' contributions to force readiness,
- the number of unified/specified commands' personnel and component command units and personnel participating in the exercises, expressed in terms of numbers and percentages of forces under the unified/specified commands, and
- an assessment of the adequacy of the unified/specified commands' portions of the JCS Exercise Program in attaining their overall training missions.

Some of the above data would be easily attainable. Other information, such as the exercises' contributions to force readiness, would be difficult to develop. Would the development of this data be worthwhile then?

We believe this data would serve several very important purposes. First, in our opinion, it would satisfy the congressional intent underlying passage of Public Law 95-79. Second, it would serve as a vehicle for continually reassessing the need for and objectives of the JCS directed and coordinated exercises. And, if data, such as the exercises' contributions to force readiness or adequacy in fulfilling unified/specified commands' training missions, cannot be obtained, the procedure would force an answer to such a question as "why are the exercises held?"

CHAPTER 3

THE JCS EXERCISE PROGRAM COULD BE STRENGTHENED THROUGH REVISED MANAGEMENT PROCEDURES

While the individual services are responsible for the initial training of their respective forces, in any future military crisis these forces will almost certainly be employed in a joint and/or combined configuration under the unified and specified commands. Joint exercises are the unified and specified commands' principal means of providing (1) joint training to their assigned forces and (2) opportunities to practice and test the plans and doctrine that would be employed in any future crisis. It is, therefore, important that the JCS Exercise Program, composed of the most significant joint exercises, be developed and executed in the most efficient and cost-effective manner possible.

Our examination of JCS exercises revealed that the individual exercises and the overall program were not being adequately justified or periodically reassessed. We found a complex and fragmented system for managing the program, with insufficient central management. The program's magnitude results more from the intrinsic value of the exercises, historical precedent, and available funds than from objective overall assessments.

We, therefore, believe Defense cannot be assured the program is achieving its full potential, or that the exercise funds are being expended in the most cost-effective manner possible.

Stronger central management over the program is needed. Further, the exercises should be more comprehensively assessed and justified annually and approved, budgeted for, and funded accordingly.

JCS EXERCISE PROGRAM DEVELOPMENT AND MANAGEMENT

Acting as the Defense Secretary's military staff for operational direction of the unified and specified commands, JCS has authorized these commanders to conduct joint training exercises as may be required to achieve effective employment of their forces. The unified and specified commands are

authorized to schedule, plan, and conduct joint/combined exercises employing their own forces within their own geographical areas of responsibility without referral to JCS. The commands are also largely responsible for developing and executing JCS directed and coordinated exercises which they sponsor.^{1/} In conjunction with their component commands, the commands develop their respective JCS directed and coordinated exercises and submit them to JCS for approval. The submissions are in the form of 5-year exercise plans.

JCS is responsible for providing the unified and specified commanders guidance for developing and submitting their 5-year exercise plans, assisting the commands in coordinating the exercises' scheduling within established funding limitations, and approving the commands' exercise plans. The JCS Exercise Program is essentially a compilation of the commands' exercise plans.

The unified and specified commands' 5-year exercise plans are the basis for the JCS Exercise Program

The unified and specified commands' 5-year exercise plans are composed of those exercises that have been directed by JCS or higher authorities and those command-initiated exercises requiring coordination with JCS because they involve more than one unified or specified command or agency or the forces of other countries.

JCS exercises' recurrence--
a basis for 5-year exercise plans

Once JCS directed and coordinated exercises are inaugurated, the commands generally expect that they will recur annually. Accordingly, each year the commands add the exercises to the fifth year of their 5-year exercise plans. The commands then begin developing the exercises contained in the fifth year of their plans, while progressively refining

^{1/}JCS itself may, from time to time, sponsor nonrecurring JCS directed exercises. For example, JCS sponsored and conducted NIFTY NUGGET, a command post exercise conducted in October 1978 to test worldwide mobilization procedures and capabilities. (NIFTY NUGGET is not an annually recurring exercise.)



Source: U.S. Army

U.S. ARMY PERSONNEL PARTICIPATING IN A U.S. READINESS
COMMAND COLD WEATHER EXERCISE AT FORT DRUM, NEW
YORK.

development of those in the plans' more current years. The commands' exercise plans are submitted to JCS annually for review and approval, the most current year for execution approval.

Our examination of the exercise plan development procedures at three unified commands revealed the extent to which the commands had relied on the exercises' recurrence as a basis for formulating their exercise plans. For example, according to U.S. Readiness Command officials, the command's 5-year exercise plans are developed on the expectation that the command will annually conduct four joint field exercises, one command post exercise, and unscheduled rapid reaction exercises. This expectation has validity, since the command has sponsored four joint field training exercises since at least 1972, one command post exercise since 1976, and is tasked by JCS to conduct rapid reaction exercises.

The U.S. Atlantic Command sponsors one major JCS directed joint exercise--SOLID SHIELD--annually. The exercise series began in 1963. Atlantic Command officials informed us that SOLID SHIELD is JCS mandated and does not require annual justification.

Funding drives the exercises' sizes and scopes

The sizes and scopes of JCS exercises are based on expected funding, and the exercises' progressive development in the commands' 5-year plans proceed accordingly. For example, U.S. Readiness Command officials informed us that funds available for their exercise program greatly influence each exercise's size; that is, the number of participants. Developers of the exercise program first design the lists of major participating units to accomplish the exercises' purposes. The command and its component commands then refine the list of participating units (the "troop list"), which forms the basis for exercise funding requests. As exercise funding levels are refined at higher headquarters and returned to the Readiness Command and its component commands through Joint Chiefs, the commands refine the troop lists to bring exercise costs within projected funding levels. (The JCS Exercise Program budget process is discussed in detail in ch. 4.)

Are the commands' exercise
plan review procedures adequate?

The unified and specified commands' procedures for developing their 5-year exercise plans do not, in our opinion, include sufficient annual assessment of the plans or justification of the exercises. We found that the commands did not conduct indepth annual assessments of their exercise plans and did not prepare detailed exercise justifications (including the results of alternatives analyses).

For example, the U.S. Readiness Command's 5-year exercise plan submissions to JCS do not attempt to present detailed justifications of the need for the individual exercises or examinations of alternatives to the exercise plans. According to Readiness Command officials, JCS has directed the command to conduct joint exercises to train its forces in a joint environment, and any alternatives to the exercise plans would have to come at the direction of JCS. Officials also noted that JCS had not required or requested justification for the command's exercise program.

In addition, the developers of the command's exercise plans do not analyze the need for more or fewer exercises. As was stated above, the developers begin their work on the basis that the command will conduct four field training exercises and a command post exercise each year.

Unlike the Readiness Command, the U.S. European Command places the primary responsibility for developing its 5-year exercise plans with its component commands.

Each year the Commander in Chief, European Command, conducts an exercise scheduling and coordinating conference which results in the consolidated European Command 5-year exercise schedule. Before the conference, the component commanders submit an annual schedule of exercises, including impact statements to the European Command. The impact statements must include each exercise's priority, political significance, and a general estimate of the degradation of readiness that could occur if the exercise was not funded, or only partially funded.

Formulated from its component command's inputs, the European Command's 5-year plans are submitted to JCS for approval. But little justification, such as the force readiness impact statements or assessment of alternatives

for filling exercise objectives, accompany the submissions to JCS.

For example, the Defense Department's response to a congressional committee's question 1/ on the European Command sponsored REFORGER exercise 2/ stated, in part: "Formal cost-effectiveness and alternatives analyses are not conducted each year to rejustify REFORGER."

JCS role in the
JCS Exercise Program

JCS has provided the unified and specified commands procedural guidance for developing and submitting to JCS their 5-year exercise plans and for implementing the JCS Exercise Program. The guidance requires that the commands' 5-year plan submissions include

- exercise name,
- scheduling command,
- exercise dates,
- purpose,
- description of major participating forces, and
- cost estimates for each exercise in the first 2 years of the JCS Exercise Program.

1/During the Senate Committee on Appropriations hearings on March 27, 1979, Chairman John Stennis requested that Defense provide a response for the record to the following question:

"The size and scope of REFORGER exercises appear to be determined more by the availability of funding than the use of formal cost effectiveness and alternatives analyses. Is this true? If not, what are the processes for annually rejustifying the exercises, including formal cost effectiveness and alternatives analyses?"

2/REFORGER is the largest JCS directed exercise in the JCS Exercise Program. The exercise is discussed in detail in ch. 7.

The JCS worldwide joint/combined exercise scheduling conference

JCS sponsors annual worldwide joint/combined exercise scheduling conferences which are attended by representatives from JCS, the unified and specified commands, the services, transportation operating agencies, and other appropriate Government agencies. The conferences' purposes are to work with the unified and specified commands' 5-year exercise plan submissions to (1) coordinate exercise site and date selections, troop lists, and transportation to resolve any conflicts and (2) scale the exercises' scopes to expected funding limitations.

During the conferences, JCS and the various representatives concentrate on the first 2 years of the 5-year plans, with greatest emphasis on the first year. JCS does not examine the need for the exercises or their objectives during the conferences.

Approval of the JCS Exercise Program

Following the worldwide scheduling conferences, the JCS 5-year Exercise Program, emanating from the unified and specified commands' 5-year plans, is submitted to the Joint Chiefs of Staff for approval. The first fiscal year of the program is submitted for implementation approval; the other years for contingent approval subject to further planning and refinement.

The 5-year exercise programs have historically contained only general information from the sponsoring commands' 5-year plan submissions and have included

- exercise name,
- sponsoring command,
- location,
- exercise dates,
- list of major participating units,

--cost estimates, and

--statements of purpose and remarks.

The statements of purpose have been very general, usually consisting of only two or three sentences, such as "to gain experience and training through a joint exercise," "to evaluate the capability of assigned forces to conduct military operations within the areas of responsibility * * *," and "to conduct required training."

We were told JCS approval of the 5-year programs was in essence, only a formality. There has been little, if any, critical analysis of the programs or their individual exercises during the approval process. The programs' magnitude and the exercises' scopes were determined by the availability of funds.

These findings are reinforced by the lack of (1) in-depth assessments of the 5-year exercise plans by the commands, (2) critical evaluation of either the individual exercises or the overall exercise programs during the annual worldwide exercise scheduling conferences, and (3) the lack of supporting justification data in the 5-year exercise program proposals.

Moreover, we conducted detailed examinations of REFORGER and CRESTED CAP, two major JCS directed strategic mobility exercises sponsored by the European Command, and we found problems severe enough, in our opinion, to warrant the types of analyses discussed above. Our analysis of these exercises is the subject of chapter 7.

Actions by JCS

After our review began, JCS drafted a modification to its procedural guidance. The modification, approved in July 1979, requires the commands to include in their submissions descriptions of the exercises' contributions to the commands' missions. The modification also states:

"Thirty days following the annual exercise conference each command is requested to provide a narrative assessment of its proposed JCS-directed and JCS-coordinated exercise program as modified by

conference results. Assessment should also include identification and description of those command initiated exercises which are significant in nature and without which the overall narrative assessment would be incomplete. The assessment should describe the focus of the command's exercise program; outline its relationship to command mission and JCS/OSD [the Office of the Secretary of Defense] guidance; and assess the program's contributions to command readiness. Command exercise program assessments will be used in the defense of proposed Service funding levels and will be considered in the rationalization of the overall JCS exercise program."

CONCLUSIONS

JCS directed and coordinated exercises are essential to the joint training and readiness of U.S. military forces and should be continued. The exercises' importance also dictates that they, and the overall JCS Exercise Program, be managed in the most efficient and effective manner possible.

However, neither the unified and specified commands nor JCS annually conducts indepth assessments of the exercises before they are approved for execution.

