REPORT

OF THE

DEFENSE SCIENCE BOARD

TASK FORCE

ON

READINESS

JUNE 1994

Office of the Under Secretary of Defense for Acquisition and Technology

Washington, D.C. 20301-3140

This report is a product of the Defense Science Board (DSB). The DSB is a Federal Advisory Committee established to provide independent advice to the Secretary of Defense. Statements, opinions, conclusions and recommendations in this report do not necessarily represent the official position of the Department of Defense.

OFFICE OF THE SECRETARY OF DEFENSE
WASHINGTON, D.C. 20301-3140

DEFENSE SCIENCE
BOARD

June 22, 1994

MEMORANDUM FOR THE SECRETARY OF DEFENSE
DEPUTY SECRETARY OF DEFENSE
THROUGH: UNDER SECRETARY OF DEFENSE (ACQUISITION & TECHNOLOGY)

SUBJECT: Final Report of the Defense Science Board (DSB) Task Force on Readiness

This memorandum provides for your review and comment the final report of the DSB Task Force on Readiness, and recommends that you forward the report to the Secretary of Defense. The report focuses on the Department's readiness management and oversight processes, especially key indicators for measuring readiness and candidate methodologies for providing early warning of potential readiness problems, and on other matters affecting individual and collective readiness, such as structure, lift, and sustainability.

In conducting its activities, the Readiness Task Force has met as a group frequently, and its members have visited numerous sites to gather information. They also met with the Chairman of the Joint Chiefs of Staff, Services Chiefs and available CINCs. The Task Force did not look in detail into acquisition, technology, or industrial base issues related to readiness; the adequacy of forces to carry out the Bottom-Up Review; or nuclear forces strategy and requirements.

Regarding the current status of military readiness, the Task Force concluded that although there are some downward indicators, the general readiness posture of today's conventional and unconventional forces is acceptable in most measurable areas. However, the Task Force reported that it observed enough concerns that they were convinced that unless the Department of Defense and the Congress focus on readiness, the armed forces could slip into a "hollow" status.

For analytical purposes, the Task Force divided readiness into three levels: unit, joint (and combined) force, and national. The Task Force found that there currently exists a well-defined reporting system to evaluate the current readiness of combat and support units. On the other hand, it found the Department's systems for predicting future unit readiness significantly less mature and less comprehensive.

The Task Force assessed the current state of the Department's ability to measure joint readiness as poorly defined. Specifically, there is neither a clear definition of joint readiness nor of a system to measure it.

At the highest level, national readiness is important to ensure that our forces have sufficient readiness to carry out our National Military Strategy. The analysis conducted under the Bottom-Up Review provided the basis for addressing the strategic readiness of our forces in some areas, notably in force structure. This analysis, however, did not consider all essential

elements in strategic readiness. For example, it did not analyze in sufficient depth the C^4I needed to integrate forces. Additional analysis is being conducted by OSD, the Chairman, and the CINCs. The Task Force deferred judgment on this level of readiness.

Recommendations in the final report include the need to: provide adequate resources to access, train, and educate high quality personnel; work with Congress in developing a contingency funding system which does not harm readiness; improve analytical tools to help project the future readiness implications of our policy and budgetary decisions; bring a greater joint forces perspective to readiness; develop an OSD C^4I architecture; provide greater involvement by theater CINCs in the readiness matters; enhanced use of simulations; place emphasis on weapons of mass destruction readiness; and reexamine the readiness oversight and management roles of OSD, JCS, the Services, and the CINCs.

Taken in the aggregate, the report's recommendations could serve to support the broad policy adjustments the Department of Defense is taking in overseeing and managing readiness. I concur with the observations and recommendations of the Task Force, and recommend that you approve the report for appropriate dissemination by signing the attached memorandum.

Paul G. Kaminski
Chairman

OFFICE OF THE UNDER SECRETARY OF DEFENSE
4000 DEFENSE PENTAGON
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21 June 1994

PERSONNEL AND
READINESS

MEMORANDUM FOR CHAIRMAN, DEFENSE SCIENCE BOARD

SUBJECT: Report of the Defense Science Board (DSB) Task Force on Readiness

Attached is the final report of the DSB study on readiness. The Terms of Reference asked us to provide advice, recommendations, and supporting rationale which address the areas below.

- Key indicators for measuring readiness and candidate methodologies for providing early warning of potential readiness problems, including assessments of:

  - How the Department deals with readiness concerns; and
  - The adequacy of existing readiness reporting systems.

- Other matters affecting individual and collective readiness, such as: structure, lift, sustainability, active-reserve mix, retention, training, and the use of civilians and coalition personnel support.

During the past year the Readiness Task Force reviewed a broad range of readiness topics and looked in depth at numerous specific aspects of readiness, particularly the readiness management and oversight process. In conducting its activities, the Readiness Task Force met as a group frequently, and its members visited numerous sites to gather information. Significantly, the Secretary or Deputy Secretary of Defense met with us at many of our group meetings so that they could take timely action, rather than wait for the results of our reports. In addition, we met with the Chairman of the Joint Chiefs of Staff, the Service Chiefs and available consultant CINCs as we developed our observations and recommendations. As a result of these collaborative efforts, steps to implement many of the recommendations made in this report already are underway.

The Task Force concluded that the readiness of today's conventional and unconventional forces is acceptable in most measurable areas. That does not mean that the Task Force did not find "pockets" of unreadiness. Most of these "pockets" are a result of changes taking place in the armed forces and the turbulence created by these changes. However, we observed enough concerns that we are convinced that unless the Department of Defense and the Congress focus on readiness, the armed forces could slip back into a "hollow" status.

To prevent such back-sliding, the Task Force identified specific recommendations we believe will pay significant dividends in future readiness, and particularly in future joint and combined readiness. These recommendations are summarized in the Executive Summary and provided in more detail in the body of the report.

We propose that, in the future, the Readiness Task Force meet quarterly, or on call of the Secretary of Defense, to review the status of the recommendations and/or address other readiness issues as directed.

General Edward C. Meyer (U.S. Army, Retired)
Chairman

Attachment

DEFENSE SCIENCE BOARD TASK FORCE ON READINESS

FINAL REPORT

Chairman

General Edward C. Meyer
(U.S. Army, Retired)

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EXECUTIVE SUMMARY

In the late 1970's and early 1980's we had "hollow" forces. Compared with today's troops, the service member who served during that period was, on average:

- less well educated;
- more involved with drugs;
- less well trained;
- less well equipped;
- less well sustained;
- less strategically mobile;
- and, less highly regarded by the population.

The armed forces then were not ready to meet most of the major contingencies called for by the National Security Strategy without a considerable period of warning time to permit our conventional forces to mobilize and equip themselves. Absent ready conventional forces, greater reliance was placed on nuclear deterrence; and, our nuclear forces were maintained at a higher state of readiness than most of our conventional forces.

The Readiness Task Force concludes that the readiness of today's conventional and unconventional forces by contrast is acceptable in most measurable areas. However, our group was asked to do more than merely assess the readiness of today's armed forces compared with those of two decades ago. We were charged with providing advice on how to avoid future unreadiness - future "hollow armed forces."

When we state that the readiness of today's forces is acceptable, that does not mean that we did not find "pockets" of unreadiness. Most of these "pockets" are a result of changes taking place in the armed forces and the turbulence created by these changes. However, we observed enough concerns that we are convinced that unless the Department of Defense and the Congress focus on readiness, the armed forces could slip back into a "hollow" status.

To prevent such back-sliding we believe that the following actions, some ongoing and planned, need to be supported:

1. Resources to access, train, educate, retain high quality personnel. Maintaining the quality of our people should continue to be the Department's top priority.

2. A system that adequately funds contingency operations. The Department should work with Congress in developing and institutionalizing a contingency funding system which adequately funds contingencies and does not divert, delay or disrupt the flow of funds needed to maintain readiness of forces not engaged in such operations.

3. Development of measurement systems that better equate readiness to resources - present and future. The Department should take actions to develop and improve the set of analytical models and other means that can be used to help better understand the relationship between funding allocation decisions and future force readiness.

4. Sustainment readiness addressed with efforts equal to those involved in assessing unit combat readiness. The Department should develop and implement procedures and practices to address sustainment readiness issues at the same level of detail and with the same emphasis normally used when addressing combat readiness. (To include rationalization of the role of Reserve Components and the criticality of strategic mobility.)

5. Increased emphasis on Joint and Combined readiness and requirements, including development of joint mission essential task lists. This is one of the actions the Department should pursue to provide greater emphasis on the joint forces perspective of readiness.

6. Development of an OSD C4I architecture and greater involvement by theater CINCs in the readiness of space assets that influence their combat capabilities. There is a need for rapid development and implementation of a joint C4I architecture and doctrine. It should include readiness of satellite components of the C4I system to ensure it can support joint contingency operations. The theater CINCs should be involved throughout the process.

7. Enhanced use of modeling and simulation. Modeling and simulation technology should be exploited to enhance joint and combined training and doctrine. It offers a tremendous opportunity to leverage our existing training at all levels through enhancement or even replacement where appropriate after thorough review.

8. Emphasize offensive and defensive measures relating to Weapons of Mass Destruction. Nuclear readiness requirements should be based on evolving nuclear policy guidance. The Department must ensure that U.S. forces are prepared to conduct operations (offensive and defensive) in a nuclear, biological, and/or chemical environment. That includes the conduct of national-level command and control exercises involving joint military and civilian leadership and their staffs to ensure the ability of military and civilian leadership to carry out their roles and provide confidence in the continued effectiveness of nuclear control and security means. Of the triad, the area that requires greatest attention is biological.

9. Continued refinement of the roles of SECDEF/CJCS/SVCS/CINCS in readiness matters. The environment and processes are changing. The Department should re-examine the readiness oversight and management roles of the Office of the Secretary of Defense, the Office of the Chairman of the Joint Chiefs of Staff, the Services, and the CINCs. In many areas of readiness, responsibilities are clear. However, in the case of resource allocations to support joint readiness, and planning for readiness to conduct joint operations, these responsibilities are less clear.

10. A system to ensure that BRAC 95 has top down guidance regarding ultimate basing, depots, etc., as well as a funding system to permit rapid write-off by the Defense Department of selected bases. Guidance should be applicable to all Services with a focus on expediting elimination of excess infrastructure.

11. Implementation of ongoing Defense Science Board proposals that have an impact on readiness - Acquisition, Depot Maintenance, Defense Manufacturing, and the special Study for the USD (P&R) on Training Readiness. These specific reports address issues and provide recommendations which directly impacts on readiness today and in the future.

12. We have a special concern about future readiness. The reduction of resources for acquisition raises serious questions about the capabilities of our forces to respond to the challenges of the 21st Century.

The above list does not include all of our recommendations. However, it highlights the areas that we believe will pay significant dividends in future readiness, and particularly in future joint and combined readiness.

There are several policy areas that will affect future readiness which need immediate clarification. The Department of Defense and the Congress need formal publication of a National Security Strategy from the White House that defines the administration's security policies in this changed world. We found it difficult to evaluate the adequacy of the readiness of certain forces when no specific National Security Policy

has been provided. The effect of this void is the inability to answer the question "to do what?" about certain elements of the armed forces. We used the defense strategy that served as a basis for the Defense Department's Bottom-Up Review to evaluate conventional force readiness. We did not attempt to evaluate the adequacy of those forces. Such evaluation needs to be done in conjunction with future simulated and real war games.

In addition, we concluded that the key indicators that measure readiness and provide early warning of potential readiness problems are strongest as they relate to a unit's current readiness within its Service and weakest as they address future and joint readiness.

It's well to remind those interested in military readiness that this matter has always been the near exclusive responsibility of the uniformed military - with the Services playing the dominant role. This process is changing. Now, the SECDEF, CJCS, and CINCs are all more involved in not only evaluating, but resourcing, joint and combined readiness. This Task Force has had unprecedented freedom to review readiness matters. Secretaries Aspin and Perry, General Shalikasvili, and the leadership of the individual Services have been most supportive in this area.

The nation celebrated the 50th Anniversary of D-Day during the preparation of this report. It is well to remember that five years before D-Day the United States had very hollow forces. Many servicemen died as a result of our unreadiness. Readiness can not be taken for granted. History has shown how "pockets" of unreadiness rapidly grow and create "hollow" forces. We believe that attention to the issues raised in this report, and the continued support of Congress for a ready responsive force will give us a chance to prevent the shortcomings of the past from happening again as the military force evolves in response to the demands of our unsettled world.

DEFENSE SCIENCE BOARD TASK FORCE ON READINESS

FINAL REPORT

I. INTRODUCTION

The Secretary of Defense established the Defense Science Board (DSB) Task Force on Readiness, known as the "Readiness Task Force" (RTF), to provide him with advice, recommendations, and supporting rationale which address the following areas:[1]

- Key indicators for measuring readiness and candidate methodologies for providing early warning of potential readiness problems, including assessments of:
  - -- How the Department deals with readiness concerns; and
  - -- The adequacy of existing readiness reporting systems.
- Other matters affecting individual and collective readiness, such as: structure, lift, sustainability, active-reserve mix, retention, training, and the use of civilians and coalition personnel support.

Members of the Readiness Task Force are:

General Edward C. Meyer, USA (Retired), Chairman
General Maxwell R. Thurman, USA (Retired)
General Larry D. Welch, USAF (Retired)
Admiral Huntington Hardisty, USN (Retired)
Admiral Robert L. Long, USN (Retired)
General Joseph J. Went, USMC (Retired)
Lieutenant General Julius W. Becton, Jr., USA (Retired)
Lieutenant General Herbert R. Temple, Jr., ARNG (Retired)

The Readiness Task Force reviewed a broad range of readiness topics and looked in depth at numerous specific aspects of readiness. This Final Report of the Readiness Task Force highlights areas that we believe the Department of Defense should focus on to provide the ready forces needed, today and tomorrow, to respond to likely challenges in the changing world environment.

Over the past year, in conducting its activities, the Readiness Task Force has met as a group frequently, and its members have visited numerous sites, individually as well as in groups, to gather information for this report. Significantly, the Secretary or Deputy Secretary of Defense met with us at most of our group meetings so that they could take

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[1]The Defense Science Board Task Force on Readiness was established on May 19, 1993 in Terms of Reference signed by the Under Secretary of Defense for Acquisition and Technology.

timely action, rather than wait for formal reports. In addition, we met with the Chairman of the Joint Chiefs of Staff and the Service Chiefs as we developed our findings and recommendations. We also have maintained a dialog with the GAO as they conduct a Congressionally directed effort to define key military readiness factors. As a result of these collaborative efforts, steps to implement many of the recommendations made in this report already are underway.

