Secretary of Defense

James R. Schlesinger

ANNUAL DEFENSE DEPARTMENT REPORT

FY 1975

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REPORT OF THE SECRETARY OF DEFENSE

JAMES R. SCHLESINGER

TO THE CONGRESS

ON THE

FY 1975 DEFENSE BUDGET AND FY 1975-1979 DEFENSE PROGRAM

MARCH 4, 1974

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Mr. Chairman and Members of the Committee:

It is my privilege to present to you the FY 1975 Defense Program and Budget. This is the first budget in a decade or more that does not include support of United States forces in combat. At the same time, it is a budget that must carry us, through maintenance of a military equilibrium, on the passage from the cold war toward a period of enduring peace. In such a difficult period of transition, I have a special duty to review with you the fundamental strategic issues that we face and the basis on which we are developing what we consider to be the lowest prudent peacetime defense posture.

Admiral Thomas H. Moorer, the Chairman of the Joint Chiefs of Staff, will present his customary report on our military posture. He will discuss in more detail than I shall here the current and developing balance of military power.

A. THE INTERNATIONAL SITUATION AND THE DEFENSE ESTABLISHMENT

Our defense budget proposals, of necessity, reflect our perspective on the United States role in the world. It is understandable, of course, that there will be divergencies in judgment among Americans on that role, and those divergencies will be reflected in different estimates of what the defense budget should be. As the Psalmist tells us, "Where there is no vision the people perish". Hence, I would like to share with you our vision.

The United States today, as opposed to the period before 1945, bears the principal burden of maintaining the worldwide military equilibrium which is the foundation for the security and the survival of the Free World. This is not a role we have welcomed; it is a role that historical necessity has thrust upon us. The burden of responsibility has fallen on the United States, and there is nobody else to pick up the torch if the United States fails to carry it.

In fulfilling this responsibility we recognize that we are dealing in a world which is militarily dominated by two states -- ours and the Soviet Union. There is no other nation that possesses a military capability comparable to these two states. Consequently, in judging the military balance, and in deciding upon our own force posture, we do so primarily with the Soviet Union in mind.

This does not suggest that we are not hopeful with regard to the future peaceful evolution of world politics; quite the contrary. Considerable progress has been made during the last five years in improving the international political climate. The President has taken many important initiatives: opening up new lines of communication with the Soviet Union and with the Peoples' Republic of China, helping to settle long-standing disagreements between East and West such as Berlin, beginning in practical ways to put limits on armaments, and ending our military involvement in the hostilities in Indochina. There has been a new spirit of cooperation between East and West, reflected in these practical arrangements, that offers the possibility -- as yet it is no more than that -- of a more durable peace in the future. And as you know, United States force levels have declined substantially in the wake of these Presidential initiatives, and the share of our national resources committed to defense has been significantly reduced.

Neither am I suggesting that the difficulties in the international situation imply that there will be an unconstrained arms race or frequent confrontations between East and West. It is precisely to avoid these circumstances, and to put boundaries around arms competition, that we are engaged with the Soviet Union in SALT II. And it is to achieve a similar objective, through a more stable balance at lower force levels in Central Europe, that we and our NATO Allies are engaged in negotiations on Mutual and Balanced Force Reductions with the Warsaw Pact states.

While we pursue negotiations about mutual reductions of arms, in furtherance of detente, it is my judgment that we must maintain a worldwide military equilibrium. Short of that, we create the possibility of vacuums and temptations that could undermine detente and the hope for improved political relations with the East.

A policy requiring us to maintain our military strength and alliances while we are actively pursuing detente with the Soviet Union and the Peoples' Republic of China may appear to some as incongruous. We have a long tradition in this country of arming with great haste when war comes upon us, and disarming with even greater haste when the war is over; and we have tended, often, to view our relations with other nations in terms of absolutes -- friend or foe, ally or adversary, cold war or detente.

Unfortunately, the real world is more complicated. Today, I hardly need argue that a feast and famine approach to national defense is no longer feasible, let alone desirable. Our experience

in this century has amply demonstrated that satiating our military establishment in wartime and starving it in peacetime brings us neither peace nor long-term alleviation of the heavy burden of defense. In both blood and treasure, it will cost us less to maintain a reasonably stable level of defense effort until it is possible to achieve genuine mutual reductions in armaments.

The Soviet Union shows that it, at least, sees no inconsistency between detente and increasing military capabilities. We see continuing increases in Soviet budgets, forces and forward deployments. The Soviet Union is making significant improvements in its strategic nuclear forces and, in concert with its partners in the Warsaw Pact, maintains large and ready general purpose forces. These forces are, in fact, the most usable elements of their considerable and diversified military power. We would serve ourselves and our Allies poorly indeed if we relied solely on fond hopes or soft words while failing to take practical account of improving Soviet capabilities.

The Soviet Union has historically been a relatively prudent and sober power and I trust it will continue to be so. I hope that as a result of our mutual recognition that there is no good alternative to peaceful cooperation, we shall gradually achieve a world in which security is based upon something more than a balance of arms. But until such a time arrives we must recognize the need for a stable balance of military forces. As a minimum, we must keep a visible strategic nuclear balance, contribute to a balance of general purpose forces in central Europe where the bulk of Soviet and Warsaw Pact forces are arrayed against NATO, and together with our Allies maintain a balance of naval forces to ensure the freedom of the seas and the protection of our sea lines of communication, as has been the long tradition of the United States.

1. The Strategic Nuclear Balance

There have been two aspects in the development of Soviet strategic forces, one long-term and the other more recent, that affect our present strategic forces planning and the deterrent value of our strategic systems. The long-term and quite well known factor is that over many years the Soviets have been steadily closing the gap in nuclear capabilities between them and us.

For a period of time prior to 1960 the United States had a virtual nuclear monopoly. By 1960 it was perceived that our monopoly advantage would ebb; and, in fact, it not only began to

ebb, but by 1966-67 the Soviet Union had a very substantial intercontinental counter deterrent. During the early 1960's it was stated quite clearly by President Kennedy -- and also by a large majority of Americans in both parties -- that the United States needed alternatives other than suicide or surrender, that it needed options which did not imply immediate escalation to major nuclear war.

If anything, the need for options other than suicide or surrender, and other than escalation to all out nuclear war, is more important for us today than it was in 1960, because of the growth of the capabilities possessed by other powers. These additional options do not include the option of a disarming first strike. Neither the USSR nor the United States has, or can hope to have, a capability to launch a disarming first strike against the other, since each of us possesses, and will possess for the foreseeable future, a devastating second-strike capability against the other. This almost certainly will deter the deliberate initiation of a nuclear attack against cities, for it would bring inevitable retaliatory destruction to the initiator. Thus, this basic deterrent remains intact.

A development of more recent years is the accelerated improvement in Soviet missile technology. The Soviet Union now has the capability in its missile forces to undertake selective attacks against targets other than cities. This poses for us an obligation, if we are to ensure the credibility of our strategic deterrent, to be certain that we have a comparable capability in our strategic systems and in our targeting doctrine, and to be certain that the USSR has no misunderstanding on this point.

It is true that in addition to retaliatory targeting against urban and industrial centers, our war plans have always included military targets. The purpose of having war plans whose dimensions are generally understood by potential foes is, first, to deter rash actions. But secondly, if deterrence fails, the war plans provide the National Command Authorities -- the President and his advisers -- with well thought-out, detailed sets of options.

In the past, most of those options -- whether the principal targets were cities, industrial facilities, or military installations -- have involved relatively massive responses. Rather than massive options, we now want to provide the President with a wider set of much more selective targeting options. Through possession of such a visible capability, we hope to reinforce deterrence by removing the temptation for an adversary to consider any kind of nuclear attack. Therefore, the changes we are making

in our strategic planning this year are specifically intended to shore up deterrence across the entire spectrum of risk. We believe that by improving deterrence across the broad spectrum, we will reduce to an even lower point the probability of a nuclear clash between ourselves and other major powers.