Without greater assessment and justification of the individual exercises and 5-year plans comprising the JCS Exercise Programs at both the unified/specified command and JCS levels, Defense officials cannot be assured the exercises are providing the greatest possible benefits at the lowest possible costs. We found problems with two major JCS exercises we reviewed which demonstrate the potential value of such assessments.

Revised JCS procedural guidance for the unified and specified commands use in planning and programing JCS exercises was a significant improvement over previous guidance. We believe, however, the guidance does not go far enough to assure adequate 5-year plan and JCS Exercise Program evaluation.

RECOMMENDATIONS

We recommend that the Secretary of Defense direct JCS to assume a greater role in developing and managing the JCS Exercise Program, including

- providing the unified and specified commands expanded guidance for developing their 5-year exercise programs and
- making an indepth evaluation of each command's 5-year plan submissions.

CHAPTER 4

JCS EXERCISE PROGRAM BUDGETING PROCEDURES

CAN BE STRENGTHENED

The Congress desires that Defense budget requests for programs involving readiness of U.S. Forces be thoroughly justified, both in terms of the requested funds and the programs' impact on force readiness. Previous chapters of this report have, we believe, demonstrated the importance of JCS exercises to the joint readiness of U.S. Forces. Thus, budgetary procedures for the JCS Exercise Program should be consistent with the above congressional intent.

We found that current JCS Exercise Program budgeting and justification procedures did not provide the depth of information the Congress desired of readiness programs. We believe greater emphasis on the justification of JCS exercise budget submissions by appropriate Defense elements would bring budget requests more into line with congressional intent.

CONGRESSIONAL INTENT REGARDING REQUESTS FOR READINESS PROGRAM FUNDS

The Congress has been concerned for years over the readiness impacts of alternative funding levels for readiness projects. Essentially, the Congress does not know what levels of readiness Defense would maintain if funding for requests, such as operations and maintenance, was increased or decreased.

The passage of Public Law 95-79 is one example of a congressional attempt to determine the effect of alternative funding on readiness levels. In passing the law, the Congress clearly intended that projects directed at improving readiness be better justified in the budget process to allow assessment of the impacts of program funding decisions. (See p. 10.)

Defense recognizes the importance of this concept, but it is having difficulty fulfilling its requirements because of inadequate readiness measurement capabilities. For example, Department of Defense Planning and Programming Guidance for the Five Year Defense Plan for Fiscal Years 1979-83, dated March 11, 1977, stated, in part:

"The Defense Guidance requires that our combat forces be maintained in a high state of combat readiness. Our ability to reach that goal is severely limited by the lack of meaningful definitions of readiness that are consistent among Services and our current inability to define the link between resource inputs and resulting force readiness. It is essential that the Department of Defense: improve its ability to define and measure readiness, and relate changes in resources applied to changes in readiness experienced or projected; and adjust the allocation of Defense resources to attain the desired levels of readiness.

"Acquiring this capability will be a major undertaking that will not be completed quickly or cheaply. It would seem to involve at least these major tasks:

--Define meaningful and measurable readiness for the different combat unit types that are valid indicators of the units' ability to accomplish their combat mission. * * *

While recognizing Defense's present difficulties in measuring the impacts of readiness projects on force readiness, we believe that until more precise measures are available, decisionmakers should be provided as much justification and readiness impact data for JCS exercise budget submissions as practicable.

JCS EXERCISE JUSTIFICATION DATA IS NOT ADEQUATELY DEVELOPED

We found that Defense budget requests for JCS directed and coordinated exercises contained only general exercise justification data. For example, the Department of the Army's fiscal year 1980 budget submission, totaling requests of \$37,517,000 for JCS directed and coordinated exercises, contained the following justification:

"The Army participates in Joint Chiefs of Staff exercises on a world-wide basis. The JCS Exercise Program consists of exercises recommended by commanders of unified commands which are approved by and then directed by or coordinated with the Joint Chiefs of Staff. These exercises provide training for Army organizations in joint operations, prepare forces for

the conduct of contingency operations, test the effectiveness of airlift forces and plans, test the reaction capability and combat readiness of selected units, fulfill treaty commitments, and provide a means to evaluate procedures, doctrine, and equipment which affects the missions of our operating forces."

Moreover, we found that comprehensive justification data was not being developed during the JCS Exercise Program budget process.

The JCS Exercise Program budget process

Budget data for JCS exercises is initially developed through the interaction of the unified and specified commands and their component commands. The component commands then submit the budget data to their respective service headquarters, which, in turn, include requests for the exercise funds in their respective budgets.

The service headquarters notify JCS of the funding requests for JCS exercises. This notification is the basis for JCS providing budget guidance for JCS exercises to the unified and specified commands. On the basis of this guidance, the exercises are scaled to anticipated funding. The exercises are scaled first at the unified and specified command levels, then more definitively at the annual JCS worldwide exercise conferences.

An example of the unified and component commands' interaction in the exercise budgeting process involves the U.S. Readiness Command and its component Army command--the U.S. Army Forces Command.

The Readiness Command begins developing its 5-year exercise program by preparing statements of purpose, tentative site and date selections, and troop lists for each of its four annual field training exercises and its command post exercise. The command then confers with its Army component when the above draft data is reviewed and revised as necessary, and the particular Army units to participate in the exercises are tentatively selected from the component's recommendations.

On the basis of the agreed upon troop lists, the Army Forces Command develops exercise budget requests for submission to Army headquarters. The submissions reflect the necessary funds to support the numbers and sizes of units required for the exercises.

In discussions with Army headquarters officials, we were told that very little justification for their subordinate commands' participation in the JCS exercises was received at Army headquarters.

The Army budgets for JCS exercise funds through its "Operation and Maintenance, Army" appropriation under an account entitled "General Purpose Funds--Joint Chiefs of Staff Directed and Coordinated Exercises." We were told that the Army usually provided budget submissions for the troop lists requested by the unified commanders.

EXERCISE JUSTIFICATIONS ARE NOT
SUFFICIENTLY DEVELOPED IN THE
JCS PROGRAM DEVELOPMENT PROCESS

As discussed in chapter 3, the unified and specified commands' 5-year exercise plans are developed on the basis that (1) the commands are tasked to conduct joint training for their assigned forces, (2) they will conduct essentially the same number of exercises from year to year, and (3) expected exercise funds will be made available. The commands' programs are developed, approved, and budgeted for on the basis of general exercise statements of purpose, site and date selections, and troop lists.

The exercise statements of purpose contained in the commands' 5-year plan submissions to JCS were very general. The statements usually contained such phrases as "to gain experience and training through a joint exercise," "to evaluate the capability of assigned forces to conduct military operations within the areas of responsibility * * *," and "to conduct required training."

JCS' reviews of the commands' exercise plans have centered on (1) coordinating the exercises and (2) assisting in fitting them to expected funding. JCS approval of the JCS Exercise Program has been almost automatic.

Considering the above procedures, the degree of justification of the exercises can be seen from the following comments by U.S. Readiness Command officials. According to

these officials, the command submits its 5-year exercise plans to JCS in JCS-prescribed format. That format, they said, does not require the command to justify its program or to assess alternatives for planning and conducting the exercises. The command conducts its exercise program, we were told, as part of a mission assigned by JCS.

RELATING JCS EXERCISE FUNDING LEVELS TO FORCE READINESS

The European Command's Army and Air Force component commands, in presenting their proposed exercise schedules for consideration by the European Command commander (see p. 16), develop general estimates of the degradation of readiness that could occur if the exercises were not funded or only partially funded. However, since neither the European Command nor its component commands have an accurate U.S. Force readiness measurement system, such estimates are not very meaningful. For the most part, readiness progress based on exercises is left to intuition and subjective judgment and provides little basis for selecting or adjusting the scope of an exercise. Moreover, the estimates are not forwarded to the service headquarters or to JCS when the command submits its 5-year exercise plans.

Similarly, U.S. Readiness Command's 5-year exercise plan submissions to JCS do not assess the impacts of exercise funding levels on readiness. According to Readiness Command officials, the U.S. military assesses readiness on a unilateral basis by measuring the status of equipment, the numbers and skills of people in a unit, and the level of training achieved on a unilateral basis. The Readiness Command views its mission as one of directing joint exercises for assigned troops so that the services can practice their skills in a joint environment.

WHAT IS BEING DONE?

Revised procedural guidance to the unified and specified commands for developing their 5-year exercise programs, approved by JCS in July 1979, requires the commands to provide JCS assessments of their exercise programs, including the programs' contributions to the commands' readiness. The assessments are to be used in "the defense of proposed Service funding levels and will be considered in the rationalization of the overall JCS exercise program." (See p. 19.)

The commands' assessments should include detailed justifications of the JCS exercises they sponsor and, optimally, should quantify the exercises' impacts on their forces' readiness. Defense officials recognize that present readiness measurement capabilities are inadequate for such sophisticated readiness analysis, however.

In lieu (or until development) of this capability, we believe valuable data can be developed and included in JCS exercise budget requests. Such data would include, but not necessarily be limited to

- reasons for the exercise;
- importance of the exercise to the sponsoring command's overall joint training program;
- numbers of units and personnel to be trained in the exercise, expressed as a percentage of those requiring training;
- narrative of the plans and doctrine to be tested/practiced;
- degradation in joint training and the testing of joint forces, plans, and doctrine that would result if the exercise were not funded; and
- expression of the need for more or larger exercises, as characterized by the above factors.

CONCLUSIONS

Because of the importance of JCS exercises to joint readiness of U.S. Forces, we believe budget requests for JCS exercise funds should be adequately justified and the objectives to be achieved should be identified in quantifiable terms. The services' budget requests for JCS exercise funds have not included the degree of justification, in terms of requested funds and the exercises' impacts on force readiness, the Congress desires, however.

Sufficient justification data for JCS exercises is not being developed in either the exercise budgeting or the JCS Exercise Program development processes. Newly approved JCS

procedural guidance requiring more indepth assessments by the unified and specified commands of their 5-year exercise plans should facilitate development of JCS exercise justification data. However, JCS should assume a greater role in overall JCS Exercise Program management to assure the exercises are adequately justified and budgeted for, and that the budget requests properly reflect needed exercise funds.

RECOMMENDATIONS

In conjunction with our recommendation on page 21, we recommend that JCS work more closely with the unified and specified commands and the service headquarters to assure that proposed JCS exercises are adequately justified and expected results are measurable.

CHAPTER 5

REALIZING GREATER BENEFITS FROM JCS EXERCISES

BY FURTHER INTEGRATING THEIR OBJECTIVES AND RESULTS

INTO ONGOING OPERATIONS

In addition to the training they afford, JCS exercises offer important opportunities for identifying and resolving weaknesses in doctrine, contingency plans, and ongoing command operations. To make the most of these opportunities, the services should thoroughly evaluate the exercises and apply the lessons learned to ongoing operations and subsequent exercises.

We found that systems for identifying, analyzing, and following up on exercise lessons learned and putting the results to use were not effective.