The points below establish the context to help understand the observations, concerns and recommendations in this Final Report.

- Current Status of Military Readiness. Although there are some downward indicators, we found the general readiness posture of our military forces to be acceptable. Many of our current readiness concerns are a direct result of turbulence associated with the drawdown in our force structure, complications associated with changes in strategy, and changes in resource allocations stemming from budget reductions. We would expect such turbulence to subside as we adjust to the new defense environment. Civilian and military leaders are concerned, however, that, unless we take preventive or corrective actions, continuing force reductions, strategy changes, and budget reductions could cause serious readiness degradations. We think these are legitimate concerns.

- Current Readiness Reporting Systems. Current readiness assessment systems, while having shortcomings addressed in this report, were designed to focus on specific readiness resources (e.g., personnel, equipment, training, supplies) that are critical to achieving unit readiness. Other systems provide general information identifying major shortfalls in resources that would inhibit responses to contingencies. This information, coupled with our commanders' experienced judgments, provides a useful assessment of current unit readiness.

- Readiness Task Force Focus. Taken in the aggregate, our recommendations should serve as a basis for adjustments in the way the Department of Defense oversees and manages the readiness of its military forces. While the military Services should continue to exercise the readiness responsibilities they have today, they should take steps that will help the Department to:

  1. Bring a greater joint forces perspective to readiness, in addition to the largely single-service unit perspective we have today;
  2. Develop ways to project the future readiness implications of our policy and budgetary decisions, rather than waiting until such decisions have been implemented in order to determine whether the readiness of our forces has been degraded;
  3. Develop better ways to link readiness concerns to our policy development and resource allocation processes; and

4. Integrate the readiness oversight and management roles of the Office of the Secretary of Defense, the Office of the Chairman of Joint Chiefs of Staff, the CINCs and the Services.

This Final Report addresses our concerns in each of these areas and suggests approaches for dealing with them.

II. SCOPE -- READY TO DO WHAT?

The Readiness Task Force focused on the readiness management and oversight process. We did not look in detail into: acquisition, technology, or industrial base issues related to readiness (which are being examined by separate Task Forces of the Defense Science Board); the adequacy of forces to carry out the tasks required in the Bottom-Up Review; or the readiness of the nuclear forces to carry out the nuclear forces strategy pending the outcome of the Nuclear Posture Review.

A major challenge has been to answer the question -- "Ready to do what?" This is largely due to the absence of a current National Security Strategy and its follow-on the National Military Strategy. The question was temporarily answered in September 1993 with the release of the Bottom-Up Review (BUR), which addressed the needs for conventional and unconventional forces. Our Task Force has evaluated the conventional and unconventional forces based on their readiness to respond to the three functional areas defined in the Bottom-Up Review:

- Rapid response to two nearly simultaneous major regional conflicts anywhere in the world with major land, sea, air, and space forces.
- Rapid response to small contingencies, sometimes requiring highly precise operations, with a very high probability of success from the outset of the operation.
- Special capabilities demanded by special situations in peacekeeping, peacemaking, humanitarian missions, etc.

The Services and the Chairman of the Joint Chiefs of Staff are in a continuing process of evaluating the adequacy of the forces necessary to carry out the requirements identified through the Bottom-Up Review. A recent observation by General Luck indicating a need for 400 thousand troops reinforces the need for a reappraisal of the requirements defined in the BUR. The Chairman is planning a major war game to evaluate the BUR this Fall. This war game should afford the opportunity to validate CINC requirements. Moreover, in light of the importance of joint and combined operations in the protection of U.S. and allied security interests, both the FY 1995-99 and FY 1996-01 Defense Planning Guidance (DPG) directed the CINCs to assess joint readiness in the context of the Bottom-Up Review and to provide advice on readiness matters in the Program and Budget process.

III. CURRENT FACTORS AFFECTING READINESS

The Readiness Task Force's review took into account the impacts on readiness of the following changes:

- The world situation and threat perception;
- National military strategy;
- Funding levels;
- Roles and missions;
- End strengths - military, active, reserve, civilian;
- Organization of force structure;
- Production, availability and access to strategic resources;
- Personnel quality of life and morale;
- Basing (overseas and CONUS); and
- Supporting infrastructure.

Many of these changes have had a negative impact on near-term readiness, and affect each of the Services differently. Examples are:

- Army -- Increasing the practice of borrowing military manpower to conduct tasks unrelated to their military missions, and increasing numbers of mismatches between job requirements and service-member skills ("MOS mismatches") due to personnel turbulence;
- Navy -- Providing operating funds for bases that did not close as scheduled, even though O&M funds for those bases were removed from the budget;
- Air Force -- Shortfall in availability of critical spare parts due to turbulence associated with the rapid drawdown.
- Marine Corps: Lengthy or frequent contingency deployments ("high OPTEMPO") that prevent units from participating in required training activities.

Until this change-related turbulence declines, units in the field will inevitably be subject to some degraded readiness. Turbulence is the number-one enemy of cohesiveness in units and concomitant readiness. During this period of change, there will be various instances of degraded readiness and anecdotal evidence of readiness problems from the field will be common.

There are several changes which should have a positive impact on readiness. In addition to the creation of our Task Force, the Department has undertaken additional initiatives to ensure the continuing readiness of U.S. military forces, consistent with our national security requirements:

- Made readiness the Department of Defense's top priority and included readiness reporting requirements in the Defense Planning Guidance;
- Created the Senior Readiness Oversight Council. This council, chaired by the Deputy Secretary of Defense, and co-chaired by the Vice-Chairman of the Joint Chiefs of Staff, is the senior-level DoD forum for readiness policy and oversight.
- Created the Readiness Working Group. This group, co-chaired by the Deputy Under Secretary for Readiness and the Joint Staff Director for Operations (J-3), provides the primary support for the Senior Readiness Oversight Council.
- Established the position of Under Secretary of Defense for Personnel and Readiness. The Office of the Assistant Secretary of Defense for Force Management and Personnel was reorganized and renamed, and then elevated to Under-Secretary status.
- Established the position of Deputy Under Secretary of Defense for Readiness. This new position in the Office of the Under Secretary of Defense for Personnel and Readiness is the focal point on the OSD staff for readiness issues and, as previously noted, co-chairman of the Readiness Working Group.
- Increased Service focus on unit readiness monitoring capabilities.
- Conducted readiness off-site meetings (three-days of meetings chaired by the Deputy Secretary of Defense), which resulted in plans to develop analytical tools that relate resources to readiness.
- The Chairman, JCS, has taken the initiative and responsibility for assessing readiness of US forces to execute assigned missions.
- The Vice-Chairman, JCS has expanded the focus of the Joint Requirements Oversight Council (JROC) beyond it's normal acquisition review function to include readiness issues. The JROC is comprised of the Vice-Chairman and Service Vice-Chiefs; and
- The Vice-Chairman, JCS, also initiated the Joint Warfighting Capability Assessment process, which will assess readiness operationally and programatically, current and future, with a focus on mission accomplishment.

Additionally, Congress has demonstrated continuing support for readiness in the budget process.

IV. LEVELS OF READINESS

Based on U.S. security requirements posed by the Major Regional Conflicts (MRCs), small contingencies, and special capabilities noted in Section III above, the Readiness Task Force, drawing on JCS definitions, discussions with senior civilian and military defense leaders, and our members' own experiences, found it useful to consider the three readiness levels defined below:

1. Unit readiness -- the level of preparedness of units to execute assigned missions with available weapon systems or support systems. The Task Force specifically addressed both current unit readiness and indicators of future unit readiness.

2. Joint (and combined) force readiness -- the level of preparedness of Combatant Commands and Joint Task Forces to integrate ready combat and support units into an effective joint and combined operating force.

3. National readiness -- the level of preparedness to support the national military strategy is the broadest level of readiness, which includes the traditional four pillars of military capability: readiness of military units (and joint and combined forces readiness), sustainability in combat, modernization of forces, and force structure.

A. Elements of a Readiness System

The Task Force determined that managing and assessing the first ("unit") and second ("joint force") levels of readiness requires a system that contains at least the following five elements:

- Defined areas of readiness (e.g., equipment, personnel, training, C4I, etc.);
- Clearly assigned responsibility and criteria for those areas of readiness;
- Measures of readiness in each of the defined areas;
- A reporting and verification system; and
- A system of review by the various levels of authority responsible for allocating resources to achieve readiness and/or decisions to employ ready forces.

Our Task Force assessed existing readiness systems as defined by the above five elements. Further, we made judgments about how well the current readiness system works. In this Final Report we have made some specific comments on the state of readiness as defined, reported, and reviewed by the existing system.

B. Current Unit Readiness

There currently exists a well-defined reporting system to evaluate the current readiness of combat and support units. It embraces the five elements of a readiness system as defined above. For example, the elements of unit readiness include personnel readiness, training readiness, and equipment and supply readiness. Responsibility for each of these areas is clearly defined within the military Services' statutory responsibility to organize, train, and equip forces. The Services have mature measurement and reporting systems for units, and results are evaluated and validated through readiness inspections, exercises, and contingency after-action reviews. Unit readiness reporting is reviewed at multiple levels, including the Office of the Joint Chiefs of Staff and the Office of the Secretary of Defense. While shortfalls exist in current readiness, generally stemming from having to make choices among limited resources, the current unit readiness system is mature and well understood at multiple levels of command, management, assessment and review.

C. Future Unit Readiness

The Department's systems for predicting future unit readiness are significantly less mature and less comprehensive than those for reporting current unit readiness. For example, current reporting systems include the unit commander's forecasts of near-term changes in each of the readiness measurement areas. Commanders often base these forecasts on short-term and anecdotal considerations with little benefit of analyses of quantified data. While there are some mature, validated systems in use within the Services for assessing the impact of current budget allocations on future readiness, there is no comprehensive, aggregated system of assessment, reporting, and reviews useful to senior OSD, JCS and CINC decision makers.

Early in our effort, we attempted to identify key indicators that could serve as useful "red flags" for senior defense managers to signal potential problems affecting future readiness. While such warnings could be identified in each readiness measurement area, some problems may not be evident until it is too late to take preventive actions. Therefore, we believe it is more useful to the decision maker to have valid longer-range predictions of impacts expressed in terms similar to those used to assess current readiness. Initial successes in this area give us high confidence this can be done.

For example, the Air Force uses a mature, calibrated system that forecasts future equipment readiness in terms similar to those used to describe current equipment readiness -- weapons system mission-capable rates and sortie-generation capability. This Air Force system to forecast equipment readiness uses input variables such as: dollars available to buy spare parts, depot and unit logistics, manpower, systems reliability, and maintenance practices. The outputs are mission-capable rates and sortie-generation capability by system. While this system does not predict readiness by unit, predicting readiness by weapons system is useful for both budget allocation and future

force readiness purposes. These sortie generation measures would afford the Joint Staff/CINC's staffs the opportunity to more effectively evaluate War Plans and pursue the resultant planning and programming requirements.

Other systems, which exist or are being developed, such as the Army's system to forecast personnel levels, offer likely candidates for upgrade to achieve the level of comprehensiveness needed to give useful predictions of future readiness in the other measurement areas. However, there is, at present, no requirement for reporting and review of this projected data at OSD, JCS, or CINC levels. Efforts are underway to develop such capabilities through the Joint Requirements Oversight Council (JROC) and the Readiness Working Group (RWG).

D. Joint (and Combined) Forces Readiness

Our Task Force assessed the current state of the Department's ability to measure joint readiness as poorly defined. Specifically, there is no clear definition of areas of joint readiness (analogous to the elements of unit readiness) that incorporates the following (as well as other) essential elements:

- Unit readiness;
- The C4I system;
- Deployability of forces;
- Theater or JTF logistics support;
- En route and theater infrastructure support;
- Joint and combined training and exercises;
- Theater-allied relationships; and
- Nuclear, biological, and chemical (NBC), command and control.

For "unit" readiness, the elements of readiness, responsibility, measures, reporting and reviews are well defined. Responsibility for all elements of readiness is assigned to a single organization (a military department). In contrast, such a clear assignment seems impractical for joint force readiness. Instead, it is likely to be more useful to define separate responsibility, measures, reporting, and review for each element of joint forces readiness.

For example, there is general agreement that CINCs who are Commanders of Combatant Commands are largely responsible for the elements of joint forces readiness. There is a requirement that these Commanders report periodically to the Chairman, JCS on a range of subjects that pertain to joint forces readiness. However, there is no defined, comprehensive approach to assigning responsibilities and matching control of resources to these responsibilities. Further, for most elements of joint forces readiness, the measures are not specific nor are there requirements to validate the measurements

through assessments comparable to unit readiness inspections. There are general requirements for Combatant Commanders to report on a wide range of readiness issues to the Chairman and Secretary of Defense, and for the Chairman to provide a separate readiness assessment to the Secretary of Defense. The current system, however, is not well designed to assess current joint force readiness.

We also reviewed the ability to evaluate joint readiness over time. The Service systems are in the nascent stage of developing predictive means for measuring future readiness, and that predictive capability is limited predominantly to the weapons systems area. Translating these means into useful methods for predictive joint readiness will require an all out effort by the entire defense establishment.

E. Readiness to Support the National Military Strategy

In order to determine how capable our joint forces are to carry out specific contingencies, simulated war games must be conducted which stress the entire range of military capabilities - (combat, mobility, support, space, etc.). CINCs have run exercises of this nature in the past; however, the adequacy and readiness of the support systems has not been exercised for some time.

When the National Security Strategy and the resultant National Military Strategy are developed and when there is general agreement on standards for joint readiness, it will be essential to conduct several simulation assisted war games to aid in determining the adequacy of the resources to carry out the strategy.

V. FUNCTIONAL AREA ASSESSMENTS

In addition to the broad readiness areas of interest already addressed, the Task Force assessed specific functional areas affecting individual and collective readiness to include:

- Personnel
- Funding OPTEMPO
- Sustainment
- Joint/Combined Training Doctrine
- Joint C4I/Space
- Modeling and Simulation
- Reserves
- Mobility
- Weapons of Mass Destruction
- Infrastructure/Facilities
- Medical

The assessments for these functional areas, to include specific observations, concerns, and recommendations, are provided in this section starting with "Personnel".