But if, for whatever reason, deterrence should fail, we want to have the planning flexibility to be able to respond selectively to the attack in such a way as to (1) limit the chances of uncontrolled escalation, and (2) hit meaningful targets with a sufficient accuracy-yield combination to destroy only the intended target and to avoid widespread collateral damage. If a nuclear clash should occur -- and we fervently believe that it will not -- in order to protect American cities and the cities of our allies, we shall rely into the wartime period upon reserving our "assured destruction" force and persuading, through intrawar deterrence, any potential foe not to attack cities. It is through these means that we hope to prevent massive destruction even in the cataclysmic circumstances of nuclear war.

This adjustment in strategic policy does not imply major new strategic weapon systems and expenditures. We are simply ensuring that in our doctrine, our plans, and our command and control we have -- and are seen to have -- the selectivity and flexibility to respond to aggression in an appropriate manner. We do not intend that the Soviet Union should have a wider range of options than we do.

Even after these adjustments to our present policy, there remains a serious potential problem for the future of our strategic policy and forces. In recent years, the USSR has been pursuing a vigorous strategic R&D program. This we had expected. But its breadth, depth, and momentum as now revealed comes as something of a surprise to us.

During the past year alone, the Soviets have tested four new ICBM's (the SS-X-16, SS-X-17, SS-X-18, and SS-X-19), and have developed their first MRV-submarine-launched missile. The new ICBM's are of especial interest. Three of the four have been flown with MIRV's, and all of them are being designed for increased accuracy. The very large SS-X-18 will have about thirty percent more throw-weight than the currently deployed SS-9. The SS-X-17 and SS-X-19 are considered as successors to the relatively light SS-11. They will have from three-to-five times the throw-weight of the earlier model SS-11's, which now constitute the bulk of the Soviet ICBM force. If all three new and heavier missiles are deployed, Soviet throw-weight in their ICBM force will increase from the current 6-7 million pounds to an impressive 10-12 million pounds.

This throw-weight, combined with increased accuracy and MIRV's could give the Soviets on the order of 7,000 one-to-two megaton warheads in their ICBM force alone. They would then possess a major one-sided counterforce capability

against the United States ICBM force. This is impermissible from our point of view. There must be essential equivalence between the strategic forces of the United States and the USSR -- an equivalence perceived not only by ourselves, but by the Soviet Union and third audiences as well. This was the essence of the SALT I agreements.

With these things in mind, we are seeking in SALT II to ensure that the principle of essential equivalence is upheld. We are also proposing in the FY 1975 budget several strategic R&D programs conducted within the SALT I agreements as hedges against the unknown outcome of SALT II and the uncertain actions of the USSR. The United States is prepared to reduce, stay level, or if need be increase our level of strategic arms, but in any case that level will be fixed by the actions of the Soviet Union. If the Soviet Union insists on moving ahead with a new set of strategic capabilities, we will be forced to match them. We would prefer, however, to reduce the present balance in such a way that strategic equivalence can be achieved at the lowest cost and least destabilizing level of forces.

2. The NATO-Warsaw Pact Balance

There are some who feel that the United States entered indiscriminately into security commitments in the post-World War II period, and that it is time to review those commitments. I agree that we ought to review our commitments. But the worst thing of all would be if the United States, in reviewing commitments now believed by some to have been entered into indiscriminately in an earlier period, were to abandon these commitments indiscriminately -- because many of those commitments are vital to our security, and to the place and role of the United States in the world today. We can retreat to the North American continent, and we can perhaps survive there indefinitely. But it would be a changed world, and one in which many of the better aspects of the American society would be increasingly subject to strain.

NATO is perhaps our most important commitment. I hardly need remind this Committee of the fundamental ties between the United States and Europe, or to recall for you all we have done in this century to help ensure European freedom and vitality. Nor need I tell you that American and European interests in the larger issues of mankind are indivisible. It is for these larger reasons, as well as our own immediate national interests, that we have worked so hard, over so many years, under so many Administrations, both

Democratic and Republican, to establish a solid foundation for Western security, and to help ensure political stability and economic well-being.

As far as I am aware, there is no fundamental disagreement with these basic assumptions of our European policy. It is instead on certain manifestations of that policy about which there is disagreement -- whether the NATO conventional forces are adequate for deterrence and defense, and whether the United States is bearing a disproportionate share of the collective defense burden of the Alliance.

It is precisely to these two aspects of our NATO policy that I have devoted so much attention in my discussions with the NATO Defense Ministers. My purpose has been to begin a process aimed at achieving over the next three years two fundamental security objectives necessary to sustain an adequate defense posture:

-- First, the construction of a satisfactory basis for maintaining an adequate overall NATO security posture for the long haul, including balanced forces with rational missions credible to our adversaries and ourselves.

-- Second, an equitable adjustment of burdens to put United States participation in NATO, and the United States military presence in Europe, on a solid, durable foundation acceptable both to the United States Congress and public, and to our Allies.

The objective of NATO strategy is deterrence, and the forces we field to achieve deterrence are both nuclear and conventional forces. The role of these forces has changed over time. In NATO's early days, the United States enjoyed a clear superiority in nuclear forces. This allowed early NATO strategy to be based on the "tripwire" concept, by which conventional ground forces in Europe were designed to serve primarily to trigger nuclear retaliation by the United States against a Warsaw Pact attack.

Now, as the Soviet Union reaches nuclear parity with the United States, deterrence will be strongly reinforced if there is a balance of conventional as well as of nuclear forces. This clearly does not mean that we no longer require a nuclear deterrent. Nor does it mean that the American nuclear commitment to the security of the Alliance has been outdated. The commitment is firm. But it does mean that our nuclear forces may no longer carry the same

dominant weight in the balance of deterrence that they did in an earlier period, and this places a higher value on NATO's conventional military capabilities. Thus a strong conventional capability is more than ever necessary -- not because we wish to wage conventional war but because we do not wish to wage any war.

I have discussed with our NATO Allies what I call the "NATO triad", which is different in concept from our strategic triad. It is based upon strategic forces primarily provided by the United States, tactical nuclear forces that would be available in the event that Western Europe started to be overrun, and a stalwart conventional capability. I believe that the European Allies are aware of the implications of nuclear parity, and are now more interested in a stalwart conventional capability than they have been since the inception of NATO in 1949. This new perception is vitally important because the decision to use nuclear weapons will be an agonizing decision not lightly entered into by anybody nor lightly concurred in by the member nations of NATO.

While many agree with the need and importance of conventional forces, there is controversy over the balance of military forces between NATO and the Warsaw Pact. It has sometimes been suggested that NATO does not have, and cannot afford to acquire, a conventional option which does more than serve as a trip-wire for nuclear war. I disagree. Our analysis suggests that NATO has the essential ingredients for such a balance. If the NATO countries do not falter in their defense programs, and if we can concert our defense efforts more effectively, there is no reason why NATO should not be able to achieve and sustain an adequate defense posture for the long haul.

NATO has fielded a large military force of high quality. It is a force of considerable strength. It continues to improve. In many respects it is not the equal of the Warsaw Pact force opposing it -- for instance, in maneuver divisions and tanks. NATO's main reinforcements, those from the United States, are not so close as those of the Soviet Union. But NATO has some strengths of its own, such as tactical air forces, and the Warsaw Pact has some weaknesses and vulnerabilities, such as logistics and the uncertain reliability of some Pact members. NATO could give a good account of itself in defense, provided NATO gives itself the defensive weapons and military

cohesion it needs. Of course, NATO is dependent on each member keeping up its individual efforts. All must do their fair share if the present disparities between NATO strength and that of the Warsaw Pact are not to become insuperable.