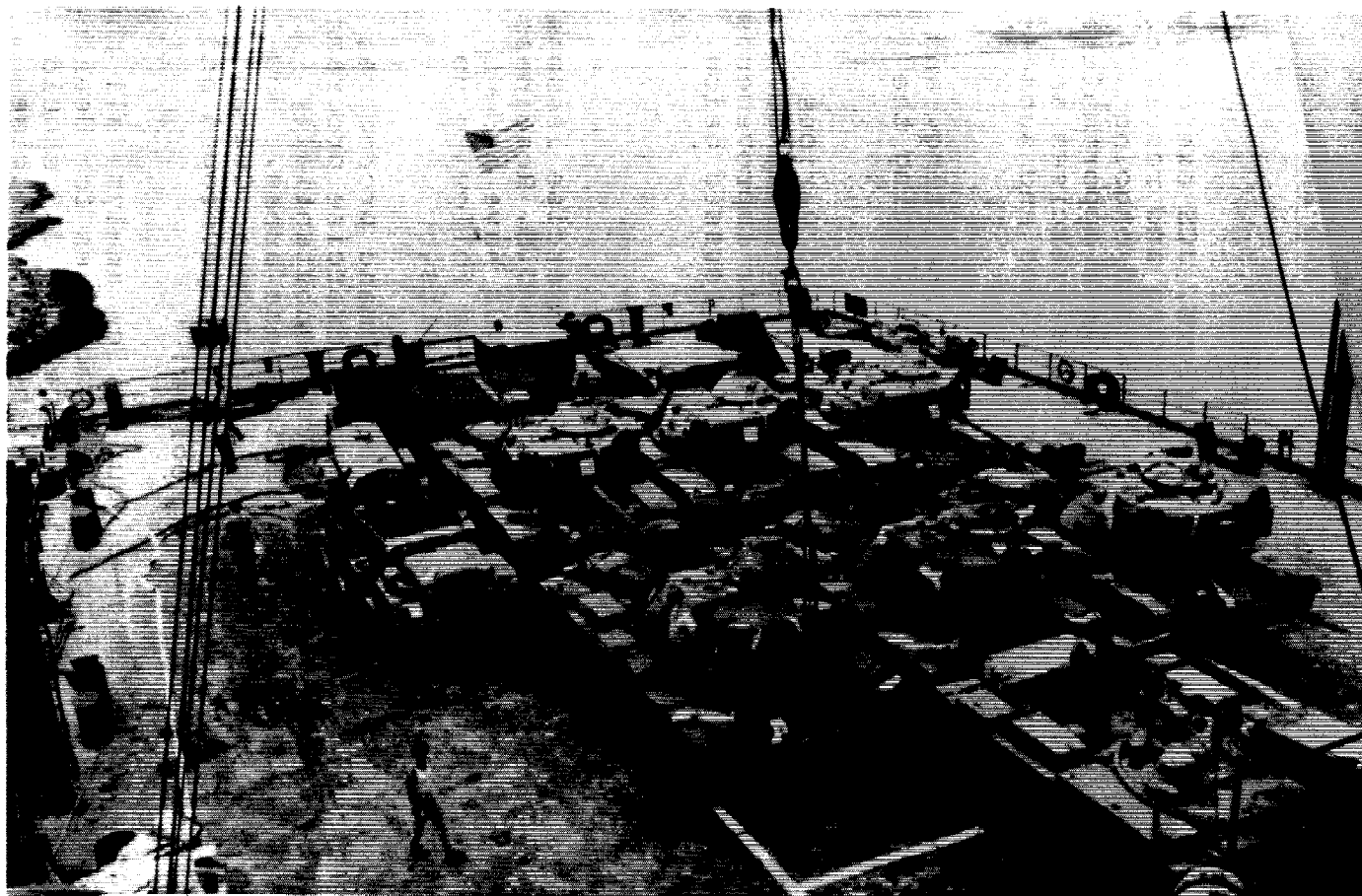
Unified commands we visited have initiated various systems for dealing with lessons learned. The commands' weaknesses, the unified commands' programs for improvements, and our assessments of their programs are discussed below.

THE BENEFITS OF EXERCISE LESSONS LEARNED HAVE NOT BEEN FULLY REALIZED

We found no lack of identification of exercise lessons learned data in the European Command and the U.S. Readiness Command. Historically, however, the commands have had significant difficulties in implementing and following up on lessons learned and in applying the results.

We believe revamped U.S. Readiness Command procedures for planning and evaluating the Command's exercise programs (see p. 41) will, when fully implemented, substantially alleviate the Command's difficulties in these areas. However, the above problems continue in the European Command, and present initiatives are not sufficiently developed and may not be enough to resolve the problems.

We could not in the scope of our review analyze all the other unified and specified commands' procedures for dealing with JCS exercise lessons learned. We believe JCS should assure that efficient systems for dealing with exercise lessons learned should be in place to fully realize their potential benefits.



Source: U.S. Army

M60A1 TANKS AND OTHER EQUIPMENT ARE POSITIONED ON THE DECK OF THE ADMIRAL WM. CALLAGHAN FOR TRANSPORT TO EUROPE AND REFORGER 77. TWO SHIPS TRANSPORTED THE TACTICAL EQUIPMENT OF AN ARMORED BRIGADE TO EUROPE FOR REFORGER 77. FOUR SHIPS TRANSPORTED SOME 2,400 PIECES OF EQUIPMENT, TOTALING 57,000 TONS, FROM PORTS IN TEXAS TO AMSTERDAM AND ANTWERP TO EXERCISE LINES-OF-COMMUNICATION AND HELP EQUIP THE NEARLY 14,000 U.S. BASED TROOPS WHO PARTICIPATED IN REFORGER 79.



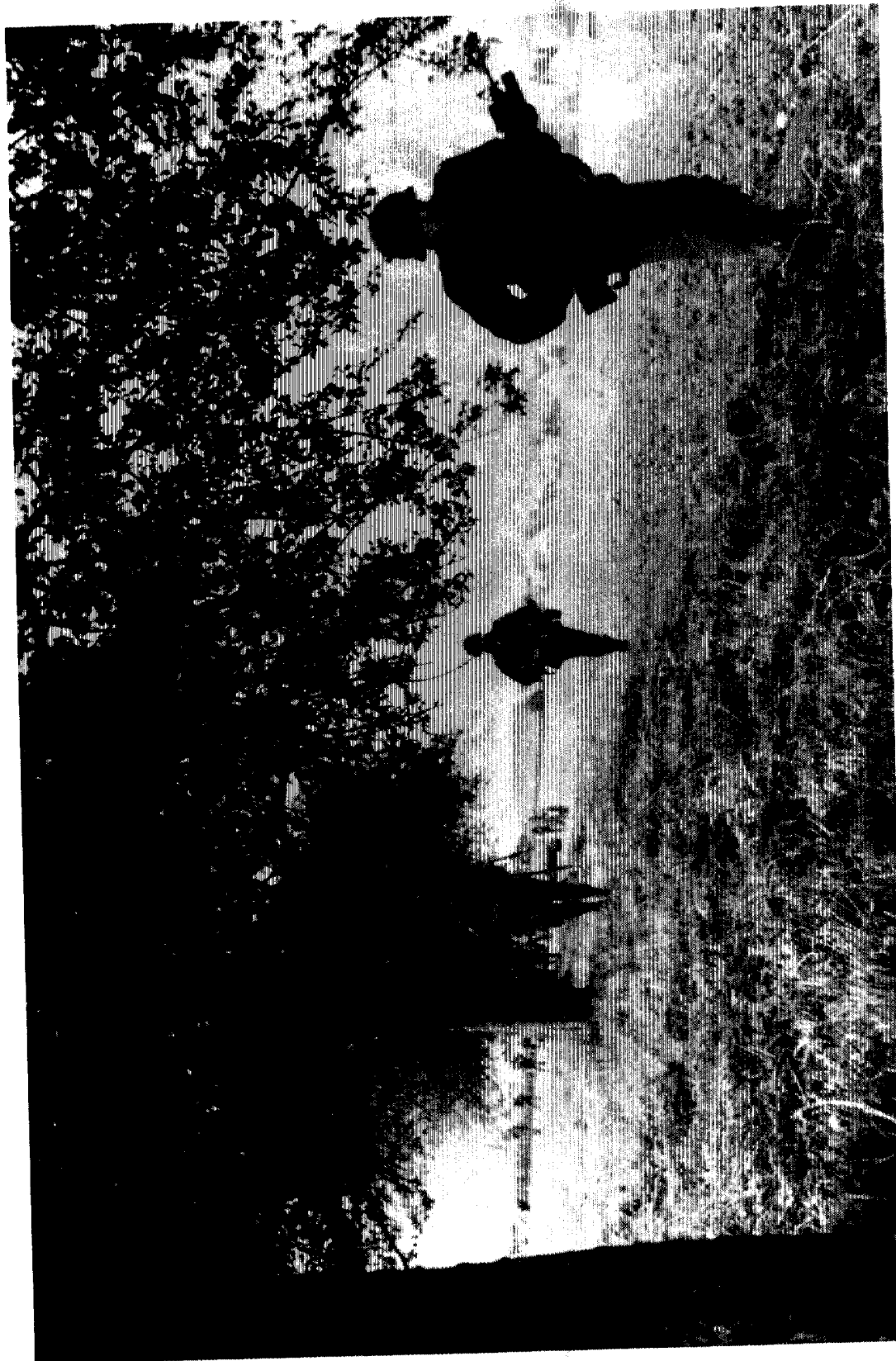
Source: U.S. Army

**REFORGER 77: U.S. BASED EQUIPMENT TO BE USED IN THE EXERCISE
IS OFF LOADED FROM A C-141 AT RAMSTEIN AFB, WEST GERMANY.**



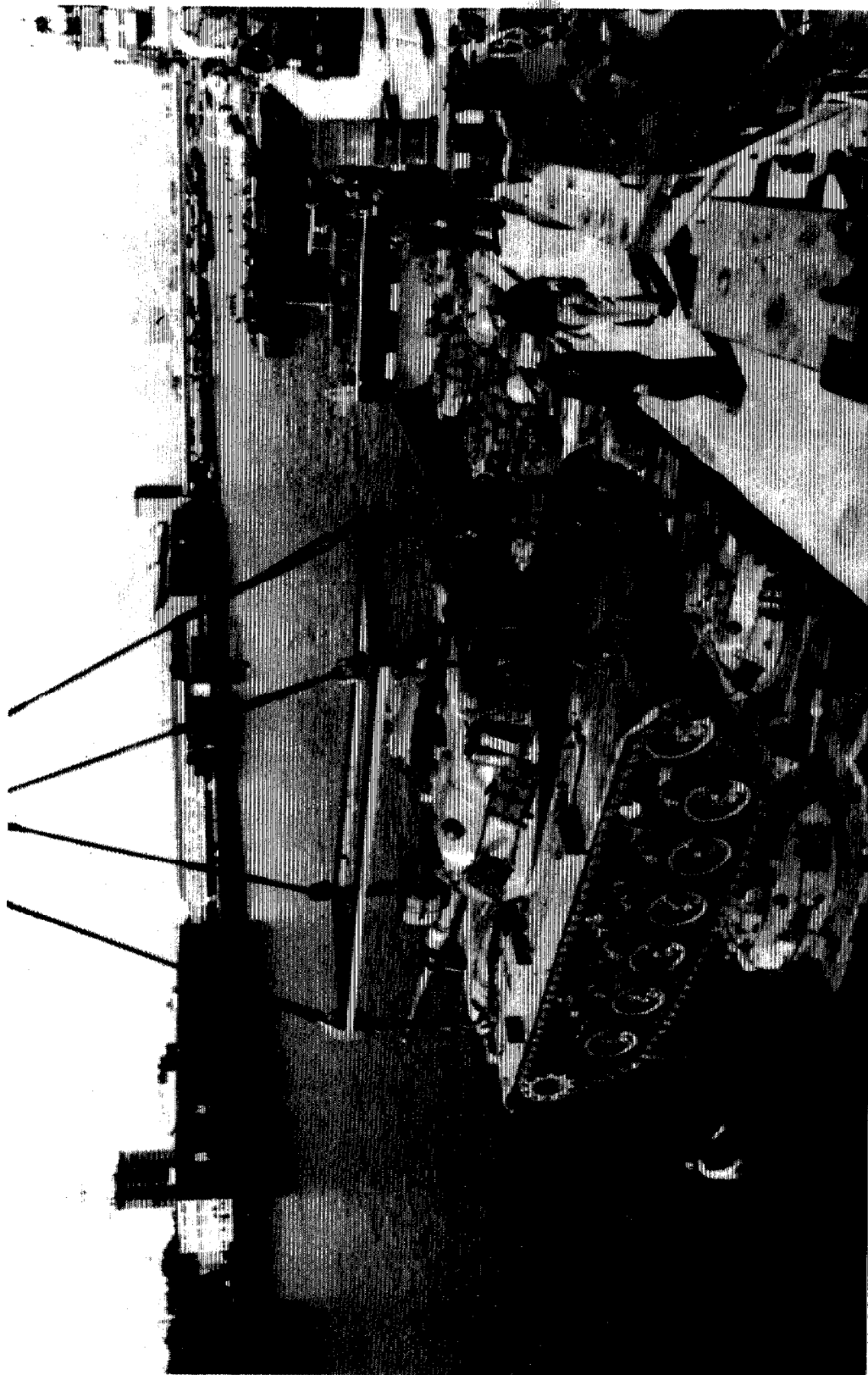
Source: U.S. Army

REFORGER 77: EQUIPMENT FOR SOME U.S. BASED UNITS IS STORED (PREPOSITIONED) IN HUMIDITY CONTROLLED WAREHOUSES IN WEST GERMANY. PORTIONS OF PREPOSITIONED STOCKS ARE WITHDRAWN ANNUALLY FOR USE IN REFORGER EXERCISES.