PERSONNEL

I. INTRODUCTION

Throughout the past year there has been one theme which consistently cut across all of the various readiness functional areas: Quality Personnel. Without question, maintaining the quality of our people should be the Department's top priority. As the size of our Armed Forces declines, it is imperative that the quality of the force be sustained. The rapid downsizing has had several deleterious effects on our personnel system, from potential recruit to the career service members. Overall, the propensity of America's youth to serve in the Armed Forces, as measured by the Youth Attitude Tracking Study (YATS) has declined in the past three years. Likewise, the propensity of parents and other influencers to recommend military service to young people is decreasing. These reductions occur at a time when the relevant - enlistment eligible - cohort is at its lowest point in the decade. The improving economy and increasing employment will also increase competition for quality youth. Recruiting resources, particularly advertising resources, have been significantly reduced over the past several years. As accession requirements, suppressed during the drawdown, increase it will be imperative to properly resource recruitment efforts (e.g. advertising, recruiters, etc.) to sustain the input of quality personnel to an All-Volunteer Force. Toward that end, in April of this year, a Senior Panel on Recruiting was formed, chaired by the Deputy Secretary of Defense, comprised of the Secretaries of the Military Departments, Chairman of the Joint Chiefs of Staff, and with the Undersecretary of Defense for Personnel and Readiness as executive secretary. The efforts of this panel will be pivotal in continuing a successful recruiting program.

Personnel turbulence resulting from the rapid force reduction has placed a tremendous burden on the Department's personnel management system. As each unit is reorganized or eliminated, personnel must be retained, reassigned, retrained, or separated. Based on personnel inventories relative to grade and skill requirements, we are paying some people to leave the military and others to stay. These actions have clouded the Department's ability to accurately project retention. RAND's ongoing Enlisted Career Retention Indicator Project at the tasking of the OUSD P&R's Military Personnel Policy Office should provide added insight.

Added turbulence in personnel management due to the rapid down sizing makes it imperative that we be able to more accurately forecast manpower and personnel inventories. The Services are all pursuing enhancements to their models for personnel planning. It would be appropriate for OSD to take the lead in coordination/integration in this area analogous to efforts underway in the logistics modeling world. The Air Force's ULTRA model development offers an excellent initial focus for this action.

Key to maintaining a viable All-Volunteer Force are equitable pay and a stable retirement system. While the widening gap between military pay and the Employment

Cost Index (ECI) receives a great deal of press, the fact that recruit quality and retention levels remain at near all-time highs contradicts the "gap's" credibility. The "Defense" ECI, a recently introduced alternative index developed by RAND, shows a gap closer to zero. Most likely the truth lies somewhere in between. However, this uncertainty needs speedy resolution for it is clear that sustained caps on military and civilian pay could significantly damage our ability to properly recruit and retain quality personnel in the future.

PERSTEMPO, or the amount of time units (and by inference individuals) are gone from home location, has been impacted by the rapid force drawdown. This downsizing accompanied by the withdrawal of our forces from overseas bases back to CONUS and a higher level of contingency operations has increased deployment frequency and placed new strains on our personnel. All Services have been impacted, but the Army and Air Force, whose forces have been traditionally forward-deployed, are experiencing the greatest shock from this phenomenon. Family separation has always been a major, if not the number one retention variable, and the Navy learned long ago the necessity for explicit PERSTEMPO standards. The Marine Corps has recently completed a study of the issue and is considering the applicability of a similar policy. The Army and Air Force should take heed and follow suit.

Emerging data indicates an increased suicide rate and a potential increase in family violence among military members. The ongoing downsizing, resultant turbulence, and increased PERSTEMPO rates are certainly contributing factors and this situation requires the continued vigilance of the Department.

Another critical personnel area which requires continued vigilance is equal opportunity - that is the prevention of discrimination based on race, color, religion, sex, national origin, age or disability. While the Department's efforts have led the way for our nation, equal opportunity is a fragile area and one in which commanders must pay continued attention if they intend to be successful in carrying out any mission. We must never allow ourselves to take equal opportunity for granted.

Finally, a major factor in ensuring the Department's continued ability to recruit and retain quality personnel is the support and cooperation of national leadership. The morale of our personnel and their subsequent retention decisions will be negatively impacted without the continued positive reinforcement of national support which must start with the Commander-in-Chief.

II. OBSERVATIONS/CONCERNS

Current

1. Managing the force level transition/downsizing needs to be accomplished with the least adverse impact on current readiness.

- Relief from DOPMA and senior enlisted grade caps during drawdown is necessary.

- Borrowed military manpower results in a loss of unit cohesiveness, reduced training efficiency, and lowered readiness.

2. Adequate resources for recruiting and training base support are critical element in personnel readiness and must be maintained.

3. Competitive and equitable compensation packages are essential to retain quality personnel. Bonus/incentive program adjustments for critical skills, will likely have to increase after the drawdown.

4. Demonstration of a real commitment to "people first" programs including continued emphasis on retention of quality of life programs for service members and their families (e.g. adequate military housing/housing allowance system, retention of commissary/exchanges, no decrease in type - or increase in cost - of medical service offered) is key toward easing concerns over job security and stability.

5. Careful management of OPTEMPO and the related PERSTEMPO, especially for critical skills and units is necessary. Excessive family separation results in lower morale, poor retention, and reduced readiness.

    - Development of a PERSTEMPO policy by the Army, Marine Corps and Air Force could enhance personnel readiness.

<u>Future</u>

Future concerns include:

1. Developing and implementing methods to reverse the propensity-to-serve trends or developing adaptive techniques to permit coping with the trends.

2. Conducting analytical studies, using historical personnel databases, to develop a better understanding of the implications of the trends and necessary actions.

3. Developing a mechanism to ensure appropriate pay and a stable retirement system.

4. Sustainment of national support for the changing DoD mission.

5. Continuing emphasis on retention of quality of life programs for Service members and their families (e.g. adequate military housing/housing allowance system, retention of commissary/exchanges, no decrease in type or increase in cost official service offered).

III. RECOMMENDATIONS

In view of the observations and concerns, the Department should:

1. Ensure personnel inventories/strengths are stabilized to meet requirements.

2. Provide adequate resources to recruit and retain quality personnel.

    - Support the Senior Panel on Recruiting's efforts to effectively resource recruitment activities.

    - Support ongoing efforts to improve DoD's ability to accurately project retention.

3. OSD should support continued efforts to coordinate/integrate the Services' attempts to enhance their personnel planning models.

4. Accurately determine the difference between military pay and the appropriate civilian pay index.

5. Direct the Army, Marine Corps, and Air Force to follow the Navy's lead and develop PERSTEMPO standards consistent with their projected missions.

6. Develop means to ensure DoD continues stressing and implementing all facets of equal opportunity.

7. Emphasize importance of personnel issues in future dialog with national leadership and the American public in general.

FUNDING/OPTEMPO

I. INTRODUCTION

Funding for operations related to training and military engagements (operational tempo - OPTEMPO) supports such things as aircraft flying hours, ship steaming days and tank/vehicle miles. Overall this funding has generally been adequate, although partly financed at the expense of modernization and force infrastructure. However, two major factors can impact the adequacy of this OPTEMPO funding: 1) unplanned contingencies toward which additional flying hour, steaming day, or tank miles must be expended, and 2) increasing competition from other Operations and Maintenance Account (O&M) requirements.

Unplanned contingency operations drive up costs and require resources, both financial and people, to be realigned. The expenditure of O&M funds for contingencies simply means that they are not available for their intended use. Those O&M dependent functions that are most easily deferred or canceled include training, regularly scheduled preventive maintenance, and real property maintenance. While the disruptive nature of contingencies cannot be overcome, the funding issue can be ameliorated. In FY 94, a timely Congressional Supplemental provided the funding required to fully support projected operations in Somalia, Bosnia, Iraq, and Haiti. Had this action not been taken Services would have been forced to curtail OPTEMPO and/or other required O&M planned expenditures. Had the Supplemental been delayed to late in the fiscal year required training opportunities would have been missed altogether directly reducing readiness. A standard operating procedure needs to be developed to ensure timely funding for emergent contingency operations. One of many possible financing options might be the use of contract authority for certain contingency operations such as sealift. This potential needs to be explored.

An additional facet of contingency operations funding is the reimbursement for performance of United Nations operations. While problematic in the past, this issue currently appears on the way to proper resolution, thanks to the combined efforts of the Comptroller, Joint Staff, and State Department.

As the force drawdown progresses and pressure to reduce the Department's Budget continues, both the size and resiliency of the O&M Account have been significantly reduced. To the extent that unrealized "efficiencies" (e.g.-DMRDs, BRAC closing delays, etc.) occur, funds must be shifted from other O&M areas to pay fact-of-life bills. OPTEMPO dollars can readily be, and routinely are, shifted to cover utility bills, port operations, etc.. Fencing OPTEMPO, while a potential solution, is considered unacceptable due to the limits it would place on Commanders who must deal with an imperfect marketplace and constantly changing fiscal environment.

Finally, there are two additional issues directly tied to OPTEMPO, which can significantly effect the readiness of our forces. First, OPTEMPO intensity levels, if sustained beyond normal for extended periods, can actually reduce the ability of our forces to train for all assigned missions. For example, while air dropping supplies in Bosnia would seem to provide excellent training opportunities, if done to the extent it precludes performance of other required mission training will negatively impact readiness. Secondly, too much OPTEMPO means excessive time away from both home station and family. Family separation is cited as one of the major detriments to personnel morale. It is imperative that the Department properly manage this aspect of OPTEMPO.

II. OBSERVATIONS/CONCERNS

Current/Future

1. Implications of a more CONUS-based force on OPTEMPO requires increased analysis and careful management.

2. OPTEMPO/PERSTEMPO for unique skills and units must be carefully studied.

3. A long-term funding plan is needed for unscheduled operations outside of the Service's O&M Accounts (to include United Nations operations).

4. Unrealized "efficiencies" (e.g.- DMRs, BRAC delayed closings, etc.) result in OPTEMPO funding being shifted to pay fact-of-life bills.

5. Fully funding OPTEMPO at some expense to modernization and force structure accounts is appropriate at least as a temporary measure.

III. RECOMMENDATIONS

In view of the concerns and observations the Department should:

1. Develop in concert with the Congress and implement a system that adequately responds to Contingency funding requirements. Investigate funding alternatives such as the potential use of contract authority for certain contingency operations such as sealift.

2. Fully fund OPTEMPO requirements within O&M account but continue to allow each service current management flexibility.

3. Retain flexibility in expenditure of OPTEMPO funds. Avoid fencing OPTEMPO which would degrade commanders' ability to deal with the dynamic fiscal

environment. Appropriate accounting feedback procedures should be developed and implemented.

4. Give greater visibility to the impact of contingency operations on quality training and a ready force.

5. Investigate tiered readiness as a means of managing OPTEMPO.

6. Establish Army, Marine Corps, and Air Force OPTEMPO/PERSTEMPO criteria, which with OSD support, would give visibility to management implications of a more CONUS based force to include unique skills and units.

7. Investigate 1993 Marine Corps OPTEMPO study for its applicability in principle to Army and Air Force.

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SUSTAINMENT

I. INTRODUCTION

Sustainment of warfighting capability depends on modernization, reliability, maintenance and logistics. Upgrades or incremental improvements to proven systems endow them with greater reliability, and hones their technological advantage. This increases preparedness by allowing DoD to avoid costly and long lead-time modernization programs. Upgrades fill key deficiencies until next generation systems, currently in various stages of R&D reach fruition.

Some equipment and weapons require replacement rather than upgrade either due to modernization or reliability issues. Maintenance requirements become a key indicator of preparedness of weapons and systems. Once maintenance becomes prohibitively expensive or too frequent, readiness suffers and replacements are required.

The Task Force noted the growing backlog in deferred maintenance and the efforts of the Services to manage it. All Services indicated the presence of a maintenance backlog and only the Navy thought it was manageable. The Air Force is watching it closely and the Army and Marine Corps expressed concerns about the impact of the maintenance backlog, especially on their Reserve components. A number of factors serve as catalysts for the maintenance backlog (unscheduled OPTEMPO, availability of spare parts, availability of properly trained maintenance personnel to include Full Time Support personnel in Reserve component units). Of particular concern is the projected growth of the backlog over the POM years.

Among other logistics sustainment issues, the Task Force expressed concern about the status of prepositioned stocks and the availability of sufficient quantities of smart weapons to support future contingencies. Opportunities to practice "Just in time" inventories should be pursued. There is also concern that Combat Support/Combat Service Support units will run out of equipment in the two nearly simultaneous MRC scenario. It was noted that sustainment of Reserve component forces pre and post-mobilization requires attention.

The Task Force focused on identifying analysis methods/models to better understand the relationship between logistical funding allocation decisions and future force readiness. Three systems (FAMMAS, TLAM, ALAM) used by the Air Force to link resources with readiness appear to hold promise for DoD-wide application. These models have been used by Air Force Logisticians to forecast peacetime mission capable rates and wartime sustainability estimates for each aircraft in the Air Force inventory with an accuracy of +/- 2% over a three year time line and +/- 5% forecasting the six year program.

Using data provided by the Air Force, Commanders and CINCs could evaluate contingency plans against the forecasted sortie generation rates to determine adequacy of air support for combat operations. This concept would then forge the links between resource allocation (spaces, repairables, DBOF funding percentages, and maintenance rates) in peacetime and wartime sortie availability to support military operations.

Use of the models by the other Services is being investigated by the Service DCSLOGs and monitored by the DUSD for Logistics. All Services have agreed to examine relevance of the models (using Service aircraft) to the Service's logistical procedures. Navy has a model for aircraft which also shows excellent potential.

After the aircraft trial runs have been completed, the Army has agreed to use the models to evaluate sixteen land combat systems including the Abrams Tank and Bradley Fighting Vehicle. The Marine Corps will coordinate their efforts for land systems with the Army.

This approach offers the potential for the development of a DoD-wide set of models that measures fleet operational availability for both air and ground systems within each Service as a direct function of the allocation of funds and labor. This same information can be used by the Commanders and CINCs to evaluate war plans and contingency operations.