This realistic and positive assessment of NATO's conventional defense capabilities does not mean the existing correlation of forces between NATO and the Warsaw Pact is satisfactory for our security. While NATO does have substantial conventional defense capabilities -- and it is important that the Soviet Union realize this -- there remain objective disparities, and any Mutual and Balanced Force Reduction agreement must address these disparities if it is to enhance stability.

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The second major objective I have pursued with our European Allies is the achievement of an equitable adjustment of the defense burden. In fairness, we should acknowledge at the outset that NATO defense has been far from a single-handed effort by the United States. Of the peacetime forces deployed in the European area, our allies contribute approximately 90 percent of NATO's ground forces, 80 percent of the ships, and 75 percent of the aircraft. In the critical central region of Europe, the United States contributes only 23 percent of NATO's manpower -- compared, for example, with the Soviet Union's share of 46 percent of Warsaw Pact manpower.

I am confident, from my meetings with the Defense Ministers, that the Allies do appreciate the need to achieve a more equitable sharing of the defense burdens. In fact, they have been moving in this direction for the past several years, as evidenced by the real increases in their defense budgets -- increases that have occurred notwithstanding the process of detente, and at a time when our own defense budget and forces have shown substantial real reductions. I am hopeful that allied defense budgets will continue to increase overall during the next few years, although the present economic prospects in some countries are discouraging.

The Allies are of course also aware of the present Congressional requirement that full offset of the United States balance of payments deficit on defense account in FY 1974 be obtained and that compensatory

reductions in United States forces stationed in Europe as part of our NATO commitment be made if offset arrangements are inadequate. I believe, although I cannot at this time promise, that offset arrangements with the Federal Republic of Germany and with our other Allies will fulfill the requirement of the law without requiring unilateral redeployments of United States forces from Europe. These arrangements will make an important contribution to the burden sharing objective we seek.

I do not intend, however, to rest our burden sharing objective on the Defense balance of payments account. The balance of payments accounts are only one indicator of the respective burdens being borne by each Ally. What we seek, as I have mentioned, is an adjustment of general burdens which will put United States participation in NATO, and the United States military presence in Europe, on a more solid footing.

But after a more equitable sharing of the defense burden, there is, frankly, no satisfactory alternative in the near term to the continued presence in Europe of substantial numbers of United States forces. Reductions in United States forces in Europe would be prudent only through successful negotiation with the Warsaw Pact. While we are seeking greater efficiencies in the use of our forces, and are working with our Allies to achieve a more efficient and effective allocation of our collective resources, early improvements of this nature are not likely to permit unilateral United States force reductions so long as the Warsaw Pact continues to improve its capabilities.

The Mutual and Balanced Force Reduction negotiations do hold out a real prospect for reductions. It is not a certain prospect, for we do not seek reductions at any cost, but only reductions that contribute to security in Europe. We and our NATO Allies have put forward proposals which would achieve both a more stable balance and reduced levels of forces and we hope progress can be made. Neither purpose would be served by mechanical reductions yielding a precarious correlation of forces. Both are served by the approach to negotiations being taken by us and our Allies.

3. U.S.-USSR Naval Balance

The third area in which we and our Allies want to maintain a perceived balance with the Soviet Union (and its allies) is in the forces that can be employed at sea. As a maritime nation, dependent upon the sea for the vitality of our economy and for mutual support with our Allies, the sea is more important to us than to the Soviet Union. Therefore, a balance at sea implies more than a strict numerical balance, for together with our Allies we would need to protect a minimum essential level of shipping against a sustained interdiction effort by the Soviet Union and its allies.

Historically, Soviet Navy planning has emphasized force to support its land campaigns by interdicting the opponents' navies, and thereby interrupting the projection of opposing power by sea. Soviet forces have therefore stressed small surface combatants, many submarines, antiship cruise missiles, a large patrol vessel force particularly suited to coastal defense, and naval long-range and medium bombers.

In the past ten years, however, we have seen a growing deployment of Soviet naval forces to distant waters. The Soviet Navy began continuous out-of-area deployments in 1964 in the Mediterranean; these deployments were expanded later to the Indian Ocean, the Caribbean, and the west coast of Africa. The overall level of Soviet deployment activity measured in ship-days increased roughly six-fold from 1965 to 1970. There has been some leveling off since 1970, but we anticipate a modest increase in Soviet sea-going activities in the future. ("Ship-days" measure only activity, of course, and not direct combat capability.)

The Soviet Navy, contrary to some opinion, is not presently growing in numbers. It is growing in capability. The Soviet Navy has a vigorous ship-building program to replace older combatant ships with new, more capable types. By 1979 the Soviet Union could have several aircraft carriers of the KURIL-class, the first of which is now approaching operational status. We expect their major surface combatants to continue for the next several years at a level of about 200 ships, nearly the same as the United States now has. We are seeing a decline in the overall size of the Soviet submarine force, as they retire older diesel ships at a greater than one-for-one rate as new nuclear submarines come into the fleet. Even so, we

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estimate that by the early 1980s the USSR will have approximately twice the planned United States submarine level. This relatively large Soviet submarine force will continue to pose the primary threat to our sea lanes throughout the decade.

In sum, as we look ahead we see a Soviet Navy that is becoming increasingly capable of overseas deployment, whose submarines could pose a significant threat to free world shipping, and whose surface combatants, with their considerable antiship cruise missile capability, could inflict serious damage on our naval forces in a surprise attack. Admiral Moorer will discuss the naval situation in greater detail.

United States naval forces have been improving in quality since the 1950s. Increased emphasis has been given to protection of sea lanes of communication as a hedge against the possibility of a Soviet campaign against military and economic resupply shipping. Major ASW development programs have been carried out, providing a good surveillance and warning capability and a good capability to counter the Soviet submarine threat in a sustained conflict. Despite these improved capabilities, the numerical size of the Soviet submarine force indicates it could be a significant threat to shipping and naval forces during the early stages of any major conflict.

Numerically, the United States Navy has been declining steadily in recent years, and indeed has been reduced by about 45 percent since 1969. This reduction primarily reflects the retirement of many aging World War II-construction ships, including some early retirements which were made to provide funds for future procurement. Our carrier forces are declining from a total of 26 in 1962 to a projected 15 in 1975. (Because our new carriers are larger than their World War II-construction predecessors, the total number of shipboard naval aircraft has only declined by about a third rather than by half.) There has been a parallel and related reduction in the number of major surface combatants from more than 300 to the present level of about 200 ships. Amphibious lift ships, submarines, and support ship forces also have declined numerically from highs reached during the 1960s. These numerical reductions have been offset to some extent by the significantly improved individual capabilities of the ships and aircraft.

The current vigorous naval modernization program, funded in part by the savings achieved from retiring older ships, should result in surface combatant force levels climbing back to about 230 ships by the end of this decade. The number of general purpose nuclear-powered attack submarines is projected to increase from 59 at end FY 1974 to about 90 by the early 1980s.

These increased force levels are possible in large part because of the decision to pursue the high-low mix concept. Larger numbers of new units with relatively lower capability can be acquired for the same cost as a smaller number of high capability forces. Thus the planned overall force mix takes into account the different threat levels, enabling us to buy both sophisticated multi-purpose aircraft carriers and smaller, less sophisticated and less costly Sea Control Ships; nuclear-powered guided missile frigates as well as smaller patrol frigates; and so forth.

These planned modernization programs, together with continuing research and development leading towards advanced weapons and sensor systems, give us confidence that we and our allies can maintain an adequate naval balance with respect to the USSR into the early 1980s. Planned maritime forces, sea and air, will be capable in general of defending essential worldwide sea lanes, providing a strong capability to project power ashore in selected areas, and sustaining current levels of forward deployments.