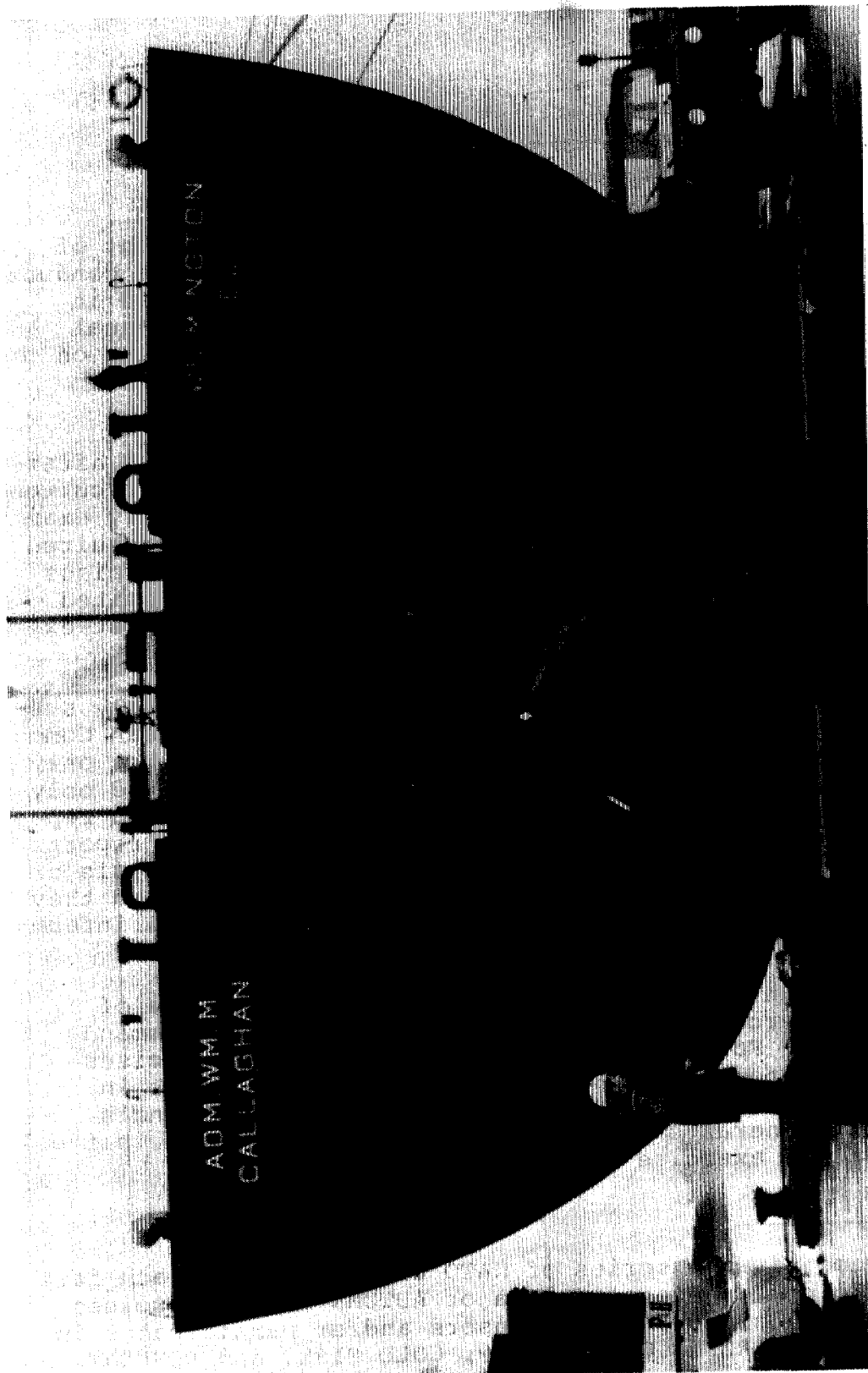
Source: U.S. Army

REFORGER 77: U.S. BASED TROOPS PARTICIPATING IN THE REFORGER EXERCISE.



Source: U.S. Army

REFORMER 77: M60A1 TANKS ARE LOADED ABOARD A BARGE FOR SHIPMENT TO ROTTERDAM AND BACK TO THE UNITED STATES.



Source: U.S. Army

REFORGER 77: FIELD MANEUVERS COMPLETED, EQUIPMENT IS LOADED ABOARD A U.S. VESSEL AT BREMERHAVEN, WEST GERMANY FOR TRANSPORT BACK TO THE U.S.

Inadequate post-exercise
analysis in the European Command

European Command Headquarters

The European Command has access to a vast amount of data describing lessons learned from U.S. exercises conducted in Europe. The data, for the most part, is included in component command "after-action" reports and the annual European Command Inspector General evaluation reports on U.S. involvement in the AUTUMN FORGE 1/ series of exercises conducted each fall.

There is little systematic analysis of exercise after-action reports at the European Command level. Under current procedures, responsible action officers must manually examine volumes of post-exercise reports to determine the required actions, while simultaneously examining current exercises and future exercise plans. We were advised that limited staff precludes the command from fully performing post-exercise functions.

In addition, component commands are not routinely submitting detailed after-action reports to the European Command. For example, the commands' exercise division receives only limited portions of after-action reports; it received only the executive summary of the REFORGER 77 after-action report. Apparently, the division does not receive complete reports because it does not use them for post-exercise analysis or other purposes. European Command officials indicated they had no real need for the reports other than for general information.

Although it does not conduct detailed analyses of specific exercise lessons learned, the European Command reviews U.S. Forces' participation in various exercises with a view toward determining U.S. Force readiness in Europe. The review is conducted through the command's Inspector General's evaluation of U.S. involvement in the AUTUMN FORGE exercise series.

1/The name given a series of NATO exercises held each fall under a common scenario. Major AUTUMN FORGE exercises which the United States sponsors and/or participates in include REFORGER, CRESTED CAP, COLD FIRE, and DISPLAY DETERMINATION.

The Inspector General's overall goal is to determine whether U.S. practices satisfy wartime requirements. The primary means of accomplishing this goal in the last 2 years (1977 and 1978) has been the evaluation of U.S. Force participation in AUTUMN FORGE. These exercises, according to the command's Inspector General, provide an excellent vehicle for evaluating the readiness of U.S. Forces--both those within the command and external reinforcements.

The scope of the Inspector General's evaluations has steadily increased over the past several years. In 1975 and 1976, for example, the evaluations focused primarily on REFORGER, whereas in 1977 the evaluations were expanded to include a greater number of exercises of the AUTUMN FORGE series. Evaluations in 1978 included U.S. Forces' participation in allied field exercises.

The European Command encourages the component commands to input to the Inspector General's evaluations by offering the component commands the opportunity to comment on the Inspector General's observations. We believe the Inspector General's evaluations of selected exercises are valuable and worthwhile. But, we believe the full benefits of the various exercises are not being realized because of a lack of systematic analysis of exercise after-action reports. Systematic analysis of the reports would only complement the Inspector General's findings, in our opinion.

U.S. Army, Europe
Headquarters

The U.S. Army, Europe (USAREUR), a component command of the European Command, is responsible for managing U.S. Army involvement in JCS and the North Atlantic Treaty Organization (NATO) exercises in Europe, including monitoring reports from participating commands. The command monitors approximately 68 exercises each year. We found that USAREUR lacked an adequate formal system for analyzing exercise results and precluding the recurrence of problems.

Lessons learned from exercises are normally acquired from participating headquarters' and units' submissions, in the format prescribed in the command's exercise operations orders. Lessons learned are received in both initial impressions reports, due shortly after exercise completion, and final after-action reports, which include detailed information on the subject.

Distribution of the reports is made to USAREUR staff agencies, subordinate commands, higher and adjacent U.S. headquarters and, in most cases, to various allied headquarters. Some USAREUR staff actions are taken to correct problems the reports note, but there is no established procedure or system to ensure that all lessons learned are handled in such a way as to preclude recurrence of the basic problem.

The USAREUR Exercise Division's current staffing authorization does not allow the division to make trend analyses on exercise lessons learned. Making these trend analyses would be a significant additional task for the division because it currently has no available personnel or persons qualified to conduct them. An April 1978 Department of the Army Inspector General's survey recognized the division's heavy workload and recommended six additional spaces so that the division could adequately perform its tasks. At the time of our review, the division had not yet received the additional personnel.

USAREUR is in the process of developing an automatic data processing exercise lessons learned system aimed at remedying lack of actions and eliminating unresolved problems from continually recurring in exercises. USAREUR officials believe this system will facilitate systematic elimination of unresolved problems and will provide input for new lessons learned.

U.S. Air Forces, Europe, Headquarters

The U.S. Air Forces, Europe (USAFE), another component command of the European Command, participates in a large number of unilateral, multinational, and NATO exercises. Although it has a system for identifying and compiling certain exercise deficiencies, USAFE does not have a total management system for analyzing and following up on lessons learned from large-scale exercises.

USAFE designates an office of primary responsibility for each exercise in which its forces participate. Using reports from the various elements participating in the exercise, the designated office develops an exercise after-action report listing of exercise deficiencies by functional category. After-action reports are submitted to the

appropriate directorates for corrective actions and to USAFE headquarters where the issues are compiled into a final exercise report.

Although USAFE officials believe that action is being taken on the deficiencies, they acknowledge that officials frequently do not have time to review after-action reports for trends and recurring problems. Therefore, they cannot be sure that followup action is taken.

We reviewed the recent after-action reports for exercises CRESTED CAP and COLD FIRE to determine whether recurring problems were being reported. We identified instances where the same deficiencies were reported year after year. The after-action reports for CRESTED CAP 76, 77, and 78, reported that (1) dual-based units did not deploy with all field and life support gear, working a hardship on the host base and (2) deployed load crews were not trained and qualified in the handling and loading of tasked munitions. We also noted other recurring problems. However, the main functional categories of the CRESTED CAP after-action reports were inconsistent from year to year, making it difficult to isolate such problems. That is, the same deficiencies were recorded and reported under different main functional headings. Thus, there may have been many more recurring problems that were not readily apparent because of the manner in which the deficiencies were described.

PROGRAMS TO IMPROVE JCS EXERCISE PLANNING AND EVALUATION ARE UNDERWAY

A variety of programs and systems are being implemented in the European and Readiness Commands. Their designs, stages of development, and the priorities assigned to them vary. When fully developed and implemented, their effectiveness will, we believe, also vary.