II. OBSERVATIONS/CONCERNS

Current

1. Increased CINC participation in the requirements determination and resource allocation process is warranted.

2. Stocks of PGMs are inadequate.

3. Prepositioned stocks' disarray due to Desert Shield/Desert Storm adversely impacts current readiness.

4. The availability of Combat Service (CS)/Combat Service Support (CSS) equipment to support two nearly simultaneous MRCs requires assessment.

5. The CS/CSS units' spare parts availability/-mismatch to support two nearly simultaneous MRCs (turbulence issue)must be resolved.

6. The maintenance backlog is growing due to "operations other than war" OPTEMPO, and turbulence (drawdown of civilian workforce, shortage of civilian workforce, shortage of reservists maintenance personnel, etc.).

6. Measurement of the maintenance backlog during the drawdown and what that backlog means with respect to readiness are not readily understood.

7. CINCs and Commanders can use Air Force and/or Navy modeled sortie generation data to determine adequacy of air support for combat operations.

8. Existing Service analysis models offer the potential to better understand the linkage between resource allocation in peacetime and wartime readiness.

Future

Future concerns include:

1. CS/CSS units' equipment availability for two nearly simultaneous MRCs?

2. CS/CSS units' spare parts availability/-mismatch for two nearly simultaneous MRCs?

3. Continued growth of maintenance backlog over the POM years - validation of its impact.

III. RECOMMENDATIONS

The Department should:

1. Leverage existing Air Force and other Service resource/readiness models as appropriate to develop a DoD-wide set of models that measures fleet operational availability for air, ground and sea systems within each Service as a function of funding and labor allocation.

2. Evaluate historic, current, and projected maintenance backlogs to determine their true value in forecasting readiness. Include the impacts of the following major variables in the analyses:

   - unscheduled OPTEMPO
   - availability of spare parts
   - availability of properly trained maintenance personnel to include Full Time Support personnel in reserve component units

3. Expedite emplacement of prepositioned stocks.

4. Ensure sufficient quantities of smart weapons exist to support the prospective MRCs and meet the needs of the warfighting CINCs.

5. Assess status of CS/CSS units' equipment, and ability to support the two nearly simultaneous MRC scenario.

6. Establish pilot programs which involve CINCs in the development of joint requirements to improve Joint and Combined readiness. Consideration should be given to USACOM and CENTCOM as the pilot entities. They should be provided a small technical capability to assist in evaluating new technologies that might have an effect upon their Joint and Combined war fighting capability. As appropriate, these CINCs might be involved in a JROC process that looks broadly across functional capabilities with the greatest impact on joint operations.

JOINT/COMBINED TRAINING & DOCTRINE

I. INTRODUCTION

The Task Force strongly supports the ongoing efforts to develop the Joint and Combined Task Force environments. The new world setting of uncertain geopolitical circumstance requires that "real" readiness be measured by a unit's ability to operate as part of a joint or combined task force. However, proportionately, resources for joint and combined exercises have not been significantly increased.

The Services have been quick to recognize the continued need for highly trained forces to be responsive to the myriad of missions possible in an uncertain pol-mil environment and wide ranging US strategic interests. Training OPTEMPO has been protected throughout the FYDP even at the expense of other important functions. With new challenges and declining budgets, there is a need to maximize the potential for training realism as well as training relevancy. Attention is needed to ensure that the potential for use of distributed simulations to enhance training is exploited. High priority must also be given to protecting the capability to meet short and mid-term surge Reserve joint training requirements.

While improvements have been noted since Desert Storm, the Services' commitment to the joint and combined training environments require greater emphasis. Significant focus has been placed on Service unique training activities, where responsibilities are clearly defined. However, jointness must prevail in the future. To be ready to participate more effectively with short notice in joint operations, the Services should be forward looking and create opportunities to incorporate jointness in their training and doctrine. Service training facilities must also serve joint forces.

Caution must be exercised to ensure that joint training is compatible with Service Title X training requirements and individual or unit proficiency needs. It is also critically important to review the roles and functions of Services and CINCs as they relate to joint training. With the advent of USACOM and the JWFC, the prerogatives and responsibilities of all concerned have been fundamentally changed and are now less well defined. In addition to the impact on Service/CINC roles, relationships of the CINCs to each other have also changed. CINCs have long been widely divergent in operating procedures. The rating system for joint forces readiness must be standardized among all CINCs. As USACOM executes its mission of providing forces that are integrated and trained as joint units capable of carrying out their assigned tasks (in a resources constrained environment), Service cooperation to leverage training opportunities will play a major role.

The emerging focus on operations-other-than-war (OOTW) - peacekeeping and peacemaking operations, humanitarian assistance operations, etc. - requires attention to Service training programs (scope and level) to determine requirements for modification or

expansion. There might be a need to consider OOTW as a capability warranting an expanded rating system. For example, the mission of providing humanitarian aid to a civil authority can be difficult for a joint task force to accomplish; there is likely to be very little warning time prior to deployment; they are most unlike the wartime mission; and they require coordination with more agencies. Lack of interagency training could be a major inhibitor to readiness. United Nations/United States "leadership" exposure to simulations training capabilities should be a priority for DoD. Further, undertaking these missions while drawing down our forces may require new planning assumptions with respect to the BUR's two nearly simultaneous MRC foundation. A step in the right direction is the ongoing JCS effort to develop doctrine for OOTW.

As demonstrated during Desert Storm, future U.S. involvement in conflict scenarios will likely include coalition and combined activities. Combined/coalition activities imply jointness with its innate requirements for interoperability and integration of effort. The force structure analysis for the BUR should be expanded to more fully account for the role of traditional allies, treaty signatory nations, or ad hoc coalitions participating in the MRC scenarios. This aspect must be thoroughly integrated into the CINCs' evaluation of readiness, particularly when considering nations with whom the United States has little or no combined operations experience. Finally, joint training doctrine should include provisions for integrating combined/coalition forces.

Progress has been made toward defining responsibilities for Joint training since the release of the interim Task Force's report in February 1994. Examples of such are: (1) The Chairman, Joint Chiefs of Staff (CJCS), responsible for Joint Training policy has declared joint training a priority for his office; (2) The J-7 organization within the Joint Staff has defined a Universal Joint Task List and is currently working on defining Joint Mission Essential Task Lists with each CINC; (3) USACOM has defined a three tier structure for joint training and identified, at least initially, the resources required to carry out USACOM's joint training responsibilities; (4) There is a growing understanding of the potential for use of simulation to enhance joint training - the Synthetic Theater of War (STOW) demonstration now has operational sponsors; CINCEUR for the proof of principle Exercise ATLANTIC RESOLVE in November 1994, and USACOM for a full-scale STOW demonstration in 1997; the Joint Warfighting Center is maturing in its concept and capability to provide support for joint training and exercises; and USACOM has defined the need for a Joint Training, Analysis and Simulation Center in the Tidewater area to support joint training and evaluation; (5) A Peacekeeping Task Force has been established with DoD-wide participation; and (6) Some progress has been made in identifying the shortfall in quantitative joint readiness evaluation and reporting.

II. OBSERVATIONS/CONCERNS

Current

While improvement in developing a Joint/Combined training environment has been noted some areas continue to require additional attention. Actions are needed to:

1. Enhance momentum in developing jointness in the Department - accelerate efforts to define joint training objectives and readiness criteria and increase Service commitment to joint training (e.g.- sharing of training facilities).

2. Determine whether a separate training requirement be established for OOTW.

3. Assign responsibility for joint training of all CONUS-based conventional combatant forces to USACOM and provide resources to support that responsibility.

4. Review Title X to ensure that it does not unnecessarily constrain joint training.

5. Review the roles and functions of CINCs as they relate to joint training.

6. Broaden the BUR force structure analysis and the CINCs' readiness evaluation to more fully account for contributions (and in some cases, needs) of traditional allies, treaty signatory nations, and or ad hoc coalitions participating in the MRC scenario.

7. Provide OSD oversight in coordination of programs, funds and milestones for top-down modeling and simulation.

8. Protect the capability of Reserve joint training requirements to meet short and mid-term surges.

Future

Future concerns include:

1. Sustaining jointness momentum in the Department in the face of declining budgets and the emergence of other priority concerns.

2. Planning for the involvement of allied/coalition forces and the increased demands for interoperability and integration.

3. Ensuring that Service training programs and individual and unit proficiency do not get degraded as a result of increased emphasis on joint training.

4. Exploiting the potential for distributed simulations for large scale interactive training to enhance joint and combined training realism and relevancy.

III. RECOMMENDATIONS

1. The Secretary of Defense and Chairman of the Joint Chiefs of Staff should consider making USACOM responsible for joint training for all CONUS-based conventional combatant forces. Additionally, USACOM must be provided the resources to support this responsibility.

2. The Joint Staff and USACOM, in coordination with the CINCs, should define joint training objectives and readiness criteria to such a degree that the joint readiness status of forces will be as clear and compelling as the unit readiness status that is the responsibility of the Services. Development of JMETL standards should be accelerated to support this effort.

3. OSD should issue firm guidance to ensure that individual Service constructive models used for training and evaluation interface in order to provide for effective exercising of joint task force staffs that is coherent from both Service and joint view points.

4. The Department should ensure that resources are available to support establishing and operating the Joint Training, Analysis and Simulation Center under USACOM.

5. The CJCS exercise funds used for transportation to overseas exercises should be reexamined, particularly in light of the need for more attention being given to ensure effective joint training of deployable forces in the CONUS.

6. The Joint Staff should continue ongoing efforts to refine joint training doctrine for OOTW.

7. Combined/coalition forces should be incorporated in development of joint training doctrine.

JOINT C4I/SPACE

I. INTRODUCTION

US military force reductions and the abandonment of many overseas bases/facilities arguably increase the value of C4I and space capabilities. The Bottom-Up Review made cost the driving measure of effectiveness in choosing which improvement programs to perform DoD's projected space launch needs at the "lowest cost over the next decade." Flexibility or reliability that might be realized by more ambitious measures did not outweigh the potential costs.

The Task Force supports the Joint Staff C4I For the Warrior initiative as an important first step in correcting long-standing information system deficiencies. Additional progress in fielding and implementation of open systems for joint use will significantly strengthen the current tenuous C4I posture. Global Command and Control Systems (GCCS) can be a quantum leap forward for joint operations. GCCS will require continued active senior OSD, Joint Staff, and CINC involvement if it is to avoid the pitfalls of the World-Wide Military Command and Control System (WWMCCS).

Intelligence systems, including surveillance assets (e.g.- reconnaissance satellites, long endurance UAV's, etc.), are particularly fragmented and need accelerated efforts to ensure inclusion in the overall C4I architecture. These assets should be routinely incorporated into exercises to provide realistic evaluation and feedback, identify needed improvements, and develop user familiarity with and confidence in the availability of "all source" information to support planning and operations. Additionally, the responsibility for the database multi-level security of these systems needs to be clearly defined and understood.

The complete dependence on SATCOM for high data rate long haul transmission, and the increasing demands on satellites for surveillance/intelligence gathering, together demand a comprehensive review of satellite readiness. Of particular concern is the asymmetry between satellite intelligence collection and distribution capability. The ability to launch additional platforms as needed must be addressed as integral to satellite readiness. With regard to the use of space assets, the role of the theater CINCs in determining future space capabilities needs to be taken into account. These CINCs also need to consider space assets' readiness, just as they do combat and sustainment readiness.

In response to CINC requests to improve Joint Task Force capabilities for crisis response, the Department established the Joint Crisis Action Test and Evaluation (JCATE) Joint Test Force. In addition to being tasked with introducing and assessing innovative technologies and concepts for command and control of Joint Task Forces, JCATE has developed a methodology to conduct assessments for the enhancement of CJTF C4I and other operational information processes for joint warfighters. This

methodology has applicability for assessing current joint readiness in most of the essential functional areas of space/joint C4I. It should continue to be aggressively pursued. JCATE should be fully funded and manned in accordance with their approved charter and program test design.

II. OBSERVATIONS/CONCERNS

Current

1. Need to assess contribution of non-US military satellite assets in support of contingency operations.

2. Theater CINC's ability to directly task space assets needs to be ensured.

3. The adequacy of satellites for communications and intelligence collection readiness must be constantly monitored.

4. Intelligence systems are predominantly stand-alone and lack required interface.

5. Need to address database security issues (e.g. the need for a clearly defined/understood responsibility for Information Security).

6. Procedures must be established to ensure DoD's ability to interface effectively with industry on C3I issues.

7. Need to respond to CINC's request for an agent independent of developers/requirement generators to assess enhancements to Joint C4I readiness.

Future

Future concerns include:

1. Continuing progress in fielding and implementing of open joint systems.

2. Resolution of database security issues, due to increased reliance on non-US military satellites.

3. Ensuring adequate capabilities to provide appropriate intelligence collection means.

III. RECOMMENDATIONS

The Department should:

1. Aggressively pursue the C4I for the Warrior Initiative as a first step in correcting long-standing information system deficiencies.

2. Conduct an extensive review of satellite readiness. Specific issues should include the asymmetry between collection and distribution capabilities, database security requirements, and satellite launch capabilities.

3. Conduct an in-depth review of C4I Doctrine. Two major concerns are the responsibility for tasking space assets to support theater operations and the role of the CINCs in determining future space capabilities.

4. Accelerate efforts to exploit commercial and other open systems and integrate intelligence systems into overall C4I architecture.

5. Sustain continuing involvement of leadership to ensure the continued fielding of the Global Command and Control System (GCCS).

6. Fund the JCATE initiative, with SROC oversight, to enhance joint C4I readiness.

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MODELING AND SIMULATION (M&S)

I. INTRODUCTION

At the heart of joint readiness is the need for joint force commanders and their staffs to practice frequently the joint skills of war. Today, modeling and simulation offers great potential as an affordable and effective means by which joint forces can achieve and maintain expertise in operational and tactical tasks, such as employing operational firepower, conducting strategic deployment, employing forces, developing theater intelligence, conducting mission rehearsal, and operational movement and maneuver. In the future, technologies of the "Information Age" offer the prospect of making M&S increasingly more useful in enhancing joint force readiness.

Both prudence and economy dictate that DoD capitalize on Advanced Distributed Simulation (ADS) technology to prepare for joint/combined warfare in an uncertain world. ADS can provide the wherewithal for joint task forces, and in particular joint task force staffs, to practice more often and build confidence. Simulations offer the potential for markedly improving joint requirements definition and refinement; joint doctrine development and acquisition; test and evaluation; planning and courses-of-action assessments or rehearsals; and military education.