4. Middle East Lessons

Soviet actions during the October 1973 Middle East War show that detente is not the only, and in certain circumstances not the primary, policy interest of the USSR. The immediate Soviet arms shipments to Egypt and Syria at the outset of hostilities, the deployment of nuclear-capable SCUD missile launchers, the peremptory Soviet note to the United States Government implying the possibility of direct Soviet military intervention with ground and air forces, and the forward deployment of sizeable Soviet naval forces -- over 90 Soviet ships in the Mediterranean at the height of the hostilities and smaller naval forces in the Indian Ocean -- provided another lesson in Soviet willingness to take risks with world peace.

We also learned useful military lessons from the October hostilities. For example, the value of United States military capabilities -- our capacity to airlift and sealift needed munitions and equipment over long distances, and the deterring presence of the Sixth Fleet -- was proved. Our quick logistical response capabilities and large naval presence had much to do with moderating the effects of the war.

We learned both from our last campaigns in Vietnam and the ensuing force reductions after Vietnam, as well from the Middle East crisis, that the readiness and level of modernization of our forces were not wholly adequate. With the support of the Congress, we are taking steps to correct this. Also, while our Middle East airlift effort was splendidly executed, we found our dependence on airlift highlighted. We need to increase that capability.

Given the present situation in the Middle East and the growth in the Soviet naval capabilities and deployments worldwide, we have decided also that United States interests would be served by our presence in the Indian Ocean on a more regular basis, i.e., by making more frequent deployments in that area in the coming year. In consonance with that decision, we are recommending to the Congress a budget supplement for $29 million for the expansion of our support facilities on the Indian Ocean island of Diego Garcia. This will limit the costs of Indian Ocean deployments and provide greater flexibility in the types of forces we would have available in that area of the world.

In addition, the Middle East war confirmed prior judgments about various aspects of modern warfare. The principal points are:

-- the importance of advanced warning and its assessment, and the ready forces available to take advantage of it;

-- the heavy attrition of equipment and supplies that can result from modern, intense conventional conflict;

-- the need for balanced, mutually supporting forces, i.e., not just tanks and aircraft, but infantry, antitank weapons, artillery and ground air defenses as well;

-- the new importance of modern antitank and air defense weapons;

-- the importance of defense suppression weapons, equipment and tactics;

-- the importance of a warm production base, and sufficient reserve stocks of ammunition, spare parts and equipment;

-- the importance of trained manpower.

None of these lessons is surprising. The Department has been working for some time to improve our capabilities in each of these areas.

5. Settling Down for the Long Haul

As I mentioned at the outset of this introduction, this is our first peacetime defense budget in a decade. It is, therefore, an appropriate time to consider how best to settle down for the long haul, for the continuing, steady task of providing an adequate defense for the United States and its interests. During the next few years, we must search for and assess the best R&D, weapons acquisition, and other strategies for the long haul. In doing so, we must ask such questions as how we can most efficiently compete with our major potential opponents, and what constitutes our own major strengths and weaknesses.

In our adjustment to a long haul posture, there are five basic principles which, in my view, should guide the future conduct of this department. They are that:

-- The safety of the United States, its citizens, and their lawful pursuits continues to depend on the maintenance of a strong defense establishment. Accordingly, we who represent this department must not be reticent in stating the needs we have or the pride we feel in the performance of the duties for our nation.

-- We have the responsibility, not only to the United States itself but also to our friends throughout the world, to assure the military balance so necessary to deterrence and a more enduring peace. Other nations led in that responsibility for most of the first two centuries of our national existence; now the cloak of leadership unavoidably embraces us, and we must make the long-term effort to bear it.

-- The men and women of the Department of Defense are without peers as servants of the nation. It does not follow, however, that patriotism can proceed without respect. We must give them the respect, dignity and support that are their due. Equal opportunity will continue to be a a DOD watchword.

-- To stress our needs is not to ignore an equal obligation, to use our citizens' resources wisely. We must continue to improve the efficiency and effectiveness of our forces and to add to the arsenal of deterrence.

-- We can and must become increasingly competitive with potential adversaries in a more fundamental sense. We must not be forced out of the market -- on land, at sea or in the air. Eli Whitney belongs to us, not to our competitors. He, rather than the medieval craftsmen of Mont St. Michel and Chartres -- however magnificent and unique their art -- must once more become our model.

I cannot say at this juncture exactly what the long haul holds for this Department. But I can say that unless we are to plan only by intuition, we must continue to build our peace structure on the hard facts of the international environment rather than on gossamer hopes for the imminent perfectability of mankind.

B. THE PROPOSED DEFENSE BUDGET

The President's Defense budget proposals transmitted to the Congress on 4 February were developed within this overall international context, and with the existing economic and fiscal constraints well in mind. These proposals include requests for FY 1974 Supplementals -- the result of pay and price increases and necessary readiness improvements -- as well as funds for FY 1975.

1. FY 1974 Supplementals

The FY 1974 Supplemental requests total $6.2 billion in addition to the amounts already appropriated by the Congress, raising the proposed FY 1974 obligation authority (TOA) to $87.1 billion. As shown on the following table, $3.4 billion of this Supplemental amount is required for pay and rate increases (most of which was included under Allowances for Civilian and Military pay raises in the original FY 1974 budget request last year); the balance of $2.8 billion is required to achieve the desired readiness level for U.S. forces.

FY 1974 SUPPLEMENTAL APPROPRIATIONS REQUEST
(TOA, $ Millions)

Force readiness	
Fuel price increase	480
Middle East payback	231
Augmented force readiness	1,397
Increased airlift capability	169
Accelerated modernization	516
Strategic program changes	25
Total, force readiness	2,818
Pay and rate changes	
January 1, 1973 pay increase (military & civilian)	1,495
October 1, 1973 pay increase (military & civilian)	1,060
Military retired pay cost-of-living increases:	
July 1, 1973	287
January 1, 1974	182
Wage board pay increases	236
Increased food costs	107
Postal costs	48
Total, pay & rate changes	3,415
Total supplemental request	6,233

The "readiness supplemental" includes fuel price increases in the amount of $480 million as well as $231 million in extra costs of our arms supply to Israel. These extra costs result from our increased operations and maintenance activities and the additional cost incurred in replacing in U.S. inventories the material provided to Israel.

The Supplemental request also reflects the most urgent deficiencies in the condition of our forces that were made apparent by the Middle East hostilities. With these deficiencies in mind, I have included $1,397 million to improve the readiness of our forces, $169 million to increase our airlift capability, and $516 million to buy certain high-value weapons and equipment which are now in short supply in our Services.

The readiness improvements include adding to our ammunition stocks, reducing the maintenance backlog on our ships and equipment, making sure pre-positioned equipment is ready for use, improving our defense suppression capabilities, and purchasing short-supply items important for overall readiness.

The airlift improvements I recommend are modest first steps to a more fundamental examination of our airlift capabilities which I believe is necessary. These first steps include expanding C-5 and C-141 utilization rates, developing a stretched version of the C-141, and seeking relatively inexpensive modifications to civil aircraft to permit them to carry military cargoes in an emergency.

The additional high value weapons and equipment purchases proposed in the Supplemental include TOW antitank missiles for the Army and Marines, M-60 tanks and M113A1 armored personnel carriers for the Army, vehicles for the Marines, P-3C antisubmarine warfare aircraft for the Navy, air munitions for the Navy and Air Force, and improvements to a number of USAF aircraft. An increase in RDT&E funds is also proposed for all of the Services.

Finally, the FY 1974 Supplemental includes $25 million for long lead time items for the second Trident submarine.

2. The FY 1975 Budget

The FY 1975 Budget request in total obligational authority (TOA) amounts to $92.6 billion, an increase of $5.5 billion over FY 1974 and $12.1 billion over FY 1973. Outlays for FY 1975 are estimated at $85.8 billion, an increase of $6.3 billion over FY 1974 and $12 billion over FY 1973. These FY 1975 totals include the amounts transmitted to the Congress by the President, plus estimates for pay raises expected to become effective during the year and the costs of proposed new legislation.