U.S. European Command programs

European Command officials informed us that the present method of analyzing force readiness in terms of performance during selected exercises is clearly not now adequate. The present system does not provide an accurate portrayal of readiness trends nor does it allow for accurate pinpointing of problem areas.

A couple of programs are underway at European Command headquarters to enhance its ability to influence force readiness. The first priority initiative is to portray and analyze unit readiness trends and pinpoint problem areas more accurately. Using the force status and identity report (FORSTAT) system as the basic management tool, the European Command is instituting two refinements which will meet the objectives of (1) completing automation of the FORSTAT data processing and (2) establishing a systematic quality control program to review FORSTAT data. An allied effort is the development of a program to analyze force readiness trends in terms of performance during selected exercises. Initially, the data will be developed from the Inspector General reports. By consolidating the Inspector General's observations under general categories through the use of a computer program, the European Command can establish overall trends in ground, air, and naval force performance. When this is related to FORSTAT portrayal, a better picture of the overall readiness of the forces can be obtained as a basis for focusing attention on problems, making recommendations, establishing priorities, and measuring progress. A European Command official advised that once these programs are fully developed and a computer model is available, related information can be interfaced with component command and NATO tactical evaluation systems.

Although the above programs are underway, we were told that because of their low priority it will be quite a while before they are fully developed and implemented. In the meantime, we believe the capability of European Command managers to focus attention on problems, make recommendations, establish priorities, and measure readiness progress in terms of selected exercises is impaired. Additionally, full benefit from the resources devoted to the various exercises is not realized.

USAREUR is in the process of independently developing an automatic data processing exercise lessons learned system for the storage, recall, and necessary follow up of unresolved problems noted and lessons learned during exercises. The system should facilitate compilation of lessons learned and provide for more orderly control and follow up on lessons learned actions. The capability to

compare and analyze lessons learned, through recall of information by exercise, year, type of event, and subject category, should be valuable to USAREUR headquarters and subordinate commanders in carrying out their daily operations and in planning subsequent exercises.

The USAREUR action officer responsible for developing this system said he did not know exactly when the system would become operational. Completing its development is last on his list of four top priorities.

USAFE has independently developed a program to store and retrieve deficiencies identified in large-scale exercises. Although the system data base is currently limited to coordination and interface issues, it could easily be expanded to include other major problem areas. The after-action reports for AUTUMN FORCE exercises are submitted to the USAFE headquarters where specific interface issues are identified and placed in the data base. The issues are crossfiled under numerous functional categories for random retrieval from a variety of reports.

We tested USAFE's exercise analysis system by generating computer printouts on a list of key words pertinent to our review, such as

--after-action reports,

--realism,

--readiness, and

--redundancy.

The products we received convinced us of the system's capabilities to identify deficiencies in readiness posture and assist in planning and analyzing future exercises. But, the system was not being used to its maximum capabilities. A USAFE official informed us that the system was very obscure in terms of other USAFE programs.

U.S. Readiness Command efforts to improve its exercises

Recognizing deficiencies in the development and management of its exercise program, the Readiness Command, in April 1978, created the Joint Exercise Enhancement Group to advise the command on exercise matters. The group is

composed of selected members of the Readiness Command staff and representatives of the Departments of the Army and Air Force, the Tactical Air Command, U.S. Army Forces Command, and the U.S. Army Training and Doctrine Command. Its mission is to

" * * * determine alternatives to current exercise development execution, and follow-up procedures which will increase the joint training benefits derived from the exercise program * * *. The group will identify and examine candidate actions to improve the exercise program and develop specific proposals and taskings to accomplish desired actions."

Upon its establishment, the group began to design a system for planning exercises and for developing the 5-year exercise program.

At the time of our review, the Readiness Command had designed and partially implemented such a system. According to Readiness Command officials, the system will be completely installed by December 1979. The system's primary advantages appear to be that

- exercise "statements of purpose" and objectives will be established early in the planning cycle,
- exercise objectives will be considered during scenario development,
- exercise participants will be required to submit corrective actions for selective deficiencies (Readiness Command personnel will evaluate the adequacy of these corrective actions),
- deficiencies of previous exercises will be available in a more usable format, and
- Readiness Command personnel will followup on exercise deficiencies and monitor corrective actions.

According to Readiness Command officials, the exercise program was not achieving all potential training benefits under the old exercise planning system. One reason for this

failure was that the command did not develop and establish exercise statements of purpose and objectives, the most important and pervasive exercise factors, early in the planning cycle. Consequently, the exercise site, troop lists, and funding level had the most impact on the overall exercise. This problem was addressed early in the life of the Joint Exercise Enhancement Group. The group considered the purpose and bases of exercise objectives; obtained input from the command's staff sections, components, and others; and then selected 12 broad objective areas suitable for inclusion in exercises. These 12 objective areas represented a broad spectrum of activities performed during joint exercises. They included intelligence fusion, air defense, suppression of enemy air defense, electronic warfare, airspace management, artillery counterfire, tactical air operations, communications, unconventional warfare, tactical nuclear operations, chemical operations, and automation.

Readiness Command officials added a 13th objective area (logistics) and assigned managers to each area. These managers are responsible for the overall management of their areas including

- coordinating scenario development to ensure that exercise scenarios allow for adequately exercising their objectives,
- reviewing reported exercise deficiencies and the adequacy of corrective actions,
- performing required followup relative to the deficiencies and corrective actions, and
- assuring that questionable corrective actions in important areas are tested in subsequent exercises.

The Readiness Command's exercise planning and management system, when fully implemented, will significantly increase benefits from the command's exercises, in our opinion. First, exercise purposes and objectives will be a stronger force in exercise planning. Second, since the Readiness Command's exercise objectives managers are integrally involved in the command's ongoing operations, the exercises should be more closely correlated with ongoing operations. And third, the system will provide for systematic followup and initiation of corrective actions on exercise lessons learned.

CONCLUSIONS

JCS exercises offer important opportunities for improving plans, doctrine, and ongoing command operations by revealing deficiencies in these areas. However, maximum benefits are not being realized from the exercises because adequate systems have not been in place to fully realize the benefits of the exercise lessons learned.

The U.S. Readiness Command has designed and begun implementing a system for exercise planning and evaluation that we believe will substantially resolve the above problems and markedly increase benefits from its exercises.

However, these problems continue in the European Command. The European Command Inspector General's evaluations of major NATO exercises, which the command sponsors or its forces participate in, are a valuable means of assessing U.S. Forces' readiness in Europe. But because of the lack of fully effective procedures in the European Command and its component commands for analyzing lessons learned and implementing corrective actions, the full benefits of the exercises are not being realized.

The European Command, USAREUR, and USAFE are each independently developing systems for improving the handling of exercise lessons learned. While each system offers improvements over previous procedures, none appears to offer fully effective handling of exercise lessons learned.

Each organization is attaching a relatively low priority to its system's development.

RECOMMENDATIONS

In conjunction with our recommendation on page 21, JCS should assure that each of the unified and specified commands establish uniformly effective systems for evaluating lessons learned, initiating and following up on corrective actions, and disseminating the results to all feasible users.

CHAPTER 6

GREATER REALISM IN JOINT EXERCISES

WOULD ENHANCE THEIR VALUE

JCS exercises provide valuable opportunities for the military services to train together and to practice the joint concepts and plans that they would employ in actual combat situations. The exercises also provide perhaps the best opportunities short of actual combat to test the effectiveness of our military forces, and the plans and doctrine they may be called upon to employ in combat.

It is impossible, in peacetime, to simulate a true war-time setting for large-scale joint military exercises. Notwithstanding obstacles to realism, exercise planners must make every effort to design and conduct the most realistic exercises possible.

Our review of the JCS Exercise Program revealed that more realism could be achieved by

- improved design and execution of the exercises and

- better planning to overcome peacetime constraints on military maneuvers, and environmental and wildlife constraints.

Policymakers, as well as exercise designers and planners, should increase emphasis on JCS exercises' realism, in our opinion, to maximize exercise benefits. Similarly, policymakers outside the military should consider the effects of peacetime modes of operation and environmental and wildlife considerations on military training and try to minimize these impacts.

REALISM CONSTRAINTS ADVERSELY AFFECT U.S. EUROPEAN COMMAND JOINT EXERCISES

Force deployment capabilities not fully tested

Increased attention has been directed toward the growing Warsaw Pact capability to launch a conventional attack against

NATO without a significant mobilization period. Previous estimates of the time frames the Warsaw Pact would require to mobilize, and that NATO would have to complete defensive preparations, are no longer believed by strategists to be valid. With the anticipated warning time reduced from historical estimates--some authorities believe NATO may receive no warning--there will be a premium on speed of reaction by NATO reinforcements.

Secretary of Defense guidance in 1978 required that major reinforcement units, deploying to prepositioned material configured to unit sets (POMCUS), be operationally ready for combat and released to NATO shortly after mobilization. To meet this requirement, forces must prepare for deployment in the United States, deploy to Europe, move to their prepositioned equipment, withdraw equipment, withdraw and upload supplies, move to an assembly area, and organize for combat within a relatively short period.

REFORGER is the name given the deployment of U.S. Army forces to Europe to participate in maneuvers with European-based U.S. and allied forces. REFORGER exercises are peacetime exercises in which the speed of operations is governed by economics, safety, and private sector considerations. For example, airlift requirements must be carefully integrated into the overall U.S. exercise program to make efficient use of the Military Airlift Command's airlift resources and exercise budgets. Use of necessary civil facilities, such as European civil airfields, must be scheduled well in advance and peacetime regulations followed. In an actual emergency, many of these factors would be ignored or modified in favor of more rapid deployments.

REFORGER exercises provide excellent opportunities for practicing the plans and procedures which have been developed for the reinforcement of U.S. Forces in Germany during an emergency. Moreover, we found that elaborate plans are made for participating U.S.-based units, far in advance of the exercise dates. For example, officials of a U.S.-based battalion participating in the winter REFORGER 79 told us they had been preparing for the exercise for more than a year.

These preparations are valuable since they would undoubtedly enhance the units' deployability in a true emergency. But do such preparations allow for an accurate test of U.S. Forces' capability to mobilize and deploy to Europe

in an emergency? We believe expansion 1/ of the "no notice" concept, where units receive only little advance notice that they will participate in the exercise, would not only allow for practicing deployment plans and procedures, but would also provide a more realistic test of U.S.-based units' deployment capabilities.