Live exercises and training, particularly that conducted on instrumented ranges (e.g.- National Training Center, 29 Palms, Fallon, Nellis, etc.), will continue to provide the critical component of unit training. In recent years, however, the Services have exploited modeling and simulation technology to enhance individual and unit readiness while reducing overall training costs. M&S has also been used to assist in determining acquisition requirements. More recently, the Department has taken a number of steps to improve the technologies that enable modeling and simulation for support of joint readiness. The Defense Modeling and Simulation Office (DMSO) has been established, under the DDR&E, to facilitate cooperation among the Services. The DDR&E and Vice Chairman have signed a Memorandum of Agreement (MOA) to provide joint direction and sponsorship to focus and leverage the potential of ADS. The MOA commits them to pursue, with the Services and Commanders-in-Chiefs of the Combatant commands, demonstration programs to find practical ways in which ADS can improve development and assessment of joint doctrine, plans, operations, training, and education, and to exploit ADS for support of research development, tests, and evaluations throughout the Department. A mechanism for reviewing and coordinating M&S programs through the DoD Executive Council for Modeling and Simulation (EXCIMS) has been established and the development of a DoD Modeling and Simulation Master Plan initiated. The Joint Warfighting Center was established and is fully supported by the Joint Staff. Finally, ARPA's Synthetic Theater of War (STOW) program has been redirected to support USEUCOM Exercise ATLANTIC RESOLVE in November 1994, as a proof of concept, and to meet USACOM's joint training-simulation needs in 1997.

During a recent M&S symposium, the RTF looked at modeling and simulations in use today and also those currently under development. The Task Force noted that there are a lot of useful, albeit disparate, M&S aimed at the joint environment, but that they suffer from a lack of central policy guidance. There is a need for better structure for both investment management and technical management. For example, the confederation of models linked together under a Joint-Service initiative called Aggregate Level Simulation Protocol (ALSP) will require significant investment coordination in implementing software changes. At the same time, there is an initiative underway to begin the next generation of constructive models. The Department's efforts must include finding ways to overcome the reticence of proponents to work together in developing cost-effective and compatible applications of simulation. Integration of all forms of simulations (i.e.- live, virtual, and constructive) must also be pursued to better represent the scope and complexity of joint and combined operations.

M&S can also be used as training tools to achieve low-cost skill retention by Reserve Component forces. With reduced training resources and opportunities, and lowered training OPTEMPO, modeling and simulation offer a cost-effective contribution to sustain individual and unit skills and capability. Reserve Components need high fidelity/low cost systems that can be employed at the unit level.

II. OBSERVATIONS/CONCERNS

Current and Future

1. The Department needs a central common M&S architecture and connectivity policy guidance to harmonize Service training needs with joint training and exercise requirements.

2. A more active structure and approach to bring added coherence to investments in modeling and simulation technologies is required. This structure and approach should emphasize integrating, as appropriate and based on requirements and demonstrated value, the three forms of simulation (live operations, virtual simulation systems and war games and models) into seamless simulations of larger scale operations designed to exercise various levels of joint forces. This does not mean to imply that all models and simulations need to be developed by joint agencies, rather they must be able to interact appropriately to represent the way the several Services fight in joint operations.

3. There should be an increase in the development and use of simulations for CINCs and Services to develop joint and combined doctrine.

4. Performance measures for the effectiveness of modeling and simulations for both individual and collective training are required.

5. Expanded development and use of modeling and simulations to support mission rehearsal and deployment planning and execution requires coordination.
6. Reserve Component forces require enhanced modeling and simulation support for individual skill and collective training.

7. The use of virtual and constructive simulations to leverage and enhance (rather than replace in toto) live training at the unit, combat element and individual levels requires greater emphasis.

8. Simulations which model new world missions to include operations other than war (OOTW) should be developed as feasible.

9. Multi-dimensional "seamless" simulations should include combat, combat service, combat service support, logistics, medical, intelligence and all levels of command -- joint and combined.

10. Simulations should mimic operational communications systems that are sufficiently integrated with operational equipment or are capable of "going to war."

11. Development of international simulation standards to support interoperability including increased modeling and simulation training and coordination with the UN and coalition forces are necessary.

III. RECOMMENDATIONS

1. DoD should continue to provide vigorous support to developing a full synthetic theater of war capability integrating live, virtual and constructive simulations. Continuing CINCEUR support of the Synthetic Theater of War-95 (STOW-95) demonstration in Europe is essential to both its success and relevance. Similarly, CINCUSACOM sponsorship of STOW-97 promises to provide the focus of an operational customer needed to help ensure the right direction and results of that effort. The STOW effort should be coordinated with parallel efforts to develop a common architecture.

2. DDR&E should charge the Defense Modeling and Simulation Office (DMSO) with the responsibility to lead the development of a DoD M&S Master Plan. To support execution of this plan, DMSO should have a sufficiently robust staff with the authority to coordinate milestones and budgets for complimentary M&S program efforts. They should also act as the information clearing house on ongoing advanced distribution simulation technology development, demonstration and policy information.

3. DDR&E should revitalize the work of the Executive Council on Modeling and Simulation to ensure that new simulation developments and major upgrades meet

the common architecture and data requirements to meet "plug and play: criteria for interface with other Service and joint simulations. The goal should be for all simulations intended for network connections to meet a joint "plug and play" standard. The DMSO should function as the Executive Council secretariat in communicating and carrying out policy guidance. The Joint Simulation System (JSIMS) undertaking to ensure common architecture and connectivity standards between Service simulations should be a subset of the Executive Council effort. DDR&E should chair the enterprise to ensure harmonization with larger DoD - JCS common architecture and connectivity goals and to make sure that technology efforts support JSIM efforts.

4. USACOM should be assigned specific responsibilities and resources to represent CINC's interests in development of simulations that contribute to joint force training. Consideration should be given to making USACOM a member of the EXCIM.

RESERVES

I. INTRODUCTION

The statement regarding "increased reliance on the Reserves in the future" has been attributed to the Department's senior leadership. Specific plans have not yet been developed to clarify the exact role intended. While it may be policy, there is a need to clearly define the implementation. National Guardsmen and Reservists continue to demonstrate commitment to their military responsibilities. There is a need to maximize the potential of this commitment by (1) defining the roles they will be called upon to perform, (2) developing clearly identified deployment plans, and (3) providing resources to ensure their readiness. Actions are needed to make the Reserve forces involvement apparent. That includes ensuring that the necessary investment in their equipping and training is maintained. While all Guard and Reserve units may not be required to maintain extremely high levels of readiness, degradation of individual and unit readiness must be frequently monitored and tested to assure the reliability of the force in whole or in part to respond to rapidly escalating and often unplanned requirements.

A number of factors will continue to impact positively on Reserve readiness posture including: (1) Congressional support for Reserve component forces; (2) influx of new equipment from active drawdown; (3) Active force support; and (4) the fact that Reserve components are fully focused on readiness. Component initiatives to prioritize resources and cross-level assets have permitted levels of reported readiness higher than expected during a period of resource constraints and considerable personnel and force structure turbulence.

However, behind these displayed readiness levels are clear signs of declining readiness and sustainability. The expected cascading of equipment from Active force drawdowns has not been uniformly felt throughout the Reserve Components. The lack of equipment remains a major inhibitor to Guard and Reserve readiness. Of particular concern is the Army Reserve, which, because of the nature of its role, has many high priority support units that suffer readiness decrements because they lack low visibility equipment (water purification, medical, laundry equipment, decontamination, etc.) on which to train and operate.

Because of instability in the force (e.g. limited training opportunities, relocation of units resulting from BRAC actions, perceived decrease in intensity and relevance of training, and for Army forces, the inability to provide definitive basic and advanced training schedules and seat allocations) recruiting and retention are becoming greater challenges. As more modern equipment enters the inventory, the requirement for skilled maintenance personnel and spare parts will increase. It should be noted that BRAC could have a particularly severe impact on Reserve forces when an installation is closed since Reservists tend to perform their duties near their home towns. Some units are experiencing a shortage of repair parts to rapidly repair equipment. In addition, full-time

skilled maintenance manpower is being decremented which further exacerbates readiness problems (especially in the Army Reserve). Delays have been reported in the return to service of equipment requiring higher-level maintenance. In a resource constrained environment this could be expected, but in the case of equipment related to active force contingency missions, the absence of this equipment could affect deployment schedules and Reserve component ability to support these missions.

The opportunity for Reserve participation in the active Service institutional training programs must be protected as those programs are downsized and individual course lengths are increased. Active Service educational standards and programs must be tailored to satisfy the unique needs of Reserve forces. In addition, educational programs to develop joint proficiency should include Reserve component personnel. Reserve units should be fully integrated in Joint and Combined training, exercises, and educational opportunities.

There is a need to protect against skill erosion in the face of reduced opportunities for hands-on training. It is in this area that simulations appears to offer significant promise as a means of replicating realistic training environments. Because of the dispersion of Guard and Reserve units throughout the nation, simulation devices and equipment must be cheap and provided in large quantities.

As Reserve Components are more fully integrated with the Active forces, their accessibility will become paramount. This will be especially true where functions are performed largely or wholly by Reserve units (e.g.- cargo handling teams, medical evacuation, water purification, etc.). Based on the experience of Desert Shield/Desert Storm and future plans for greater Reserve Component utilization, two actions are necessary to ensure their timely and appropriate mobilization, training, deployment, employment, and re deployment. First, the current Presidential Selective Reserve Call-up (PSRC) authority of 90 days with a possible 90 day extension should be increased to a call-up of 180 days with an 180 day extension. Second, authority to call-up a maximum of 25,000 reservists by the Secretary of Defense would enable the earliest access possible for a limited number of reservists (approximately half would support TRANSCOM's transportation/mobility requirements). Limited Reserve activations could also serve as a deterring function or limited response to those considering initiating or increasing hostile actions.

II. OBSERVATIONS/CONCERNS

Current

1. Reduced readiness is occurring due to personnel and force structure turbulence and reduction in training operating tempo.

2. There is inadequate definition of Reserve Components roles and missions - specifically for the Army National Guard and Army Reserve.

3. A Bottom Up Review-based strategy exists that rationalizes MRC's being terminated rapidly without need for extended combat operations and utilization of Reserve Component combat maneuver forces.

4. There is a lack of call-up flexibility to support enhanced utilization of Reserve Component forces.

5. Mobilization plans relating forces to missions are needed.

6. Guard and Reserve needs are not consistently considered an essential part of base closure and realignment decisions.

7. Full-time support personnel are inadequate and ineffectively distributed.

8. Depot maintenance delays, untimely issue of spare parts, consolidation of maintenance at higher levels and reduction in manning levels of skilled maintenance personnel are contributing to reduced Reserve Component readiness.

9. Lack of full automation of Guard and Reserve data management functions creates inefficiency and untimely actions that exacerbate day-to-day management of Reserve forces and inhibit the mobilization process.

10. There is a lack of simulation systems for the Guard and Reserve to compensate for reduced operating tempo. Active forces develop large simulation systems that satisfy Active component needs where forces are heavily concentrated without provision for systems and devices at Reserve sites widely distributed across the country.

Future

Future concerns include:

1. Reserve Component forces will require extensive post mobilization training, equipment maintenance, modernization and reorganization before they can be employed effectively.

2. Reliance on Reserve Component combat maneuver forces could erode to the extent that the nation will be nearly totally reliant on Active forces for ground combat.

3. Fundamental changes in national defense policies could jeopardize citizen support for a predominantly professional military establishment.

4. Post drawdown, the prior-service pool from which some reserve units recruit heavily will be much smaller.

5. Reserve component force modernization will be affected adversely by budget reductions.

6. As base realignment and closure expands, Guard and Reserve units and individuals will be either displaced or denied training opportunities depending on Active component resources.

III. RECOMMENDATIONS

The Reserve Components must be an integral part of warfighting contingency plans and peacetime operations. To maximize this potential the Department should:

1. Determine realistic roles and missions for the Reserve components - especially for the Army National Guard and Army Reserve.

2. Stratify Reserve forces to meet short term contingencies and mid length and extended operations, and resource accordingly.

3. Provide adequate simulation systems to compensate for reduced training operating tempo. Consider expanding the concept and joint use of consolidated systems such as those at the Fort Dix High Technology Training Center to accommodate high densities of Guard and Reserve personnel.

4. Make substantial investment in automation of the Guard and Reserve. The Reserve Component Automation System (RCAS) will provide a means to accomplish this for the Army Reserve components.

5. Continue efforts to enhance both timely access to and increased call-up of Reserve Component forces in consonance with their increased integration in contingency plans.

6. Articulate more clearly the need for Reserve Component forces.

MOBILITY

I. INTRODUCTION

The issue of mobility readiness, while the subject of considerable debate, appears to be a long way from satisfactory resolution. With regard to supporting the BUR strategy, overall, a MRC-West or a MRC-East are mobility (transportation) supportable but lift remains a limiting factor. While either will require careful management of transportation assets, there do not appear to be any show stoppers. The transportation supportability of two MRC's simultaneously or near simultaneously is far less certain. Issues that address that uncertainty, in the long-term, require resolution. Those issues include: the need to find a suitable replacement for the aging C-141; full asset visibility; development of a West Coast ammunition port; Access to Reserve personnel early; availability of Civil Reserve Air Fleet (CRAF); and development of standard seaport operations under a single manager.

Logistics reliability, annual operating costs, short and unimproved airfield limitations, and inability of the C-141 to efficiently carry current Army and Marine equipment degrades the C-141's ability to support current and future requirements. The current programmed purchase of only 40 C-17s, without additional wide-body, outsize cargo-capable aircraft augmentation, would probably permit not more than half of the air delivered combat forces required in the first 30 days to close on time. The Department has established a comprehensive program for selecting a C-141 replacement to include evaluating the full range of military and commercial transport aircraft that could replace the capacity lost through the C-141 retirement.

Full asset visibility is essential for optimum application of limited transportation resources. Continued development and full implementation of the Global Transportation Network (GTN) is needed.

There is no seaport on the west coast of the United States capable of handling containerized ammunition. This is a serious constraint in a MRC-West contingency and could be a show stopper in a nearly simultaneous 2- MRC scenario. This is a long-standing problem which is being addressed in the FY95 budget. Attention needs to be paid to the resolution of this problem to make sure that the funding stays in place.