This request is a substantial one, but I offer no apologies for its size. The FY 1975 Budget bears directly on the question of whether or not the United States will continue to fulfill the responsibilities it has around the world. In real terms, moreover, it is somewhat smaller than the amount actually provided for FY 1973. As shown in the following table, the increase of about $12.1 billion in TOA over FY 1973 (in current dollars) is almost wholly consumed by pay and price increases.

PAY AND PRICE INCREASES: FY 1973 to FY 1975
Excluding Retired Pay
(TOA, $ Millions)

Pay increases: January 1973 pay increase (in effect for six months of FY 1973 and all 12 months of FY 1975); October 1973 pay increase, October 1974 pay increase; wage board (blue collar) pay increase	4,598
Increased subsistence costs and other military allowances (existing legislation)	743
Petroleum price increases	1,698
Inflation on other purchases (7% from FY 1973 to FY 1974 and 4.6% estimated from FY 1974 to FY 1975)	4,689
Space rental to GSA (required starting in FY 1975)	183
Proposed legislation (military allowances)	187
Total	12,098

The three general pay increases (military and white-collar civil service) and the blue-collar (wage board) pay increases which take place regularly over this period will add about $4.6 billion to the FY 1975 Budget.

The cost of subsistence will be almost a half billion dollars higher in FY 1975 than in FY 1973. The ration rate was $1.46 per man per day on January 1, 1972, $1.65 on January 1, 1973, and $2.28 on January 1, 1974 - the rate reflected in the FY 1975 Budget. Higher costs for clothing, certain station allowances, and travel and transportation costs bring the total add-on for subsistance and other military allowances to $743 million in FY 1975.

Petroleum prices on February 1, 1974, were 123 percent above the prices we paid in FY 1973. Even assuming no further price increases, as we have in the FY 1975 budget estimates, this is an add-on of $1.7 billion.

For all other purchases, we estimate (based on Commerce data through December 1973) that price inflation will amount to 7 percent from FY 1973 to FY 1974, and we hope it will slow to 5 percent from FY 1974 to FY 1975. On this basis, price inflation will add about $4.7 billion to the FY 1975 Budget.

Beginning in FY 1975, the Defense Department is required by law to pay the General Services Administration an appropriate rental charge for GSA controlled space occupied by the DoD. This charge will amount to $183 million in FY 1975.

Finally, we are proposing certain items of military personnel legislation which -- if enacted -- will add $187 million to our costs in FY 1975.

This means that if we were to carry on the FY 1973 program at FY 1975 price levels and pay rates -- employing the same people, purchasing the same items, with nothing added -- it would cost us about $12,098 million more than it actually did in FY 1973. In addition, retired pay will increase about $1.6 billion from FY 1973 to FY 1975. Thus in formulating our FY 1975 budget request, we had to absorb a total of about $13.7 billion in pay and price add-ons.

Fortunately, we have been able to stabilize the proportion of Defense outlays which are devoted to pay and allowances, albeit not without some further reduction in personnel. As shown in the table below, pay and allowances will take about 55.4 percent of estimated Defense outlays in FY 1975, compared with 55.8 percent in FY 1973 and 55.2 percent in FY 1974.

PAY COSTS AND MANPOWER TRENDS, SELECTED YEARS
(Outlays in $ millions, manpower in thousands)

	FY 1964	FY 1968	FY 1973	FY 1974	FY 1975
Military basic pay & related	$ 8,511	$12,779	$17,618	$17,904	$19,030
Military special pays & allowances	4,475	7,080	5,628	6,261	6,655
Civil service payroll	7,305	10,281	12,994	13,812	14,929
Family housing (excluding pay)	504	396	563	771	878
Subtotal	20,795	30,536	36,803	38,748	41,492
Military retired pay	1,209	2,095	4,390	5,158	6,011
Total pay & allowances	22,004	32,630	41,193	43,906	47,504
Purchases	28,782	45,397	32,635	35,594	38,296
Total outlays	50,786	78,027	73,828	79,500	85,800
Pay & allowances as percent of the total outlays	43.3%	41.8%	55.8%	55.2%	55.4%
Average Strength (non-years)					
Military	2,691	3,436	2,324	2,218	2,177
Civil Service	1,045	1,276	1,033	1,014	1,019
Total	3,736	4,712	3,357	3,232	3,196

The current level of pay and allowances as a percent of total Defense outlays is, of course, substantially above FY 1964 and FY 1968. But this reflects a national decision to pay our military and civilian personnel a compensation comparable to what they could get in the civilian sector of the economy.

In this respect, most of the costs attributed to the All-Volunteer Force result essentially from this same national decision. About 63 percent of the estimated $3.6 billion associated with the All-Volunteer Force in the FY 1975 Budget is nothing more than a major increase in basic pay for military personnel with less than two years of service -- personnel who prior to November 1971 were grossly underpaid in comparison with the civilian sector and with career military personnel.

The FY 1975 Budget in real terms is not only less than the amount provided for FY 1973, it is also smaller than the amount provided for FY 1964, the year before the Vietnam buildup began. Furthermore, for the third consecutive year Defense outlays will take six percent or less of the gross national product and, as shown in the table below, a declining percentage of total Federal budget outlays and net public spending.

DEFENSE OUTLAYS AS A PERCENT OF:

	FY 1964	FY 1968	FY 1973	FY 1974	FY 1975
Gross National Product	8.3	9.4	6.0	5.9	5.9
Federal Budget (Outlays)	41.8	42.5	29.0	27.9	27.2
Net Public Spending	28.1	29.2	18.5	17.8	17.1

Indeed, much of the talk about reordering national priorities is quite off the mark. As indicated in the following table, National Defense spending per capita in real terms will decline from $325 in FY 1968 to $202 in FY 1975, while Other Public spending and Private spending is expected to increase from $693 to $900 and $2,421 to $3,055, respectively, during the same period.

REAL GNP PER CAPITA, SELECTED YEARS
(In constant CY 1958 prices)

	National Defense Spending	Other Public Spending	Private Spending (Consumption & Investment)	Total Real GNP Per-Capita
FY 1945 (World War II peak)	$ 1,092	$ 307	$ 1,232	$ 2,631
FY 1950 (Pre-Korea, post-World War II low)	119	468	1,609	2,196
FY 1953 (Korea Peak)	383	391	1,772	2,546
FY 1956 (Post-Korea)	269	418	1,941	2,629
FY 1961 (Last Eisenhower year)	245	508	1,896	2,649
FY 1964 (Prewar)	254	569	2,129	2,953
FY 1968 (War peak)	325	693	2,421	3,438
FY 1975	202	900	3,005	4,107

Clearly, a major reallocation of national output has already taken place since FY 1968, and the notion that Defense is consuming a disproportionate share of that output -- at the expense of our social welfare and to the detriment of our economy -- is simply not supported by the facts. Per capita GNP has increased substantially during the last decade and all of that increase has been devoted to the domestic welfare of the nation.

Although the FY 1975 Defense Budget in real terms is somewhat lower than FY 1973, several important changes in the composition of the program are planned. As indicated in the following table, incremental Southeast Asia costs drop sharply from FY 1973 to FY 1975, while support for the baseline U.S. forces increases.