Other constraints to realism

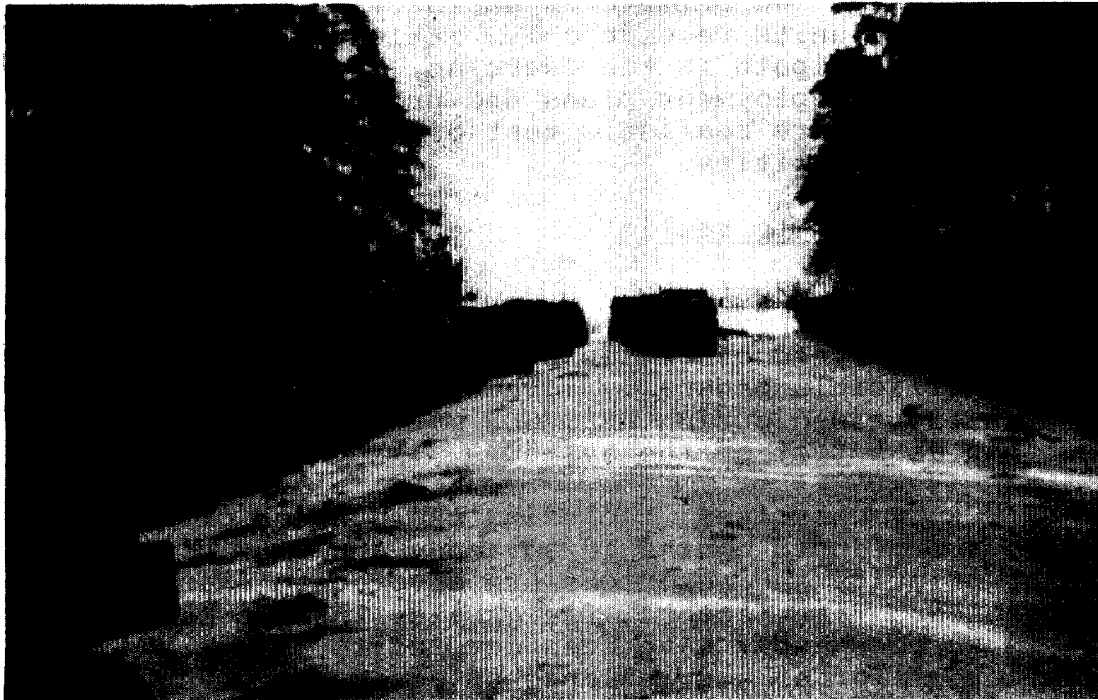
Drawing POMCUS stocks

During our end of review conferences in April 1979, exercise officials generally agreed that in the past POMCUS had been exercised during REFORGER more as a training exercise than as a test of the system.

REFORGER exercises, including the drawing of POMCUS stocks, are planned months in advance, and sufficient in-theater priority and resources are devoted to ensure success. Resources and time factors, far greater than would be available in an emergency, have been devoted to ensure a smooth reception of forces and issuance of equipment. For example, during our visit to a POMCUS equipment draw by U.S.-based forces participating in REFORGER 79, we noted significant advance preparation by, and assistance from, European-based POMCUS support personnel. Such assistance would probably not be available during an emergency draw.

Notwithstanding the above, REFORGER exercise officials emphasized that some recent innovations had occurred. For example, REFORGER 79 included a self-assisted night withdrawal of POMCUS stocks, and a surprise nuclear, biological, and chemical condition was called on one occasion during the POMCUS withdrawal procedure.

1/This concept was used to a limited extent during recent REFORGER exercises. For example, one battalion was deployed under this concept during REFORGER 78.



Source: GAO

REFORGER 79: A U.S. BASED MECHANIZED BATTALION ARRIVES AT ITS INITIAL ASSEMBLY AREA AFTER DRAWING ITS PREPOSITIONED EQUIPMENT.

Heavy in-theater support
of REFORGER exercises

As in past years, the efforts of USAREUR headquarters in planning and coordinating REFORGER 78 deployment were primarily responsible for its success, according to European Command evaluators. However, some of the support provided during the reception and movement of forces and equipment was greater than would be anticipated in a wartime environment. The following examples serve to illustrate the nature of the support provided during REFORGER 78.

The 4th Transportation Brigade was a major participant during the reception phase of REFORGER 78. Its major task was to operate an integrated transportation system to support the movement of U.S. Forces in central Europe. This involved reception and clearance activities at the sea and airports, as well as handling related rail, highway, and intratheater air movement in Europe of U.S. personnel and equipment participating in the AUTUMN FORGE exercises. Convoy operations were reportedly well coordinated and functioned smoothly. However, much of the assistance provided would probably not be available to convoy commanders in a period of crisis.

During REFORGER 79, three battalions practiced drawing ammunition, including some live rounds, out of prepositioned stocks. We viewed the draw by the 18th Battalion (1st Brigade), 1st Division from Ft. Riley, Kansas. It was, in our opinion, a smooth, orderly, and efficient operation.

However, the procedure could have been more realistic and of greater value to the drawing units if they had conducted the exercise themselves, rather than being assisted by a substantial number of U.S. in-theater ordnance personnel. The ordnance personnel advised us that the drawing units should have been able to draw their own ammunition without difficulty by following the instructions which were provided in advance and available at the loading site. We were told that very little of the assistance provided during the ammunition draw would be available in war.



Source: GAO

REFORGER 79: A U.S. BASED UNIT UNLOADS PREPOSITIONED AMMUNITION AFTER HAVING DRAWN IT FROM A STORAGE SITE.

Battlefield environment

For maximum effectiveness, the Army's training exercises must be conducted in realistic battlefield environments. During training exercises and battle simulations, conditions must exist that represent the effects of current doctrine, mobility, and weapons. During these exercises, commanders and units must face opposing forces that employ the tactics, techniques, and weapons of the forces most likely to be engaged in the anticipated conflict.

During the field training and command post exercise phase of REFORGERS 77, 78, and 79, corps and division commanders attempted to fight simulated European land battles using the "active defense" doctrine outlined in Army Field Manuals 100-5 and 6-20, dated July 1976 and September 1977, respectively. The active defense doctrine is based upon an understanding of the enemy, the ability to see the battlefield, the concentration of forces at critical times and places fighting as a combined arms team, and exploiting the advantages of the defender.

The use of the active defense doctrine in REFORGERS 77, 78, and 79 has revealed deficiencies in the doctrine which would be helpful in improving it. Evaluators of the exercises, however, have also revealed a lack of application of realistic enemy tactics, which have reduced the exercises' effectiveness.

For example, USAREUR's V Corps after-action report on the Corps' participation in the field training phase of REFORGER 78 states that the Corps has historically put one division against another division in field training exercises. Thus, the narrow scope of the exercise impairs realism of the maneuvers.

Also, an exercise planning official of USAREUR's VII Corps, the European Command's principal participant in REFORGER 79, advised us that Warsaw Pact/Soviet offensive tactics were not used because of the large maneuver damage that would result if a couple of divisions massed in a concentrated area. He said, however, that such tactics could be used on a smaller scale.

Maneuver damage constraints

In fiscal years 1976, 1977, and 1978 the United States paid more than \$53 million for about 125,000 maneuver damage and tort claims resulting from military exercises and training in Germany. REFORGER exercise maneuver damage alone averaged \$3.15 million from 1969 to 1977, and REFORGER 78 maneuver damage and tort costs are expected to range between \$5 million and \$7 million.

Maneuver damage and tort costs' impact on a large-scale exercise can be great. For example, REFORGER 79--a winter exercise--was canceled in the middle of the field training phase because of the likelihood of unusually high maneuver damage and tort costs if the exercise had continued; warm weather turned the frozen, snow-covered ground into mud. The Supreme Allied Commander, Europe, commented that to continue in warm weather would detract from the exercise's realism.

Air battle constraints

USAFE officials recognize the importance of exercise realism to the readiness of the command's air crews, but believe realistic training is lacking. According to USAFE officials, limitations imposed on training facilities and other restrictions prevent air crews of key U.S. aircraft in Europe, such as the F-15, F-111, and F-4, from receiving realistic training.

Training facilities for low-level routes, tactical air-to-ground ranges, and supersonic airspeed are required for these aircraft. However, limited facilities and host country peacetime air space regulations constrain and ultimately affect the quality of training that air crews receive. Examples, such as the following, illustrate the problem.

--Noise abatement considerations in the United Kingdom prohibit the F-111 from flying low-level routes in excess of 480 knots and below 400 feet above ground level. This does not support perceived war-time employment since the F-111 will fly faster and lower.

--The United Kingdom provides good range opportunities for USAFE aircraft stationed there. However, laser weapons activation is not permitted and there is only one usable live ordnance range, which has several restrictions.

--Weather plays havoc with the USAFE training programs, particularly from November to February when range weather is adequate to accomplish climbing maneuvers only 33 percent of the time. In addition, night low-level flying in Germany cannot be conducted between 11:00 p.m. and 6:00 a.m., hampering night training during the time of the year with the best flying weather.

ENVIRONMENTAL AND
WILDLIFE CONSIDERATIONS
REDUCE EXERCISE REALISM

The numerous environmental constraints under which the U.S. Readiness Command conducts joint training exercises in the United States detract from exercise realism. This general theme was expressed to us by numerous exercise participants and planners both at the headquarters, U.S. Readiness Command and the U.S. Army Forces Command. The essence of these comments was expressed by one officer who said, "it is becoming more and more difficult for the military man to practice his trade."

The number of environmental considerations and precautionary measures affecting U.S. Readiness Command exercise play is perhaps best seen in the command's GALLANT EAGLE exercise, which is held each fall at Eglin Air Force Base, Florida. An environmental impact assessment for GALLANT EAGLE 79 stated that the exercise was considered necessary to test unique factors pertaining to contingency operations. It stated that without such exercises, the Readiness Command would be unable to develop and test its plans and ability to respond to National Command Authorities' directions.

The assessment also identified the exercise's probable effects on the environment for such factors as air quality, water quality, vegetation, animal life, noise, etc. The following are examples of actions that were required to prevent or repair environmental damages.

--At least eight species of wildlife appearing on the U.S. Fish and Wildlife Service's Endangered and Threatened Species List can be found at Eglin Air Force Base. Each requires special consideration during exercise play. Maneuvering forces were directed to "avoid destruction of the natural habitats of these species and disturb them to the least extent possible." Two species were singled out for special instruction. Trees with Red-Cockaded Woodpecker nests were specially marked and were to be avoided. Tracked vehicles had to avoid the trees by at least 35 feet. Also, vehicles were prohibited from fording streams in which the Okaloosa Darter, a small freshwater fish, had been identified. The streams had to be crossed using existing bridges. Destruction of vegetation or land features along stream banks was prohibited.

--The Eglin complex has several archaeological sites. The sites were identified as recognizable as "unusual mounds for the terrain, heavily stained soil, pottery fragments, or unusual accumulations of shell." Maneuver forces were directed to avoid these sites.

--Reforested areas with secondary growth and seedlings were to be avoided "whenever tactically reasonable," with any damage reported so that post-exercise restoration could be accomplished.

--Numerous instructions were designed to prevent pollution of the environment, such as avoiding fuel spills.

These environmental considerations constrain tactical maneuvers and, in our opinion, seriously impair exercise realism. We believe relief from these types of restrictions on those portions of military reservations designated as maneuver areas would allow more realistic training for our military forces.

CONCLUSIONS

JCS exercises provide valuable opportunities for joint training and testing of our military forces and for using and evaluating the concepts they would employ in actual combat. The value of exercises, such as REFORGER, could be increased, however, through greater emphasis on exercise realism, including

- using more "no notice" testing of force deployment capabilities;
- improving testing of the POMCUS system;
- reducing unrealistic support of exercises, such as REFORGER; and
- increasing emphasis on realistic battlefield conditions, such as greater use of enemy tactics.

Some realism constraints, such as maneuver damages and host nation airspace regulations, cannot be avoided given current exercise scenarios and can be reduced or eliminated only through alternative scenarios. Alternatives include reducing the sizes of the exercises, changing exercise dates, or conducting similar exercises elsewhere.

Some realism constraints (airspace scheduling requirements and environmental and wildlife considerations) are beyond military officials' control. We believe recognition of the adverse effects of these constraints on major joint exercises by policymakers outside the military, coupled with their lessening wherever possible, could increase the exercises' value.

RECOMMENDATIONS

We recommend that the Secretary of Defense direct the JCS to increase emphasis on exercise realism in the design, planning, and execution of JCS exercises.

CHAPTER 7

CAN THE REFORGER AND CRESTED CAP

EXERCISES BE STRENGTHENED?

This report has discussed the importance of the JCS Exercise Program and the need for its continuation. The report also concludes, in part, that the best possible management of the program dictates that the exercises comprising it be reassessed and rejustified annually.

We believe the REFORGER and CRESTED CAP exercises are important elements of the JCS Exercise Program. While the exercises are valuable, we believe their value could be increased. In our opinion, reassessment of the following problem areas and resolution of the attendant questions would strengthen the exercises.