Efficient utilization of current transportation assets is highly dependent upon the contribution of Reserve personnel. Early availability of sufficient numbers of Reserve component personnel to operate aircraft, and to man the transportation infrastructure is critical to effective lift. TRANSCOM's concept of a READY MOBILITY FORCE comprised of about 10,500 personnel, as part of a SECDEF call-up of 25,000 reservists was developed to ameliorate this concern.

Execution of the most demanding transportation scenarios will require extensive utilization of CRAF upon which we are almost totally dependent for passenger transport. It is uncertain whether CRAF would be fully available given other national demands on commercial aviation. Even if we assume full participation, CRAF aircraft have substantial limitations relative to short and unimproved airfields, outsized and hazardous cargo, drive on/drive off capability, air refueling and ground support. In the longer-term, the willingness of commercial aviation to continue to participate at the required levels in the CRAF program will be dependent upon adequate incentives.

TRANSCOM has the responsibility for operating seaports in certain parts of the world. In other situations, the regional CINC is responsible. The absence of a standardized, coordinated approach to seaport operations under a single manager reduces the overall effectiveness in the movement of cargo by sealift.

There is a need for continued assessment and implementation of initiatives to enhance mobility readiness. Consideration of the potential contributions of allies and host nation support are acknowledged as essential in assessing contingency plans. Finally, planned improvements in sealift - including the Ready Reserve Force surge enhancement, and prepositioning remain major contributors in reducing early demands for strategic lift.

As noted in the Mobility Requirements Study, there is a critical shortage of heavy duty railcars to move tanks and similar equipment from inland bases to seaports. This capability is critical to meeting deployment timelines.

Increased participation in simulations and war gaming at all levels is critical for staff development and overall integration of mobility planning. This is a key mobility readiness issue. TRANSCOM needs to be involved in all Service and Joint Staff exercises and major war games.

II. OBSERVATIONS/CONCERNS

Current

1. TRANSCOM does not participate in most joint/combined exercises and major war games.

2. Need to replace the aging C-141 aircraft.

3. Development of a seaport on the west coast capable of handling containerized ammunition is needed to address a long-standing ammunition shipment requirement

4. Nearly half of the 25,000 Presidential Reserve Call-Up authority is ear marked for TRANSCOM's mobility needs. Early access to these Reserve personnel is crucial to the success of TRANSCOM's mission.

5. The operational limitations and availability of CRAF must be considered in planning airlift requirements.

6. A standardized, coordinated approach to seaport operations under one central manager would enhance sealift efficiency.

7. Assessment of prepositioning trade-off for sealift and airlift should be performed on a continuing basis.

Future

Future concerns include:

1. Continued strong support of peacetime operations (operations other than war) by Reserve component personnel provided a valuable service and should be aggressively pursued.

2. Adequacy of strategic lift must be assessed.

   - Need to procure an adequate number of aircraft to replace the aging C-141.
   - Willingness of commercial aviation to continue to participate in CRAF.
   - Continued improvement of sealift capability.

3. Early access to sufficient numbers of Reserve personnel will remain critical for mobility readiness.

4. Adequate capability to move tanks and similar equipment from inland bases to seaports must be reassessed.

III. RECOMMENDATIONS

1. Procure an adequate number of aircraft to modernize the force and execute the requirements of the BUR and unified commanders war plans.

2. Reassess prepositioning potential to overcome some of existing and future lift shortfalls.

3. TRANSCOM participate in all major Service and Joint Staff exercises and war games.

4. Develop seaport on west coast capable of handling containerized ammunition.

5. Assign TRANSCOM as central manager of worldwide seaport operations.

6. Ensure adequate capability to move tanks and similar equipment from inland bases to seaports.

7. Pursue SecDef 25,000 early reserve call-up authority to sustain TRANSCOM's concept of a ready mobility force. (During Operations Desert Shield and Desert Storm, USSTRATCOM was dependent on volunteers to function effectively at the outset). Reserve Component personnel require adequate levels of operating tempo to ensure their readiness when called.

8. Give more visibility to impact of operational limitations and availability of CRAF.

9. Continued support for planned sealift enhancements is critical to the overall success of the strategic lift program and must be maintained.

WEAPONS OF MASS DESTRUCTION (WMD)

I. INTRODUCTION

The continuing world-wide trends toward increased proliferation of weapons of mass destruction (WMD) and acquisition of long-range delivery systems (1) makes it imperative that U.S (and coalition) forces be prepared to conduct operations in a nuclear, biological, and/or chemical (NBC) environment, (2) highlights the increased reliance on intelligence for early warning, and (3) heightens the importance of theater and global defenses.

As long as nuclear weapons remain in the stockpile, readiness must be maintained to ensure the highest standards of safety, security, control and reliability in all facets of nuclear operations. These standards are necessary to maintain an appropriate balance between the requirement to assure the authorized use of nuclear weapons in a timely, responsive and effective manner when authorized by the President with the requirement to assure against their unauthorized or inadvertent use.

In order to maintain this balance and the high standards mentioned above, we must take a broad range of actions including those to:

- Institutionalize and enhance individual, unit and joint training for WMD-related activities to include conducting operations in an NBC environment.
- Ensure the continued viability of the DOE Nuclear Weapons Complex to ensure that it can discharge the full range of its required responsibilities.
- Acquire selected overhead intelligence systems and other capabilities to improve our potential to locate, track and target mobile missiles and other mobile/transportable assets that could affect our ability to conduct world-wide operations.

While only a few nuclear weapons can have substantial political and military impact, the mere possession of these weapons has significant force structure, force deployment and operational implications. Among the major shortfalls in our ability to meet the total threat postulated in the WMD proliferation environment are the:

- Survivability of selected National command and control critical equipment and key facilities;
- The infrequency of national-level exercises involving senior DoD political as well as military officials;
- Our capability to detect a nuclear weapon smuggled into the United States.

II. NUCLEAR

Background

The Department of Defense has traditionally placed the highest emphasis on nuclear readiness as evidenced by high-level studies such as the JCS Nuclear Command and Control Study (1984-86), the Nuclear Fail-safe and Risk Reduction Review (1991-92), and the ongoing Nuclear Posture Review (NPR). These studies support the view that nuclear forces, albeit at lower numbers, will continue to play a critical role in the evolving security environment characterized by continuing capabilities in the established nuclear powers as well as the proliferation of weapons of mass destruction and advanced delivery technologies.

There are three principal challenges to maintaining the required readiness standards for these forces: the first arises from initiatives (e.g. reduced alert rates, weapons dismantlements) undertaken to promote risk reduction. The second arises from budgetary pressures with attendant reductions in operating resources and structures. Together these challenges can result in a mismatch between assigned missions and actual capabilities. Finally, focus on other priorities with reduced emphasis on nuclear weapons matters by senior decision makers can reduce the constant attention required to ensure the highest required standards of nuclear weapons safety, security, and control.

Pressures associated with risk reduction, budgetary pressures, and shifting priorities of senior leaders are affecting nuclear readiness in three broad areas: strategic forces, non-strategic nuclear forces (NSNF) and the command and control (C2) structure that supports them. In the strategic area, the forces remain capable of performing their missions although force structure, mission priorities, and posture changes are reducing experience levels in certain areas. Due to political sensitivities and economic constraints, there have been very few national-level nuclear C2 exercises to assure that nuclear weapons could be employed in a timely, responsive and effective way when authorized by the President. For instance, there has been only one such exercise (in 1989) since 1986 and none since the start-up of USSTRATCOM. Furthermore, there has been little participation by senior political leaders and their senior staffs. This lack of exercises reduces the familiarity of senior leaders with their complex nuclear C2 responsibilities, reduces staff expertise as well as opportunities for intra- and inter-staff coordination, and reduces opportunities to evaluate system performance (especially important in the system of new command relationships) and to disseminate "lessons learned" force-wide. Further, the lack of exercises may undermine a potential adversary's perceptions of deterrence should a country conclude that the U.S. cannot or will not employ nuclear forces it does not fully exercise. Initiatives are being identified by the office of the Secretary of Defense and the Joint Staff to address this deficiency.

NSNF force structure and deployments have changed significantly as a result of various Presidential directives and arms negotiations initiatives. Because of the inherent

flexibility of these forces, the Department of Defense maintains the capability to regenerate or reconstitute NSNF should conditions warrant. While regeneration procedures have been developed and successfully exercised, there are concerns about whether the DoD can maintain this capability into the future as the frequency of operational inspections is reduced and the personnel experience base declines. Additionally, the current emphasis on conventional vice nuclear missions has the potential to further undermine NSNF readiness. In order to improve NSNF readiness, the CJCS and the Services must ensure vigorous exercise and inspection programs, appropriate procurements and protection of selected programs to maintain NSNF capabilities.

Financial pressures jeopardize several critical Nuclear C2 programs that were developed to address validated deficiencies. Programs that will provide secure, survivable, anti-jam satellite communications must be preserved. Similarly, programs and systems that ensure that our tactical warning and attack assessment system remains survivable and capable of providing unambiguous warning and assessment of nuclear attack against the U.S. or our forces and allies abroad as well as accurate identification of the aggressor continue to merit priority support. Finally, programmed enhancements, upon which the substantial consolidation of numerous airborne C2 aircraft was predicted, must be completed to avoid unnecessary costs in preserving our ability to control U.S. nuclear forces.

The likelihood of the proliferation of nuclear weapons in the next several decades is a threat of great importance. Notwithstanding the active efforts of the U.S. and its Allies to discourage proliferation entirely and retard the capability of those states that acquire these weapons, future conflicts may involve the use of nuclear weapons. The extraordinary destructiveness of these weapons and their ability to generate the most profound environmental, political, and other effects far beyond the immediate theater of employment make nuclear weapons a crucial security consideration for the U.S. and its Allies. Such importance underscores the need for an adequate nuclear warning and notification system supported by effective and timely intelligence. The unambiguous determination of the origin of a missile launch or unexplained nuclear explosion world-wide requires a range of capabilities including prompt tactical warning, launch point identification, aim point prediction, and attack assessment for accurate characterization of and response to missile attacks. Consequently the U.S. must ensure the existence of procedures and capabilities that can address the full range of potential contingencies in the evolving security environment to include a nuclear explosion that occurs without warning, (e.g., first use of nuclear weapons in a conflict where U.S. forces are not directly involved), the detection of covertly delivered nuclear weapons, etc. The DoD is currently undertaking initiatives to ensure these important capabilities.

As long as nuclear weapons remain in the stockpile, readiness must be maintained to ensure the highest standards of safety, security, control and reliability in all facets of nuclear operations. These standards are necessary to maintain an appropriate balance between the requirement to assure the authorized use of nuclear weapons in a timely,

responsive and effective manner when authorized by the President with the requirement to assure against their unauthorized or inadvertent use.

OBSERVATIONS/CONCERNS

Current

1. The potential for unconstrained WMD proliferation (development, purchase, theft, etc.).

2. Need to enhance ability to detect a nuclear weapon smuggled into the U.S. and to locate a lost or stolen nuclear weapon.

3. Absence of national-level exercises with senior level participation reduces nuclear command and control readiness.

4. Shortfall in U.S. preparedness to conduct operations in an NBC environment.

5. Potential for risk reduction initiatives to have deleterious impact on requirements to assure timely and effective use of nuclear weapons when authorized by the President.

6. Continued support for secure, survivable, anti-jam satellite communications is critical.

7. There is an increased need for an effective theater ballistic missile defense (TBMD).

8. Procedures and practices must be enhanced to ensure the capability for a fully informed response to nuclear use in a timely and integrated manner.

9. It is critical that the U.S. continue to maintain the highest levels of nuclear weapons safety, security, and control.

Future

Future concerns include:

1. Long-term training and security requirements:

   - Continuing need for political as well as military senior-level decision-maker and staff participation in regular and realistic nuclear exercises;

- Need to review and validate adequacy of current training and security requirements (including frequency and number of participating units) to ensure crew familiarity and experience with nuclear alert procedures;

- Maintaining emphasis on training and inspection for all nuclear weapons systems and NC2-related activities is essential;

- It is critical that U.S. continue to maintain the highest levels of nuclear weapon safety, security, and control.

4. Reduced base for experienced nuclear trained personnel.

5. Maintenance of non-strategic nuclear force regeneration and reconstitution capability.

6. Continued funding support for C2 enhancements that provide validated capabilities.

7. Retention of needed nuclear complex capabilities as well as nuclear weapons/systems industrial base to protect future options.

8. Development and implementation of consistent survivability policies and standards for fielded systems to ensure survivability.

9. Need to assess adequacy of civilian disaster response for nuclear disasters.

III. BIOLOGICAL WARFARE DEFENSE

Background

Biological Warfare (BW) agent uncertainty is a major concern. They are relatively easy and cheap to produce and it is extremely difficult to verify treaty compliance (no production or possession). BW agents include toxins, bioregulators, and pathogens. Toxins and bioregulators, which occur naturally, can be readily synthesized in quantity by means of biotechnology. Genetically manipulated BW agents as well as substances produced naturally in the human body, when introduced in an unnatural way, can induce abnormal effects which may result in death. Advances in biotechnology continue to make possible a larger number of agents. Normally harmless, non-disease producing microorganisms can be modified to become highly toxic or produce diseases for which an opponent has no known treatment or vaccine. Other disease agents, now considered too unstable for storage or warfare applications, can be modified using genetic engineering to be effective BW agents.

Early detection and identification of BW agents are critical for the theater CINC. A number of factors complicate the peacetime collection of information that would

support wartime requirements. They include: (1) the dual use of many biological materials; (2) dual use of equipment; (3) sensitivity and selectivity of instruments; and (4) the myriad of possible solutions versus time.

While the incubation period for BW agents varies, most produce extremely high mortality without treatment. Antibiotics and antitoxins can be effective treatments if administered early. Vaccines against known agents are effective, but at the present time, are agent specific. The most effective measure is prevention... and wearing protective masks becomes the most useful prevention measure.

While coordination on BW and CW matters within the intelligence community is good, current collection capabilities are extremely limited and there are no magic quick fixes. It is important to include the Regional CINCs in the collection plan.

In response to lessons learned from Desert Storm the Department has established a Joint Program Manager for Biological Defense, and designated the U.S. Army as the Executive Agent for Biological Warfare Defense for the Department. The two top priority activities are: (1) type classify a fieldable system to identify BW agents (a point detector and a standoff detector); and (2) produce sufficient vaccines to accommodate the forces.