DEFENSE BUDGET SUMMARY
FY 1973-75
(TOA in $ Millions)

	FY 1973	FY 1974	FY 1975	Changes 1973 to 1975
Current Prices				
Baseline U.S. forces	69,769	77,047	83,373	+13,604
MAP	1,120	3,295	1,279	+159
Incremental Southeast Asia costs	5,171	1,599	1,913	-3,258
Subtotal, excluding retired pay	76,060	81,941	86,565	+10,505
Military retired pay	4,392	5,164	6,014	+1,622
Total TOA, current prices	80,452	87,105	92,579	+12,127
Constant FY 1975 Prices				
Baseline U.S. forces	80,756	82,121	83,373	+2,617
MAP	1,261	3,449	1,279	+ 18
Incremental Southeast Asia costs	6,141	1,720	1,913	-4,228
Subtotal, excluding retired pay	88,158	87,290	86,565	-1,593
Military retired pay	5,311	5,662	6,014	+ 703
Total TOA, constant FY 1975 prices	93,469	92,952	92,579	-890

Included in the $1.9 billion for Southeast Asia costs in FY 1975 is $1,450 million for the support of South Vietnamese forces and $463 million for U.S. forces -- largely the air units based in Thailand. The rise in these costs from FY 1974 to FY 1975 results from a sharp increase in support for the South Vietnamese forces, which more than offsets a drop in U.S. force costs and the transfer of Laos support to the regular MAP program. The reason for this increase in support for South Vietnam is threefold: first, the ceasefire has not worked as well as we had hoped and, therefore, South Vietnamese military consumption is well above what was anticipated; second, unlike FY 1974, there are far fewer prior year funds available to meet FY 1975 requirements; and finally, in FY 1974 we fell behind in replacing South Vietnamese equipment losses and greater efforts are required in FY 1975.

The sharp rise in the Military Assistance Program (MAP) in FY 1974 reflects the emergency assistance to Israel. The FY 1975 Military Assistance Program, in constant prices, is about at the same level as in FY 1973.

These changes in Incremental Southeast Asia Costs and MAP make possible within a slowly declining overall Defense budget in real terms (i.e., in constant FY 1975 prices) a modest increase in the support of the Baseline U.S. Forces. This increase amounts to about $1.4 billion in FY 1974 and $1.2 billion in FY 1975, or an increase of $2.6 billion from FY 1973 to FY 1975. The additional resources are applied primarily in three areas, which in my judgment require greater emphasis -- new development initiatives for our strategic forces, augmented readiness and accelerated equipment modernization for our general purpose forces, and an increased wartime capability for our strategic airlift forces. Each of these areas is discussed in detail in the following sections of this Defense Report.

II. STRATEGIC FORCES

Among the major capabilities in the defense arsenal of the United States, the strategic nuclear deterrent forces command the most attention. Yet compared with the general purpose forces, their costs are relatively small. And, with brief exceptions, their costs as a percent of the total defense budget have actually declined during the past decade.

As is shown in Appendix Table 1, the obligational authority made available for the strategic forces in FY 1964 amounted to $8.5 billion -- 16.8 percent of the total defense budget. After more than a decade of substantial pay raises and a good deal of inflation, the obligational authority we are proposing for the strategic forces in FY 1975 comes to $7.6 billion -- 8.2 percent of the total defense budget, or less than half the share devoted to those forces in FY 1964. Such relatively modest figures are hardly compatible with the view that this Administration has been less than restrained in its conduct of the strategic nuclear competition. By any measure, our current effort is much more moderate than it was a decade or more ago.

A. THE BASIS FOR THE STRATEGIC NUCLEAR FORCES

To underline the trends in these relatively modest costs is not to minimize the importance of the strategic nuclear deterrent forces. At the same time that the United States has necessarily become more engaged in world affairs than ever before in its history, it has become increasingly vulnerable to direct nuclear attack and to the possibility of unprecedented destruction. Nuclear weapons now cast their shadow over all of us, and even complete political isolation would no longer relieve us of their threat. The United States is too powerful to be ignored and no longer far enough away (measured by ICBM trajectories) to be out of hostile reach. It is understandable, therefore, why strategic nuclear forces should receive so much attention. Without a firm foundation of nuclear deterrent forces the rest of our power would not count for much in the modern world.

I cannot stress this last point too strongly. All wars since 1945 have been non-nuclear wars shadowed by the nuclear presence. The threat to use nuclear weapons has remained, for the most part, in the background, but belligerents and neutrals alike have known that, like the big stick in the closet, it was there. Perhaps we may hope that in the future, as in the past, the nuclear forces will act as a brake upon violence, and that wars will remain conventional or not begin at all. Perhaps we

may even hope that the strategic nuclear forces, by contributing to a worldwide balance of power and international stability, will carry us well beyond detente to a more enduring peace and to a general reduction of armaments.

Not only are the strategic forces vitally important; they are controversial as well. Most of the major defense debates during the past thirty years have centered on them, and alarms have rung over such matters as the B-36, the bomber "gap", the missile "gap", MIRVs, and ABM deployments. Much of the debate has centered on specific weapons systems. But issues have also arisen about the size and composition of the offensive and defensive forces, the nature of alternative target systems, and the desirability and feasibility of enhancing deterrence and limiting escalation by having the option to avoid destroying enemy cities.

Of equal concern has been the growth to maturity of Soviet strategic offensive forces. Only a decade ago these forces numbered in the hundreds; now we count them in the thousands, and they have a substantially greater throw-weight. As a consequence, the issue that faces us no longer is (if it ever was) how to avoid initiatives that might continue or accelerate the strategic competition, but how -- in a situation of essential equivalence -- to interpret and respond to a wide range of potential Soviet initiatives.

If we are to have informed and productive debate on these matters, it is important that the Congress and the public understand the evolutionary character of strategic force planning and doctrine. Accordingly, it is essential to review the factors that now shape our strategic nuclear forces, the assumptions we make about these factors in designing our posture, and the directions we propose to take in our Five-Year Defense Program. In undertaking this review, I will place particular emphasis on why we are maintaining such comparatively large and diversified offensive forces, why we are modifying our strategic doctrine, and why we are proposing the pursuit of a number of research and development projects as prudent hedges for the future.

What is generally accepted, as a minimum, is that we ourselves must not contribute to any failures of deterrence by making the strategic forces a tempting target for attack, or prone to accidents, unauthorized acts, or false alarms.

I should also stress that it is only in the process of examining why and how deterrence might fail that we can judge the adequacy of our plans and programs for deterrence. And once that analysis begins, it quickly becomes evident that there are many ways, other than a massive surprise attack, in which an enemy might be tempted to use, or threaten to use, his strategic forces to gain a major advantage or concession. It follows that our own strategic forces and doctrine must take a wide range of possibilities into account if they are successfully to perform their deterrent functions.

Nuclear proliferation represents another important factor. It is a complex process driven by many actions and considerations. But one element affecting its extent and velocity undoubtedly is the degree to which other countries believe that the U.S. strategic deterrent continues -- or fails -- to protect them. Accordingly, in support of our non-proliferation policy, we must take account of the concerns of other countries in our doctrine and force planning.

There is also an important relationship between the political behavior of many leaders of other nations and what they perceive the strategic nuclear balance to be. By no means do all of them engage in the dynamic calculations about the interaction of Soviet and U.S. forces that have so affected our own judgments in the past. However, many do react to the static measures of relative force size, number of warheads, equivalent megatonnage, and so forth. Hence, to the degree that we wish to influence the perceptions of others, we must take appropriate steps (by their lights) in the design of the strategic forces.

Finally, an important connection exists between U.S. arms control efforts and the size and composition of the strategic nuclear forces. Arms control agreements are, of course, designed deliberately to constrain the freedom of the parties in the planning of their offensive and defensive capabilities. Strategic programs, in turn, affect the prospects for arms control. And specific weapons systems are the coin of this particular realm. Not only are such systems the mediums of exchange; they are also the basis for expanding or contracting the forces. As a consequence, arms control objectives must have a major impact on our planning.