THE REFORGER EXERCISE

Defense officials have stated that the two primary purposes of REFORGER are to fulfill the understandings of the 1967 Trilateral Talks and to practice our war plans for the reinforcement of Europe.

The 1967 Trilateral Agreements

In 1967 the United States entered into a Trilateral Agreement with the United Kingdom and the Federal Republic of Germany to return up to 35,000 U.S. soldiers and airmen to U.S. bases from their stations in Europe. The agreement stipulated that returning U.S. Forces would be held in a high state of readiness to assure their capability to return rapidly to Europe in an emergency. The NATO Defense Planning Committee concurred in the agreement. The United States also agreed that to demonstrate its resolve and ability to meet its commitments under the North Atlantic Treaty the withdrawn forces would return annually to Germany for exercises. The U.S. Army redeployment was named REFORGER.

However, the addition of major U.S. combat units (i.e., Army brigades and tactical air squadrons) in Europe during 1975 and 1976 has brought U.S. combat forces to a pre-1967 agreement level. The House Committee on Appropriations has said these actions have eliminated the agreed upon purpose for REFORGER and CRESTED CAP. The Committee has also argued that the U.S. Government has in no way indicated

a reduced commitment to defend Europe. U.S. plans to increase, by the equivalent of three divisions, the amount of stocks prepositioned in Europe further demonstrate U.S. resolve to the NATO Alliance. We, therefore, believe that the 1967 Trilateral Agreement, as a reason for conducting annual REFORGER exercises in their present scale and scope, may be obviated.

QUESTIONS: Due to the increase in U.S. combat force levels in Europe subsequent to implementation of the Trilateral Agreement, is the Department of Defense still committed to the sizes of REFORGER exercises conducted in the past? What is the optional size of a REFORGER exercise, in terms of participation of U.S. European- and stateside-based forces?

REFORGER objectives

Our examination of the overall objectives of several European Command sponsored exercises, including REFORGER and CRESTED CAP, indicated that they were very general in nature. The exercise objectives reflected in component command-level operational orders for REFORGER and CRESTED CAP and U.S. participation in COLD FIRE and DISPLAY DETERMINATION related to general U.S. and allied military needs in Europe.

The objectives' impreciseness is illustrated by phrases such as "to exercise," "maximum number of," "to demonstrate U.S. resolve," "to the maximum extent possible," "to optimize," "to enhance," "to promote," and "to improve." In addition, many of the objectives lack meaningful criteria against which to measure accomplishment.

Large scale exercises were generally not graded and provided for only subjective comments as to their general success. For example, REFORGER 79 was canceled in mid-exercise due to unsuitable weather, but was declared a success by the Supreme Allied Commander, Europe, long before an adequate post-exercise analysis could be made.

QUESTION: Can REFORGER's overall objectives be made more specific to provide better criteria against which the exercises' results can be measured?

The realism of REFORGER

The realism and value of REFORGER could be increased through

- more "no notice" testing of rapid reinforcement capabilities,
- improved testing of POMCUS withdrawal procedures,
- more realistic in-theater support of REFORGER exercises,
- use of more realistic enemy tactics during field maneuvers, and
- better planning to reduce maneuver damage.

REFORGER 79, a winter exercise this year, was halted in mid-exercise because of adverse weather conditions and the possibility of high maneuver damage. This demonstrates the possible impact of realism constraints on major exercises.

QUESTIONS: What are the available alternatives for mitigating the above realism constraints for the REFORGER exercise?

Training afforded by REFORGER

Training requirements for European-based U.S. Forces far exceed available training funds. However, USAREUR used about \$2.5 million of its operations and maintenance funds for REFORGER 78. This was over and above budgeted REFORGER funds. Moreover, because of funding shortfalls, USAREUR dropped eight European-based units (an infantry battalion, an armored battalion, two field artillery battalions, and four engineering companies) from participation in REFORGER 79. These units had planned for months to participate in the exercise's field training phase. Meanwhile, more than 13,600 U.S.-based troops, representing a large variety of units, were transported to Europe for the exercise.

The House Appropriations Committee has, in the past, indicated that REFORGER exercise funds should be used primarily to train U.S. Forces already deployed in Europe. The Committee's report on the 1977 Department of Defense appropriations bill 1/ stated

"We believe a far more critical need than a REFORGER exercise is to fully test the combat capabilities of our forces already deployed to Europe." And,

"Thus, the Committee has left the REFORGER exercise funds in the bill, but is directing a different use. The Committee has concluded that the exercise and training funds can be more appropriately used in exercises to test the 7th Army's ability to move to and operate in areas where it is most likely to fight. This could be done as a part of a "significant" winter exercise that involves the entire NATO force structure at the fighting level."

QUESTIONS: Defense officials apparently chose to provide REFORGER training to U.S.-based forces rather than European-based units dropped from REFORGER 79 for funding reasons. What was Defense's assessment of the relative REFORGER training benefits to U.S.-based troops vs. those European-based troops dropped from the exercise? What is the optimal number of U.S. based troops needed to fulfill REFORGER exercise objectives?

THE CRESTED CAP EXERCISE

The drawdown of Air Force personnel and equipment under the 1967 Trilateral Agreement involved the return of four tactical squadrons, including 96 F-4 aircraft, to United States bases. The Air Force's primary justification for the CRESTED CAP exercise was the 1967 agreement. However, these four squadrons of F-4 aircraft were replaced by newer and more sophisticated aircraft, such as the F-111 and F-15. For example, 84 F-111s have been stationed in Europe since the withdrawal of the 96 F-4 Phantoms. This negates the

1/Department of Defense appropriation bill for 1977, Report by the Committee on Appropriations, House of Representatives, No. 94-1231 dated June 8, 1976, pp. 68 and 69.

promise of the Trilateral Agreement relative to CRESTED CAP, in our opinion.

CRESTED CAP 78 included 48 F-4 Phantoms, returned to Germany by the Tactical Air Command's 4th Tactical Fighter Wing, Seymour Johnson Air Force Base, North Carolina. They flew nonstop to Ramstein Air Base, Germany, refueling enroute from Strategic Air Command KC-135 stratotankers. The related airlift of personnel and materiel was accomplished by Military Airlift Command aircraft. Approximately 3,500 U.S. personnel participated in CRESTED CAP 78, about 700 of whom belonged to the two deployed U.S. squadrons. As a result of funding constraints and introducing additional tactical squadrons in Europe, the scope of CRESTED CAP was reduced from four to two squadrons in 1977. We were told that many of the European exercises in which CRESTED CAP units participate could function using in-theater aircraft.

In a recent report to the Congress on USAFE readiness (LCD-78-430, Feb. 12, 1979), we found that some of the aircrews were not mission ready because some of their training requirements had not been met. One of the reasons was that other priorities, such as large-scale exercises, used up flying hours without fulfilling some required events. Furthermore, USAFE was confronted in fiscal year 1978, and so far in 1979, with serious funding constraints in its operations and maintenance programs. These constraints have restricted USAFE's ability to conduct needed readiness exercises and weapons training. As with REFORGER, the House Committee on Appropriations, in leaving CRESTED CAP funds in the 1977 appropriations bill, indicated that funding priority should go to European-based units.

As discussed in chapter 6, we found that considerations for host nation laws and regulations limited the services' opportunities to practice fully realistic concepts and tactics.

QUESTIONS: Considering the above conditions, could a further reduction in the scope of CRESTED CAP, coupled with more stateside training for the units involved (including participation in RED FLAG), result in more training for both USAFE and stateside units?

CONCLUSIONS

REFORGER and CRESTED CAP exercises provide valuable training for both European- and U.S.-based forces. However, the exercises' value could be increased. We believe reassessments of these exercises and resolutions of the questions we posed would result in more beneficial exercises and more cost-effective training.

RECOMMENDATION

We recommend that the Secretary of Defense direct JCS to reexamine the REFORGER and CRESTED CAP exercises, considering the questions we have posed on exercise problem areas.

CHAPTER 8

SCOPE OF REVIEW

JCS exercises are generally the largest and most costly exercises conducted and are important indicators of this Nation's capability to respond effectively to military contingencies worldwide.

We examined the JCS Exercise Program to determine if it was effectively managed, if the exercises were as effective as possible, and if maximum benefits were being realized from JCS exercise funds.

We reviewed the policies, procedures, and practices for managing the JCS Exercise Program at various command levels and locations in the United States and Europe. During our review, we met with officials; examined pertinent regulations, reports, records, and other documents applicable to the system for managing the exercise program and its individual exercises; tested reported data; and visited locations of three large-scale JCS directed exercises (REFORGER, CRESTED CAP, and GALLANT EAGLE) and one large unilateral Air Force exercise (RED FLAG).

We worked at the following activities and locations:

- Office of the Assistant Secretary of Defense (Comptroller); the Pentagon, Washington, D.C.
- Joint Chiefs of Staff, J-3 (Operations), the Pentagon.
- Office of the Deputy Chief of Staff for Operations, U.S. Army headquarters, the Pentagon.
- Office of the Deputy Chief of Staff for Plans and Operations, U.S. Air Force Headquarters, the Pentagon.
- Office of the Deputy Chief of Naval Operations for Plans, Policy, and Operations, U.S. Navy Headquarters, the Pentagon.
- U.S. Readiness Command, MacDill Air Force Base, Florida.
- U.S. Atlantic Command, Norfolk, Virginia.

- U.S. European Command, Stuttgart, West Germany.
- U.S. Army Forces Command, Fort McPherson, Georgia.
- U.S. Air Force Tactical Air Command, Langley Air Force Base, Virginia.
- Headquarters, USAREUR, Heidelberg, West Germany.
- Headquarters, U.S. Navy-Europe, London, England.
- Headquarters, USAFE, Ramstein Air Force Base, West Germany.
- U.S. Army Military Traffic Management Command, Falls Church, Virginia.
- U.S. Army XVIII Airborne Corps, Fort Bragg, North Carolina.
- U.S. Army 82d Airborne Division, Fort Bragg, North Carolina.
- U.S. Army 101st Airborne Division (Air Assault), Fort Campbell, Kentucky.

We also visited numerous major headquarters and tactical units involved in the GALLANT EAGLE exercise (Eglin Air Force Base, Fla.) and the REFORGER and CRESTED CAP exercises (various locations in West Germany).

FUNCTIONAL AND GEOGRAPHIC RESPONSIBILITIES
OF THE UNIFIED COMMANDS

JCS publication No. 2 entitled "Unified Action Armed Forces," specifies primary responsibility of the commanders of unified commands as:

- Maintain the security of their commands and protect the United States, its possessions, and bases against attack or hostile incursion.
- Carry out assigned missions, tasks, and responsibilities.
- Assign tasks to, and direct coordination among, their subordinate commands to insure unity of effort in the accomplishment of his assigned missions.
- Communicate directly with:
 - (1) The Chiefs of services on uniservice matters as they deem appropriate.
 - (2) The JCS on matters to include the preparation of strategic and logistic plans, strategic and operational direction of their assigned forces, conduct combat operations, and any other necessary functions required to accomplish their missions.
 - (3) The Secretary of Defense, in accordance with applicable directives.
 - (4) The subordinate elements, including the development organizations, of the Defense agency and/or the military department directly supporting the development and acquisition of their commands and control systems as authorized by the Director of the Defense agency or Secretary of the military department concerned.
- Promptly advise JCS of significant events and incidents which occur in their functional or geographic areas of responsibility, particularly those incidents which could create national or international repercussions.

U.S. EUROPEAN COMMAND

The U.S. European Command is a unified command with three component commands: USAREUR; the U.S. Naval Forces, Europe; and USAFE. The European Command's area of responsibility covers all of western Europe, including the United Kingdom and Ireland, the Mediterranean Sea and adjoining countries, and the Middle East land mass to the eastern border of Iran, the Persian Gulf, and the Red Sea.