A number of policy issues related to population protection need to be addressed to include: equipping, training, and inoculation of indigenous population; local governments and infrastructure; allied forces; and U.S. civilians, civil servants, and contractor personnel. The answer(s) impact on acquisition of BW (and CW) defense equipment. Currently the vaccine development and production base are extremely limited. The U.S. Army, through the Joint Program Office, is studying alternatives for managing future vaccine production. It should be noted that by Congressional mandate, vaccines can be produced only for validated threat agents. Other issues requiring review include protection and decontamination of logistical infrastructure.

Congress also mandated the consolidation of CBW defense programs into one centrally managed program at the OSD level. The action office is the Office of the Assistant to the Secretary of Defense/Atomic Energy-Chemical Matters (OATSD/AE-CM). While the details have not been completely worked out, the plan is to task the Army to act as the coordinating and integrating agent.

OBSERVATIONS/CONCERNS

Current

1. Need a fieldable BW detection and identification capability.

2. A shortfall in vaccines exists and there is a limited vaccine production capability.

3. Intelligence collection capabilities are extremely limited.

4. CINCs must be more involved in determining collection requirements.

5. Response to BW use must be determined.

6. While coordination on BW matters within the intelligence community is good, there is little coordination between the various agencies and laboratories.

7. Individual and crew performance after exposure to biological weapons requires quantification.

8. Limited knowledge of proliferator biological agent production makes development of appropriate vaccines problematic.

9. Biological weapons normally not included in major war games and planning models.

10. A joint operational Biological defense doctrine needs to be developed and implemented.

Future

Future concerns include:

1. The need to resolve policy issues relating to population protection (e.g. inoculation of indigenous population, local governments and infrastructure, allied forces, and U.S. citizens, civil servants, and contractor personnel).

2. The need to maintain a viable vaccine production capability.

3. Measures for assessment of the BW threat and force readiness must be developed.

4. Procedures and the capability to protect and decontaminate ports of embarkation must be put in place.

5. The need to continue the R&D effort for a multi-agent vaccine.

6. Continued Congressional constraint on production of BW vaccines will preclude timely availability of appropriate vaccines.

IV. CHEMICAL WARFARE DEFENSE

Background

A variety of delivery systems are available for dissemination of chemical warfare (CW) agents. Militarily significant quantities can be delivered anywhere in a theater of operations/area of conflict by ballistic and cruise missiles, aircraft bombs and spray tanks, multiple rocket launchers, unmanned autonomous vehicles, aerosol generators, artillery, and special operating forces. Fill options include submunitions and payload.

Substantial efforts have been accomplished to improve survivability of military assets against chemical threats. Modeling and simulations have demonstrated that: (1) warning and aim point of impending attack has high payoff (but we need a capability to provide warning only to vulnerable forces at risk); (2) most fielded forces have good passive protection capability (camouflage, cover, concealment, mobility, dispersion, etc); (3) reduction of logistical operations vulnerability is needed; and, (4) the asymmetries between CW protection capabilities of U.S. forces and those of civilian workers, stevedores, and some allied military could be critical vulnerabilities. The current generation of protective equipment requires replacement (degrades individual performance, cumbersome, interferes with visual and aural communications, subjects wearer to heat stress). The U.S. decontamination capability is manpower intensive, logistically burdensome, and quantitatively insufficient. We currently have a limited patient decontamination capability and no means to safely decontaminate sensitive equipment.

OBSERVATIONS/CONCERNS

Current

1. There is an urgent need for the development of a long-range standoff detection capability.

2. Protection/decontamination of out-of-CONUS infrastructure to support reinforcing/power projection forces should be a priority.

3. Timely distribution of warning and reporting information, to include Merchant Marine and CRAF assets, is essential in a WMD environment.

4. Plans for response to CW use when the U.S. has no CW retaliatory capability must be developed.

5. R&D efforts for a multi-agent CW detector must be continued.

Future

Future concerns include:

1. Sustaining training and readiness to operate in a NBC contaminated environment.

2. Development of a non-aqueous decontamination capability.

3. Resolution of policy issues relating to population protection.

4. Fielding of an effective cruise missile defense.

5. The level of operational degradation associated with current generation chemical defense equipment.

V. RECOMMENDATIONS

1. General

   A. The CJCS and the Services must take actions to sustain training and readiness to operate in a NBC contaminated environment.

   B. WMD considerations must be incorporated into training and planning simulations and wargames.

2. Nuclear

   A. The Department must conduct realistic national-level nuclear C2 exercises on a regular basis. Participation by senior political as well as military decision makers in these exercises is necessary to assure that nuclear weapons could be employed in a timely, responsive, and effective way when authorized by the President.

   B. The CJCS and the Services must ensure vigorous exercise and inspection programs, appropriate procurements, and protection of selected programs to maintain strategic as well as non-strategic nuclear force (NSNF) capabilities.

   C. The Department must continue to support C2 enhancements that provide validated requirements.

   D. The Department must ensure continued development and implementation of programs to meet long-term training and security requirements (i.e., survivable, secure and jam-resistance communications) to ensure the positive control by the President over U.S. nuclear forces in all scenarios and contingencies.

E. The TF supports efforts to identify and retain needed nuclear complex capabilities as well as nuclear weapons/systems industrial base.

F. Development and implementation of consistent survivability policies and standards for fielded systems must be continued.

G. The Department should initiate action to resolve response procedures to nuclear weapon use in a conflict where U.S. forces are not involved.

H. The Department must ensure that pursuit of risk reduction does not have deleterious impacts on assured use.

3. Biological Warfare Defense

The Department should:

A. Conduct major assessment of BW policies including such issues as population protection.

B. Support aggressive pursuit of a fieldable BW agent detection and identification capability.

C. Support efforts to develop and maintain a viable vaccine production capability.

D. Establish procedures to ensure the involvement of Regional CINCs in the collection plan.

4. Chemical Warfare Defense

A. The Department must support priority efforts to develop both a long-range standoff detection capability and a non-aqueous decontamination capability.

INFRASTRUCTURE/FACILITIES

I. INTRODUCTION

During the Cold War, DoD occupied almost 3,900 major and minor properties in 50 states and US territories, plus 1,700 abroad. US forces already have abandoned about 870 sites overseas. So far, through BRAC 93, of 495 major installations in the United States, 108 have been scheduled to close (70) or be realigned (38). Providing a well maintained and modernized infrastructure, and balancing it with other readiness requirements is a central issue. Insufficient infrastructure undermines readiness. Excess infrastructure that requires costly resources and care has the same effect.

A deliberate decision was made in developing FY 95 Defense Planning Guidance that infrastructure and acquisition were to be "bill payers" for readiness and sustainment. As such, it is reasonable to expect that underfunding of maintenance of real property is an issue.

The Department's real property is seriously deteriorated. This is true not only for facilities to be eliminated through base closures but for facilities to remain operational for the long term. DoD is investing in maintenance, repair and modernization of its facilities at a rate that is far lower than the robust period of the mid-1980s and will soon equal the rates of "hollow force" era of the late-1970s.

All Services report a growth in the real property maintenance backlog over the POM years. This concern is exacerbated by the need to maintain excess infrastructure while the Department seeks civilian transfer solutions. Funds used to maintain the excess property are sorely needed to support other critical needs. The Navy, for instance, reported that while infrastructure is balanced in the near term, there is a period between FY95 and FY99 when there is a funding-infrastructure mismatch prior to being balanced again in FY99. During this period, infrastructure reduction will free dollars for procurement once a steady state is reached. Some officials believe that modernizing facilities is a critical need and dollars recovered from infrastructure reduction should be used for maintaining, repairing and modernizing those facilities that will remain operational for the long-term. There needs to be a solution that emphasizes rapid disposition of excess facilities and does not force the Services to use already stretched O&M funds to maintain infrastructure no longer needed.

The Services have expended considerable and productive efforts in preparing BRAC plans. However, the agonizing slowdown in the actual ability of the Services to drawdown excess infrastructure resulting from BRAC decisions and force structure reductions has become a major problem. Responsive BRAC execution is needed to maximize resources needed to maintain essential infrastructure.

It has been noted that environmental costs are not properly sized, leaving field commanders with the burden of absorbing the costs. Therefore, there is a need for a more realistic, "environmentally correct", cost estimate for closing bases.

The DoD approach to base closure management has focused principally on seeking alternative uses for the excess infrastructure, which has extended the timeline for turnover. Delays or failure to implement BRAC decisions in the face of the myriad of other transition decisions exacerbates excess infrastructure concerns and the drain on O&M dollars available to the field commanders.

There are potential savings associated with further consolidations from many sites to major sites and/or interservice sites if the Department elects to move in that direction. What is needed is a coordinated DoD approach with standardized guidelines that would be applicable to all Services. This coordinated DoD approach would put BRAC activities in a viable program that would allow decisions to be executed in a timely manner. We understand that such an initiative is underway.

It is apparent that BRAC 95 will not resolve all excess facilities/infrastructure issues and outyear BRAC provisions will be required. There are no current plans for a "follow-on" to BRAC 95. Efforts to ensure a "follow-on" should be pursued. The Secretary of Defense and Chairman, JCS, endorsed this position in May. It should be pursued with Congress.

II. OBSERVATIONS/CONCERNS

Current

1. BRAC 95 Cross-Service Consolidation and Closure Initiative should be expanded to cover all DoD facilities.

2. Retention of excess infrastructure is undermining readiness.

3. More realistic cost estimates for base closings (especially environmental clean-up costs) are required.

4. The impact of underfunding Real Property Maintenance and deterioration of essential infrastructure must be demonstrated in meaningful ways (e.g.- comparison to commercial practices, the resultant increased cost of "must do" repairs, etc.).

5. A DoD coordinated BRAC approach covering all facilities with standardized guidelines applicable to all Services is required.

Future

1. Further consolidation potential beyond that achieved in BRAC 95 should be evaluated and a follow-on to BRAC 95 pursued if required.

2. Assess implications of continued growth in Real Property Maintenance Backlog on retained infrastructure.

3. Underfunding of Real Property Maintenance/Modernization.

III. RECOMMENDATIONS

The Department should pursue the following recommendations:

1. Expedite elimination of excess infrastructure.

2. Develop realistic cost estimates for base closures.

3. Develop a DoD coordinated BRAC approach with standardized guidelines which are applicable to all Services.

4. Ensure adequate maintenance and modernization programs for those facilities that will remain operational for the long-term.

5. Pursue a follow-on to BRAC 95 if required.

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MEDICAL

I. INTRODUCTION

Desert Shield/Storm has been considered a medical success story. It was the largest deployment of medical assets since the Korean War and was the greatest medical technical capability ever deployed. However, numerous medical readiness problems have been identified as a result of after action reports and analyses. Some common themes were identified.

1. Combat medical training for health care providers is deficient.

2. Medical personnel mobilization and deployment systems are inadequate.

3. Army medical units lack sufficient mobility.

4. Problems with the medical supply system.

5. Equipment modernization/sustainment problems.

6. Unfamiliarity of medical personnel with their deployment platforms.

In October 1993, the ASD for Health Affairs organized a Medical Readiness Task Force to prepare a Medical Readiness Strategic Plan (MRSP), prepare defense medical guidance to accomplish the DoD medical mission, design POM formats to identify and monitor resources needed, and to devise a process to monitor readiness. The MRSP provides a long-term systematic, multi-disciplined approach to remedy the concerns identified. To date, the Task Force has defined medical readiness, designed medical POM formats, and developed the defense medical guidance. Other tasks are ongoing to include a study to achieve better visibility of true joint medical capability for theater CINC use. The MRSP should also include considerations for DoD support of domestic manmade disasters to include identifying funding requirements (we do not currently budget for this support).

The Task Force noted that there is a need to develop a game or simulation to validate the medical strategy and policies. Of particular concerns are: deployment plans, communications requirements, and in-theater evacuation needs/capabilities. Additionally, the theater medical evacuation policy requires review and validation. Theater medical plans should consider medical demands in a combined/allied theater (contributions from allied medical assets to support U.S. forces as well as demands on U.S. medical assets for support to the allies).

II. OBSERVATIONS/CONCERNS

Current

1. Need a game or simulation to validate medical strategy and policy.

2. Need a medical R&D program to ensure a disciplined infusion of medical technology into the force.

3. Need medical planners participation in joint and combined exercises to address deployment, communications, and evacuation needs.

4. Need to review/evaluate/validate theater medical support.

   - Medical evacuation policy.
   - Deployment plans, communications requirements.
   - Evacuation capabilities needed.
   - Medical demands in a combined/allied theater (what medical support can be provided to U.S. forces as well as what medical support would be required from U.S. forces).

Future

Future concerns include:

1. The need to develop a plan to address domestic medical demands resulting from man-made disasters; and

2. A disciplined medical technology modernization plan is needed to institutionalize the infusion of medical technology.

III. RECOMMENDATIONS

1. Support Medical Readiness Task Force efforts to remedy medical readiness problems identified in Operation Desert Shield/Desert Storm; including combat medical training for health care providers, medical personnel mobilization and deployment, mobility of Army medical units, medical supply system, equipment modernization and sustainment, and unfamiliarity of medical personnel with their deployment platform.

2. Support Medical Readiness Task Force efforts to prepare defense medical guidance to accomplish the DoD medical mission and monitor medical readiness. Place greater emphasis on achieving better visibility of true joint medical capability for theater CINC use and DoD support of domestic manmade disasters.

3. Develop a game or simulation to validate the medical strategy and policy. Include medical planners and emphasize deployment plans, communications requirements and in-theater evacuation needs/capabilities. Incorporate medical functions and medical planners in Service and joint war games.

4. Conduct an assessment to determine coalition warfare impacts on US medical readiness. Identify allies' medical readiness, strengths, weaknesses.

5. Develop and implement a disciplined medical technology modernization program.

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VI. OBSERVATIONS, RECOMMENDATIONS AND FUTURE WORK

This section contains the observations and recommendations of the Readiness Task Force. As indicated by the preceding sections of this report, the Task Force reviewed a broad range of readiness issues and looked in-depth at numerous specific aspects of readiness. Based on the many briefings, extensive consultations with senior military and civilian leadership, and internal deliberations the following observations and recommendations are offered. While all of the observations, concerns, and recommendations identified in the individual functional assessments are not repeated, the essence of the specific issues is addressed. Future Readiness Task Force activities are also identified.