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1. The Problem of Objectives

I believe it is well understood that the size and composition of our strategic nuclear forces must depend to some degree on the magnitude of the overall deterrent burden that we place upon them. It is also a matter of increasingly widespread appreciation that these forces cannot bear the entire burden by themselves, however fundamental their importance may be. Other capabilities, nuclear and non-nuclear, must be maintained in strength to cover the entire spectrum of deterrence. What still requires emphasis, however, is the diversity of roles that the strategic nuclear forces continue to play. Our ability to achieve major national security objectives continues to be hostage to the operational doctrine, size, and composition of these forces.

Deterrence has been and remains the fundamental objective of our strategic nuclear forces. But what precisely do we want these forces to deter? Clearly, we expect them to forestall direct attacks on the United States; at the same time, however, we accept the equally heavy responsibility to deter nuclear attacks on our allies. To some extent we also depend on the strategic forces to exercise a deterrent effect against massive non-nuclear assaults, although we now place the main emphasis on U.S. and allied theater forces for that purpose. We also view our strategic forces as inhibiting coercion of the U.S. by nuclear powers, and, in conjunction with other U.S. and allied forces, helping to inhibit coercion of our allies by such powers.

While deterrence is our fundamental objective, we cannot completely preclude the possibility that deterrence might fail. The objectives we would want our strategic forces to achieve in those circumstances remain an issue to which I shall return.

2. USSR and PRC Strategic Objectives

Despite the importance of these objectives, it is probably the present and prospective strategic nuclear forces of other nations that constitute the single most powerful influence on the design of our own capabilities. Most of our strategic objectives, in fact, are a function of these potential threats.

The most important nuclear capability facing the United States is that of the USSR. As we engage in our own planning, we need to understand better than we now do why this capability is evolving at such a rapid rate and what the Soviets hope to gain by such large expenditures and such ambitious programs. Only with an improved understanding can we decide judiciously what impact this capability should have on our own choice of strategic programs.

Primarily at issue are the answers to two major questions. To what extent have the Soviets simply responded to and tried to counter U.S. initiatives? And to what extent have they sought (and do they continue to seek) something more ambitious than a capability for second-strike massive retaliation against the United States?

Much has been written on both counts, at least in the United States. But the Soviets have not proved especially communicative about their programs and motives, and the evidence of what they are up to is, to say the least, fragmentary and conflicting. As so often is the case, we are faced with uncertainty. Admittedly, my counterparts in the Soviet Ministry of Defense could substantially reduce this uncertainty by disclosing current and even past information about their decisions to the same extent that the United States does. But in the absence of such candor, we have no choice but to interpret the available evidence as best we can.

What does this evidence suggest?

First, the Soviets have proceeded with development of many strategic programs ahead of rather than in reaction to what the United States has done. It is worth recalling, in this connection, that they took the initiative in the deployment of MRBMs and IRBMs, ICBMs, ABMs, and FOBSs. At the present time, they have four new ICBMs that are actively being flight tested.

Second, the Soviets -- through their medium-range (or peripheral attack) capabilities -- may have initially intended to threaten Western Europe as their only response to the intercontinental U.S. threat to the USSR in the early days of the strategic competition. But they have maintained and expanded

that threat long after having acquired the capability to launch a direct attack on the United States. Indeed, the size of their medium-range force bears no evident relationship to the capability of its counterparts in Western Europe or even to any urban target system there.

Third, it is noteworthy that the Soviets are apparently not content with the SALT I agreements, which temporarily froze certain Soviet quantitative advantages (in ICBMs and SLBMs) in compensation for certain U.S. advantages. They have decided, as far as we can judge, to strive for at least comparable qualitative capabilities as well.

To sum up, what we now have to face in our force planning is that the Soviets have:

-- acquired better than numerical parity with the United States in terms of strategic nuclear launchers (counting bombers as well as missiles);

-- continued their extensive threat to Western Europe even after having acquired a massive direct threat to the United States;

-- begun to exploit the larger throw-weight of their ICBMs so as to permit the eventual deployment of as many as 7,000 potentially high-accuracy MIRVs with large yields;

-- started production of the Backfire bomber which could well evolve into an intercontinental threat.

It is premature to assess confidently what objectives the Soviets have set for themselves with these active, expensive programs. However, it is certainly conceivable that they foresee both political and military advantage, not only in the growing numerical weight of their forces, but also in their potential to bring major portions of our own strategic arsenal into jeopardy.

The United States, for its part, cannot afford to stand idly by in the face of these developments. As I shall discuss later, we are recommending a number of quite specific research programs to hedge against any sustained drive to achieve what the Soviet Union may regard, however mistakenly, as meaningful, exploitable, superiority. Preferably by agreement or if necessary by unilateral action, we believe that we must maintain an essential equivalence with them. We are prepared to balance our strategic forces down if SALT succeeds, or to balance them up if we must match Soviet momentum.

The Soviet strategic capability no longer is the only one that we must take into account in our force planning. A second important force from the standpoint of the United States is that of the Peoples' Republic of China (PRC). During the past decade, the Chinese have moved steadily from a program of development and testing to a deployed nuclear capability. We now estimate that they already have on line a modest number of MRBMs, IRBMs, and nuclear-capable medium and light bombers.

Previous forecasts about the evolution of this capability have not proved particularly reliable, and I cannot guarantee any higher confidence in the current projections. Nevertheless, we estimate that the PRC could achieve an ICBM initial operating capability as early as 1976 and an SLBM initial operating capability at a somewhat later date.

We do not yet have much insight into the strategic and political objectives that the PRC is seeking to achieve with these deployments. But certain interesting features about them are already evident.

-- The Chinese are clearly sensitive to the importance of second-strike nuclear capabilities and are making a considerable effort to minimize the vulnerability of their strategic offensive forces.

-- The range and location of their systems are such that they can already cover important targets in the eastern USSR. But they are also located so as to cover other countries on their periphery.

-- With the deployment of the ICBM that they have under development (and later an SLBM), they will have the capability to reach targets throughout the USSR and in the United States as well.

Our relations with the PRC have, of course, improved very dramatically during the last four years. Moreover, the present Chinese leadership may well be striving for exclusively second-strike countercity forces. Nonetheless, we must in prudence take these forces into account in our planning.

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Any assessment of the nuclear threats facing the United States must keep certain other prospects in mind as well. In the not very distant future, five nations (U.S., USSR, PRC, UK, and France) will have deployed SLBM forces at sea. It will clearly

be desirable in these circumstances to have some idea about the identity and general location of these different forces, together with highly reliable communications and tight control over our own land-based and sea-based nuclear capabilities.

It is even more essential that we focus on the issues that could arise if and when several additional nations acquire nuclear weapons, not necessarily against the United States, but for possible use or pressure against one another. Such a development could have a considerable impact on our own policies, plans, and programs. Indeed, this prospect alone should make it evident that no single target system and no stereotyped scenario of mutual city-destruction will suffice as the basis for our strategic planning.

3. Deterrence and Assured Destruction

I frankly doubt that our thinking about deterrence and its requirements has kept pace with the evolution of these threats. Much of what passes as current theory wears a somewhat dated air -- with its origins in the strategic bombing campaigns of World War II and the nuclear weapons technology of an earlier era when warheads were bigger and dirtier, delivery systems considerably less accurate, and forces much more vulnerable to surprise attack.

The theory postulates that deterrence of a hostile act by another party results from a threat of retaliation. This retaliatory threat, explicit or implicit, must be of sufficient magnitude to make the goal of the hostile act appear unattainable, or excessively costly, or both. Moreover, in order to work, the retaliatory threat must be credible: that is, believable to the party being threatened. And it must be supported by visible, employable military capabilities.

The theory also recognizes that the effectiveness of a deterrent depends on a good deal more than peacetime declaratory statements about retaliation and the existence of a capability to do great damage. In addition, the deterrent must appear credible under conditions of crisis, stress, and even desperation or irrationality on the part of an opponent. And since, under a variety of conditions, the deterrent forces themselves could become the target of an attack, they must be capable of riding out such an attack in sufficient quantity and power to deliver the threatened retaliation in a second strike.