The European Command is unique in that in a NATO war it will function primarily as a support command while the NATO command structure will exercise operational command. The U.S. Commander in Chief, Europe, is dual-hatted as the NATO Supreme Allied Commander, Europe, while his Army and Air Force component commanders are dual-hatted as NATO Commander, Central Army Group, and NATO Commander, Allied Air Forces, Central Europe, respectively. In peacetime, the European Commander's responsibilities are much the same as for all unified commanders.

U.S. ATLANTIC COMMAND

The U.S. Atlantic Command includes the Commander in Chief, with a joint headquarters staff; three component commands--U.S. Atlantic Fleet, U.S. Army Forces Atlantic (provided by the U.S. Army Forces Command), and U.S. Air Forces Atlantic (provided by the U.S. Air Force Tactical Air Command); and other subordinate unified and specified commands.

Of the three component commands, only the U.S. Atlantic Fleet provides permanently assigned forces for operational control. The other components are assigned for planning purposes only, but they provide forces for operations, exercises, and emergencies when directed by JCS. In addition they cooperate with the Atlantic Command staff in developing and coordinating joint plans on a continual basis.

The U.S. Atlantic Commander's area of responsibility covers the Atlantic Ocean (excluding European coastal waters), the Caribbean Sea, the Pacific Ocean on the west coast of South America, and part of the Arctic Ocean.

U.S. PACIFIC COMMAND

The Pacific Command Commander in Chief exercises operational command of all forces assigned or attached through the Pacific Command component commanders, the commanders of subordinate unified commands, and the commanders of joint task forces (when established).

There are two component commanders and two subordinate unified commanders in the Pacific Command. The component commanders are the Commander in Chief, U.S. Pacific Fleet, and the Commander in Chief, Pacific Air Forces. The two subordinate unified commanders are the Commander U.S. Forces, Japan, and the Commander U.S. Forces, Korea.

The Pacific Command has area responsibility for the Pacific Ocean west of the coast of South America, the Far East, Southeast Asia, the Bering Sea, part of the Arctic Ocean, and the Indian Ocean.

U.S. READINESS COMMAND

The U.S. Readiness Command is a unified command exercising operational command over all U.S. Army and U.S. Air Force combatant forces in the United States which have not been assigned to other unified or specified commands. The command is charged with the planning for overseas deployment of Army and Air Force units to support the contingency plans of the overseas commanders. The command is also responsible for joint training and joint exercises as well as for the development of joint tactics, techniques, and procedures for joint employment of forces.

U.S. SOUTHERN COMMAND

The Southern Command is responsible, except for air defense and protection of sea communications, for central and South America (excluding Mexico). Except for the defense of the Panama Canal and Canal Zone, contingency planning is oriented primarily toward evacuation of U.S. nationals and disaster relief. The command's other responsibilities include security assistance activities and service training missions.



THE JOINT CHIEFS OF STAFF
WASHINGTON, D.C. 20301

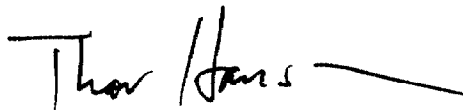
8 November 1979

THE JOINT STAFF

Mr. R. W. Gutmann
Director
Logistics and Communications Division
United States General Accounting Office
Washington, D. C. 20548

Dear Mr. Gutmann:

This is in reply to your letter to the Secretary of Defense regarding your report, 14 August 1979, "Better Management Practices Could Increase the Effectiveness of Major Joint Military Exercises," OSD Case #5257, Code 947336. Your report has been reviewed and we concur in general with the recommendations. Comments, keyed to the specific recommendations, are provided at the Enclosure.


THOR HANSON
Vice Admiral, USN
Director, Joint Staff

Attachment
a/s

GAO RECOMMENDATION

That the Secretary of Defense direct the Joint Chiefs of Staff to assume a greater role in developing and managing the JCS exercise program. This expanded role should include providing the unified and specified commands expanded guidance for developing their 5-year exercise programs. This guidance would require the annual reassessment and rejustification of each JCS-directed and coordinated exercise, including (a) an alternatives analysis, (b) rationale for the alternative chosen, (c) specific exercise objectives, and (d) assessment of the exercise's impact on the command's readiness.

OSD RESPONSE

In general terms, the objective of each individual exercise in the JCS-directed and JCS-coordinated exercise program is to improve (or maintain) the readiness of command units to perform the command's mission. The most precise form of alternatives analysis would be based on a quantitative comparison of improvement in readiness to conduct specific aspects of a command's mission versus cost of possible alternatives for each exercise under consideration. Thus, each alternative would be evaluated as to its impact on the command's readiness per exercise dollar expended. While unquestionably desirable, it is not possible at the present time to quantify readiness--this inability is recognized by GAO in the draft report--thus changes in readiness cannot be measured objectively. Recommendations (a), (b), and (d) can be accomplished, however, through use of a subjective form of alternatives analysis. By this method, a command's mission would be translated into exercise objectives (as applicable) by describing in specific terms: (1) warfare skills which must be exercised in a joint environment, (2) forces to be exercised in those skills, (3) how often such exercising is required.

From a three dimensional matrix which plots these objectives, an entire command exercise schedule can be designed. By carefully describing objectives during the creation of the matrix, individual exercises can be

designed which maximize satisfaction of objectives at minimum cost. Alternative analysis then becomes a comparison of objective satisfaction versus cost. Relative importance of objectives and degree of satisfaction of objectives must be subjectively assessed.

If the process described above is completed before funding, exercises previously conducted, or other constraints are introduced, a "zero-based" exercise schedule would result. SM-437-79, 7 July 1979, "The JCS-Directed and JCS-Coordinated Exercise Program," makes provision for showing exercise requirements which would exceed funding guidance. This zero-based scheduling procedure is also consistent with test and evaluation of joint plans and doctrines and command contingency and operation plans as well as with political requirements since these requirements would be met as the exercise objectives in the matrix are satisfied.

Expanded procedural guidance along the lines described above will be proposed as a revision to SM-437-79.

GAO RECOMMENDATION

That the Secretary of Defense direct the Joint Chiefs of Staff to assume a greater role in developing and managing the JCS exercise program. This expanded role should include in-depth evaluation of each command's 5-year plan submission to determine exercise needs, allocation of exercises among the commands, and optimal overall JCS Exercise Program configuration.

OSD RESPONSE

Following the annual exercise conference, each unified command provides the Joint Chiefs of Staff a narrative assessment of its proposed JCS-directed and JCS-coordinated exercise program. The assessment describes the focus of the command's exercise program, outlines its relationship to command mission and JCS/OSD guidance, and assesses the program's contribution to command readiness. These assessments are included with the JCS-directed and JCS-coordinated exercise schedules in a formal joint action. By this method, each command's submission is subjected to in-depth evaluation prior to approval and publication of the JCS-directed and JCS-coordinated exercise schedules.

The Joint Chiefs of Staff do influence the exercise program configuration and the establishment of priorities. However, that JCS role is constrained by the Services' ability to provide necessary resources and the undeniable prerogative of unified commanders for determining their own training needs and preparing their forces to fight. In a period of increasingly constrained resources and an increasing necessity for command exercises to be interdependent, these responsibilities of the Joint Chiefs of Staff to the Secretary of Defense can be expected to evolve accordingly.

GAO RECOMMENDATION

That the Joint Chiefs of Staff work more closely with the unified and specified commands and the Service Headquarters to (1) assure that proposed JCS exercises are adequately justified and (2) that JCS exercise budget submissions to the Congress contain sufficient justification that informed funding decisions, including impacts on force readiness, can be made.

OSD RESPONSE

In amplification of the above, GAO suggested that, until quantitative analysis becomes possible, "... valuable data can be developed and included in JCS exercise budget requests. Such data would include, but not necessarily be limited to:

- (a) reasons for the exercise,
- (b) importance of the exercise to the sponsoring command's overall joint training program,
- (c) numbers of units and personnel to be trained in the exercise, expressed as a percentage of those requiring training,
- (d) narrative of the plans and doctrine to be tested/practiced,
- (e) degradation in joint training and the testing of joint forces, plans, and doctrine that would result if the exercise were not funded, and
- (f) expression of the need for more or larger exercises, as characterized by the above factors."

In JCS-directed and JCS-coordinated exercise schedules, (a) and (b) are included in the PURPOSE statement for each exercise. (c), (d), and (e) will, as previously mentioned, be included in a proposed revision to SM-437-79 as part of an OBJECTIVES statement for each exercise. Commands include (f) in their overall exercise program evaluation now required by SM-437-79.

All of the information described above will be made available to the Services for their use during Program Objective Memorandum (POM) preparation if the proposed revisions to SM-437-79 are approved. After Service POM submission the Joint Chiefs of Staff publish the Joint Program Assessment Memorandum which, among other things, includes an assessment of the JCS-directed and JCS-coordinated exercise program. Finally, when the Service exercise budgets are presented to the Congress, OJCS provides operational data to the OSD witnesses to defend the JCS exercise program.

GAO RECOMMENDATION

That the Joint Chiefs of Staff assure each of the unified and specified commands establish uniformly effective systems for evaluating lessons learned, initiating and following up on corrective actions, and disseminating the results to all feasible users.

OSD RESPONSE

Concur--a universal "lessons learned" system which would enable planners to take into account problems/shortfalls encountered in previous exercises and analysts to determine/analyze trends would be of great benefit to the JCS-directed and JCS-coordinated exercise program. Such a system will be designed which will provide uniformity in identification, classification, analysis of lessons learned, and will provide for a formal follow-up procedure. This system will utilize WWMCCS Inter-computer Network (WIN), thus enabling both intra- and inter-command access and benefit.

GAO RECOMMENDATION

That the Secretary of Defense direct the Joint Chiefs of Staff to increase emphasis on realism in the design, planning, and execution of JCS exercises.

OSD RESPONSE

Exercise planners strive for realism in spite of artificialities which must be introduced because of environmental or host nation constraints. Even with these artificialities, JCS-directed and JCS-coordinated exercises provide for the interaction of forces and headquarters under real time demands and under conditions of stress and fatigue and thus provide a degree of realism unattainable in any other way.

Outside of the United States, US Forces are guests of sovereign nations and are obligated to abide by their hosts' laws and customs. US desires cannot be dictated to nations upon which much of our support and ability to fight depends, in an attempt to reduce exercise artificialities.

Within the United States, a major factor in the lack of realism is environmental constraints affecting the utilization of both air and ground space. Changes to existing regulations/procedures that would permit more unrestricted, realistic training will be explored.

GAO RECOMMENDATION

That the Secretary of Defense direct the Joint Chiefs of Staff to reexamine the REFORGER and CRESTED CAP exercises, considering the questions we have posed on exercise problem areas.

OSD RESPONSE

Although the 1967 Trilateral Talks remain in force and provide the historical basis for the genesis of REFORGER, the exercise has assumed a significance to both the United States and our NATO allies that extends beyond the original intent of the exercise. The annual conduct of REFORGER and CRESTED CAP now provides a tangible demonstration of our capability to deploy forces to Europe and our national resolve to support the NATO alliance, not only to our allies but also to the Warsaw Pact nations. These exercises have also become a primary means for us to practice and evaluate our war plans for the deployment and reception of forces. As those war plans have evolved, so have the plans and conduct of the exercises evolved. Essential to accurately evaluating both our deployment plans and NATO's reception plans is our ability to physically tax and stress those systems to the maximum extent possible.

That is only done during REFORGER/CRESTED CAP. Thus, we are constantly seeking different ways to improve these exercises so that they will be as realistic an implementation of war plans as possible.

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