A. Observations

The Readiness Task Force offers the following observations concerning readiness:

1. Recognizing the Challenge. The Defense Department has recognized the potential threats to readiness. It has taken early steps to address these threats, including:
   - Setting readiness as the first priority for the Department.
   - Issuing guidance to the Services to construct their programs and budgets so that readiness will be funded at a level sufficient to carry out the tasks prescribed in the Bottom-Up Review.
   - Inviting the combatant commanders in the field -- the CINCs -- to express their readiness concerns to the Secretary at a specially convened Defense Resources Board meeting during the program and budget review process.
   - Creating the position of Under Secretary for Personnel and Readiness, supported by a Deputy Under Secretary for Readiness, to serve as the focal point for DoD readiness activities.
   - Forming the Senior Readiness Oversight Council supported by the Readiness Working Group to act as the senior-level DoD forum for readiness policy and oversight.
   - Conducting a defense issues conference that included a major addressal of the relationship of resources to readiness.

2. Defining Readiness to Do What. A prerequisite for ensuring that forces are ready is to have a definition of what missions the forces need to be ready to perform. The Bottom-Up Review provided the framework for our assessment. It defined the overall classes of military operations in which U.S. forces should be prepared to engage, and in the case of major regional conflicts, rough timing for the engagement of major combat units. Still to be fully defined, however, are the readiness requirements for many other essential parts of the force, including support units, elements such as C4I and strategic lift needed to integrate units to make them effective in joint operations, and a variety of supporting infrastructure. Further, such detailed definition has yet to take place for operations below the scale of major regional conflicts (e.g., peacekeeping, humanitarian aid, disaster relief) or for operations involving weapons of mass destruction.

3. Current Readiness Status. The general readiness posture of our military units today appears to be acceptable. For several years to come, however, turbulence associated with the drawdown in force structure, changes in strategy, and budget reductions will likely result in many anecdotal reports of readiness problems. A specific unit, for example, may experience a temporary shortage in personnel during transition. In this case, what is important for readiness overall is that such a temporary shortfall is of short duration and/or compensated for elsewhere in the force. The Department should, however, take careful notice of anecdotal readiness problems which collectively may foretell broad trends toward hollowness within units that will require corrective actions.

4. Focusing on Joint Readiness. The Department's focus for readiness assessments and resource allocation traditionally has been on military units within each of the services. Virtually every military operation envisioned in the Bottom-Up Review, however, will involve joint operations where units of several services need to operate in concert to accomplish overall objectives. Thus a force whose individual Service units are ready may not necessarily be a force ready for such joint operations. This suggests broadening the focus beyond near exclusive attention to units within the Services to include the readiness of multi-service forces to engage successfully in military operations.

5. Reporting and Projecting Unit and Joint Readiness. As indicated above, the Department has in place a very extensive system to report on the current readiness of military units within each of the Services. There does not exist, however, an effective system to project the future readiness of these units -- to estimate whether they will be ready to carry out tasks in the future, given funds allocated for readiness in DoD programs and budgets. As for readiness to conduct multi-service joint operations, there do not exist effective systems either to assess the current state of joint readiness, or to estimate future joint readiness resulting from a given funding allocation.

6. Carrying Out the National Military Strategy. The Readiness Task Force did not assess directly whether our forces have sufficient readiness or capability to carry out our National Military Strategy, or rather its proxy - the Bottom-Up Review. The Task Force did note that the analysis conducted during the Bottom-Up Review did not consider all of the essential elements of strategic readiness. For example, it did not analyze in sufficient depth the needs for C4I to integrate forces, nor did it sufficiently account for readiness to deal with threats from weapons of mass destruction. Additional analysis in these and other areas is being conducted by OSD, the Chairman, and the CINCs. Therefore, judgments on the adequacy and readiness of forces to carry out the guidance in the Bottom-Up Review must be deferred until such efforts have matured. It is anticipated that the follow-on analyses will address these additional elements. It is imperative that the National Security Strategy be promulgated by the NSC so that all agencies of government can cooperatively assess our readiness; and, so that the Defense Department can refine its Defense and Military Strategy to be responsive to the National Security Strategy.

B. Recommendations:

Given our observations we recommend that the Department give consideration to pursuing the readiness activities listed below. We recommend that the Senior Readiness Oversight Council propose to the Secretary of Defense the responsibilities for the appropriate offices within OSD who in conjunction with the Services and the OJCS will ensure that the recommendations proposed are implemented.

1. Personnel. Maintaining quality personnel should continue to be the Departments' top priority.

- Resources to access, train, educate, and retain high quality personnel must be provided.
- Personnel planning models should be enhanced to ensure strengths are adequate to meet required force structure.
- Develop PERSTEMPO standards consistent with missions.
- Rationalize military pay and an appropriate civilian pay index.
- Emphasize personnel issues with the national leadership and American public.

2. Funding/OPTEMPO. Develop in concert with the Congress and implement a system that responds adequately to contingency funding requirements.

- Investigate funding alternatives which permit contract authority for certain contingency operations (e.g. sealift).

- Better define impact of contingency operations on training and readiness.
- Fully fund OPTEMPO requirements within O&M.
- Allow Services sufficient management flexibility.
- Establish Army, Marine Corps and Air Force OPTEMPO/PERSTEMPO criteria. Consider Marine OPTEMPO study applicability to other Services.
- Further investigate tiered readiness as it relates to OPTEMPO.

3. Sustainment. Ensure that sustainment readiness is pursued with equal vigor as unit combat readiness. Develop measurement systems that better equate readiness to resources - present and future.

- Leverage Service models to assist in Development of a DoD-wide set of models that relate operational readiness to funding and manpower.
- Evaluate maintenance backlogs' impact on readiness.
- Ensure adequacy of modern weapons to support needs of CINCs.
- Assess adequacy of CS/CSS units to support two MRC Scenarios.
- Establish pilot programs with USACOM and CENTCOM to involve CINC's more thoroughly in the development of joint requirements.

4. Joint/Combined Training and Doctrine. Place increased emphasis on Joint and Combined readiness and requirements.

- Develop joint mission essential task lists.
- Define joint training objectives and readiness criteria so that joint readiness status is accurately presented.
- Ensure that Service constructive models interface to permit effective exercising of joint task forces.
- Establish and fund the Joint Training, Analysis and Simulation Center under USACOM.
- Joint Staff refine joint training doctrine for Operations Other Than War.

- USACOM conduct joint training exercises for all CONUS-based conventional combatant forces.

- Include combined/coalition forces in joint training doctrine.

5. Joint C4I/Space. Develop an OSD C4I architecture and involve CINCs in the readiness of space assets that influence their combat capabilities.

- Pursue C4I for the Warrior as a first step in correcting long-standing information system deficiencies.

- Review Satellite readiness. Include asymmetry between collection and distribution capabilities, data base security and satellite launch capabilities.

- Conduct an in-depth review of C4 doctrine.

- Accelerate efforts to exploit commercial and other open systems.

- Integrate intelligence systems in overall C4 architecture.

- Fund the JCATE initiative with SROC oversight.

6. Modeling and Simulation. Technology should be exploited to enhance joint and combined training and doctrine.

- DoD support synthetic theater of war integrating live, virtual and constructive simulations.

- DDR&E direct development of a Modeling and Simulation Master Plan.

- DDR&E ensure that new simulations and upgrades meet "plug and play" standard.

- USACOM represent CINC's interests in simulation development.

7. Reserves. Turn statement of "increased reliance on the Reserves in the future" into reality. The Reserve Components must be an integral part of contingency plans.

- Rationalize roles and missions for the Reserve Components.

- Resource Reserve forces based on contingency roles.

- Provide simulation systems to offset reduced training tempo.

- Fund the Reserve Component Automation System and such other systems as required to automate the Guard and Reserve.

- Enhance timely access to Reserve Components needed for contingency operations.

8. Mobility. Ensure that adequate strategic mobility resources are made available to support the military strategy.

- Modernize strategic airlift, support sealift enhancement, and ensure adequate intra-US transport in support of natural military strategy.

- Reassess prepositioning as it relates to lift requirements.

- Use TRANSCOM as central manager of transportation resources in contingency operations, exercises and wargames.

- Pursue SecDef 25,000 early reserve call up authority.

9. Weapons of Mass Destruction (WMD). The Department must ensure that US forces are prepared to conduct operations (offensive and defensive) in a nuclear, biological and/or chemical environment. Of the NBC triad, biological readiness needs the most attention. WMD considerations must be included in training, wargames and simulations.

Nuclear:

- Conduct national level Command and Control exercises regularly.

- Maintain strategic and non-strategic nuclear capabilities.

- Ensure programs to meet long-term training and security needs.

- Continue necessary nuclear complex and industrial base.

Biological:

- Conduct major assessment of BW policies including such issues as population protection.

- Support pursuit of fieldable detection identification capability.

- Support efforts to develop a vaccine production capability.

Chemical:

- Support efforts a long-range standoff detection capability and a non-aqueous decontamination capability.

10. Infrastructure/Facilities. This represents a major capital investment for the Department. As the force is reduced in size and as resources decline, it is imperative that excess infrastructure and facilities be quickly eliminated.

- Develop better cost estimates for base closures and fund for them.
- Ensure that there are standardized guidelines for BRAC input.
- Provide adequate maintenance and modernization programs for facilities that will remain operational.
- Maximize reductions in BRAC 95 and pursue a follow-on if necessary.

11. Medical. Many medical readiness problems have been identified from Dessert Storm. Efforts should continue to ensure that medical support for future operations is adequate and ready.

- Support Medical Readiness Task Force efforts.
- Develop medical guidance to monitor medical readiness.
- Assess impact of coalition warfare on US medical readiness.
- Implement a medical technology modernization program.

12. Organizing for Readiness. One area that cuts across all of the functional readiness areas that have been highlighted above is organizing for readiness. The Department should reexamine the readiness oversight and management roles of the Office of the Secretary of Defense, the Office of the Chairman of Joint Chiefs of Staff, the Services, and the CINCs. In many areas of readiness, responsibilities are clear. The Title X responsibilities of the Services to organize, train and equip units is a notable example. In the case of resource allocations to support readiness, and planning for readiness to conduct joint operations, responsibilities are less clear. Such responsibilities should be delineated to ensure an effective overall program for readiness is carried out. In addition, where there are ongoing efforts within the Department concerning functional areas (e.g. Defense Science Board Task Force on Gulf War Health Effects, Nuclear Posture Review, Facilities (BRAC '95), etc.), readiness matters should be included in their terms of reference, and their outputs should include an assessment of the impact of the proposals on readiness.

13. Future Readiness: We were unable to assess the impact of a focus on current readiness on our future forces. Acquisition continues to take an unprecedented smaller share of the defense budget. The uncertainty attendant to that phenomenon is how well the armed forces will be able to modernize to respond to the changing nature of warfare. This is an issue which requires considerable follow-on study and evaluation. It is our judgment that our technological superiority and the nature of the threat today provides us a small cushion of time. However, focusing solely on today's readiness without concern for tomorrow's capabilities and readiness could create some vestiges of the "hollow" days (i.e. poorly equipped forces).

C. Future Work.

The Readiness Task Force will continue to meet quarterly, or on call of the Secretary of Defense, to review the status of the recommendations and/or address other readiness issues as directed.

THE UNDER SECRETARY OF DEFENSE

WASHINGTON, DC 20301-3000

ACQUISITION

19 MAY 1993

MEMORANDUM FOR CHAIRMAN, DEFENSE SCIENCE BOARD

SUBJECT: Terms of Reference -- Defense Science Board Task Force on Readiness

You are requested to organize a Defense Science Board (DSB) Task Force to advise the Secretary of Defense on the components of a Readiness Early Warning System to insure that our forces do not become "hollow," and, where deficiencies may begin to emerge, to suggest corrective actions.

The Readiness Task Force will provide advice, recommendations, and supporting rationale which address the items below.

- Key indicators for measuring readiness and candidate methodologies for providing early warning of potential readiness problems, including:

  -- An assessment of how well the Department can deal with readiness concerns; and

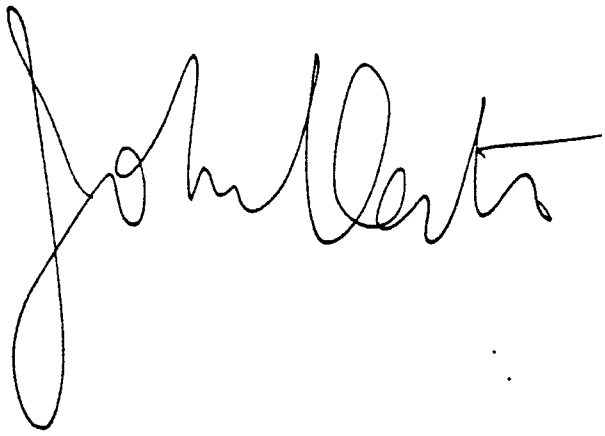
  -- An assessment of the adequacy of existing readiness reporting systems.

- Other matters affecting individual and collective readiness, such as: structure, lift, sustainability, active-reserve mix, retention, training, and the use of civilians and coalition personnel support.

While the primary focus of the Readiness Task Force is on management and oversight processes, it will also report to the Secretary findings with regard to the state of readiness of the armed forces. Where deficiencies are noted, the report will suggest corrective actions.

The Assistant Secretary of Defense for Force Management and Personnel, ASD(FM&P) will sponsor this Task Force. General Edward C. Meyer, USA (Ret.) will serve as Chairman of the Task Force. Mr. Michael A. Parmentier, Director (Readiness & Training) will serve as Executive Secretary. Mr. John V. Ello will be the Defense Science Board Secretariat representative. The Office of the Under Secretary of Defense (Acquisition) will

provide funding to support the activities of the Readiness Task Force. The Readiness Task Force will meet at least quarterly, and will provide interim reports and respond to inquiries from the Secretary, Deputy Secretary, and other senior officials of the Department of Defense. The Readiness Task Force will submit, on or before January 31, 1994, an initial report which will include recommendations for the next phase of activities as well as a proposed deadline for the final report. It is not anticipated that this Task Force will need to go into any "particular matters" within the meaning of Section 208 of Title 18, U.S. Code, nor will it cause any member to be placed in the position of acting as a procurement official.



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TASK FORCE
ON
READINESS

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USD (A) Approval

6/14/93
Date

SASD Coordination

2 June 93
Date