The principle that nuclear deterrence (or any form of deterrence, for that matter) must be based on a high-confidence capability for second-strike retaliation -- even in the aftermath

of a well-executed surprise attack -- is now well established. A number of other issues remain outstanding, however. A massive, bolt-out-of-the-blue attack on our strategic forces may well be the worst possible case that could occur, and therefore extremely useful as part of the force sizing process. But it may not be the only, or even the most likely, contingency against which we should design our deterrent. Furthermore, depending upon the contingency, there has been a long-standing debate about the appropriate set of targets for a second strike which, in turn, can have implications both for the types of war plans we adopt and the composition of our forces.

This is not the place to explore the full history and details of that long-standing strategic debate. However, there is one point to note about its results. Although several targeting options, including military only and military plus urban/industrial variations, have been a part of U.S. strategic doctrine for quite some time, the concept that has dominated our rhetoric for most of the era since World War II has been massive retaliation against cities, or what is called assured destruction. As I hardly need emphasize, there is a certain terrifying elegance in the simplicity of the concept. For all that it postulates, in effect, is that deterrence will be adequately (indeed amply) served if, at all times, we possess the second-strike capability to destroy some percentage of the population and industry of a potential enemy. To be able to assure that destruction, even under the most unfavorable circumstances -- so the argument goes -- is to assure deterrence, since no possible gain could compensate an aggressor for this kind and magnitude of loss.

The concept of assured destruction has many attractive features from the standpoint of sizing the strategic offensive forces. Because nuclear weapons produce such awesome effects, they are ideally suited to the destruction of large, soft targets such as cities. Furthermore, since cities contain such easily measurable contents as people and industry, it is possible to establish convenient quantitative criteria and levels of desired effectiveness with which to measure the potential performance of the strategic offensive forces. And once these specific objectives are set, it becomes a relatively straightforward matter -- given an authoritative estimate about the nature and weight of the enemy's surprise attack -- to work back to the forces required for second-strike assured destruction.

The basic simplicity of the assured destruction calculation does not mean that the force planner is at a loss for issues. On the contrary, important questions continue to arise about the assumptions from which the calculations proceed. Where, for

the sake of deterrence, should we set the level of destruction that we want to assure? Is it enough to guarantee the ruin of several major cities and their contents, or should we -- to assure deterrence -- move much further and upward on the curve of destruction? Since our planning must necessarily focus on the forces we will have five or even ten years hence, what should we assume about the threat -- that is, the nature and weight of the enemy attack that our forces must be prepared to absorb? How pessimistic should we be about the performance of these forces in surviving the attack, penetrating enemy defenses (if they exist), and destroying their designated targets? How conservative should we be in buying insurance against possible failures in performance?

Generally speaking, national policy makers for more than a decade have chosen to answer these questions in a conservative fashion. Against the USSR, for example, we tended in the 1960s to talk in terms of levels of assured destruction at between a fifth and a third of the population and between half and three-quarters of the industrial capacity. We did so for two reasons:

-- beyond these levels very rapidly diminishing increments of damage would be achieved for each additional dollar invested;

-- it was thought that amounts of damage substantially below those levels might not suffice to deter irrational or desperate leaders.

We tended to look at a wide range of threats and possible attacks on our strategic forces, and we tried to make these forces effective even after their having been attacked by high but realistically constrained threats. That is to say, we did not assume unlimited budgets or an untrammelled technology on the part of prospective opponents, but we were prudent about what they might accomplish within reasonable budgetary and technological constraints. Our choice of assumptions about these factors was governed not by a desire to exaggerate our own requirements but by the judgment that, with so much at stake, we should not make national survival a hostage to optimistic estimates of our opponents' capabilities.

In order to ensure the necessary survival and retaliatory effectiveness of our strategic offense, we have maintained a TRIAD of forces, each of which presents a different problem for an attacker, each of which causes a specialized and costly problem for his defense, and all of which together currently give us high confidence that the force as a whole can achieve the desired deterrent objective.

That, however, is only part of the explanation for the present force structure. We have arrived at the current size and mix of our strategic offensive forces not only because we want the ultimate threat of massive destruction to be really assured, but also because for more than a decade we have thought it advisable to test the force against the "higher-than-expected" threat. Given the built-in surplus of warheads generated by this force-sizing calculation, we could allocate additional weapons to non-urban targets and thereby acquire a limited set of options, including the option to attack some hard targets.

President Nixon has strongly insisted on continuing this prudent policy of maintaining sufficiency. As a result, I can say with confidence that in 1974, even after a more brilliantly executed and devastating attack than we believe our potential adversaries could deliver, the United States would retain the capability to kill more than 30 percent of the Soviet population and destroy more than 75 percent of Soviet industry. At the same time we could hold in reserve a major capability against the PRC.

Such reassurances may bring solace to those who enjoy the simple but arcane calculations of assured destruction. But they are of no great comfort to policymakers who must face the actual decisions about the design and possible use of the strategic nuclear forces. Not only must those in power consider the morality of threatening such terrible retribution on the Soviet people for some ill-defined transgression by their leaders; in the most practical terms, they must also question the prudence and plausibility of such a response when the enemy is able, even after some sort of first strike, to maintain the capability of destroying our cities. The wisdom and credibility of relying simply on the preplanned strikes of assured destruction are even more in doubt when allies rather than the United States itself face the threat of a nuclear war.

4. The Need for Options

President Nixon underlined the drawbacks to sole reliance on assured destruction in 1970 when he asked:

> "Should a President, in the event of a nuclear attack, be left with the single option of ordering the mass destruction of enemy civilians, in the face of the certainty that it would be followed by the mass slaughter of Americans? Should the concept of assured destruction be narrowly defined and should it be the only measure of our ability to deter the variety of threats we may face?"

The questions are not new. They have arisen many times during the nuclear era, and a number of efforts have been made to answer them. We actually added several response options to our contingency plans in 1961 and undertook the retargeting necessary for them. However, they all involved large numbers of weapons. In addition, we publicly adopted to some degree the philosophies of counterforce and damage-limiting. Although differences existed between those two concepts as then formulated, particularly in their diverging assumptions about cities as likely targets of attack, both had a number of features in common.

-- Each required the maintenance of a capability to destroy urban-industrial targets, but as a reserve to deter attacks on U.S. and allied cities rather than as the main instrument of retaliation.

-- Both recognized that contingencies other than a massive surprise attack on the United States might arise and should be deterred; both argued that the ability and willingness to attack military targets were prerequisites to deterrence.

-- Each stressed that a major objective, in the event that deterrence should fail, would be to avoid to the extent possible causing collateral damage in the USSR, and to limit damage to the societies of the United States and its allies.

-- Neither contained a clear-cut vision of how a nuclear war might end, or what role the strategic forces would play in their termination.

-- Both were considered by critics to be open-ended in their requirement for forces, very threatening to the retaliatory capabilities of the USSR, and therefore dangerously stimulating to the arms race and the chances of pre-emptive war.

-- The military tasks that each involved, whether offensive counterforce or defensive damage-limiting, became increasingly costly, complex, and difficult as Soviet strategic forces grew in size, diversity, and survivability.

Of the two concepts, damage-limiting was the more demanding and costly because it required both active and passive defenses as well as a counterforce capability to attack hard targets and other strategic delivery systems. Added to this was the

assumption (at least for planning purposes) that an enemy would divide his initial attack between our cities and our retaliatory forces, or switch his fire to our cities at some later stage in the attack. Whatever the realism of that assumption, it placed an enormous burden on our active and passive defenses -- and particularly on anti-ballistic missile (ABM) systems -- for the limitation of damage.

With the ratification of the ABM treaty in 1972, and the limitation it imposes on both the United States and the Soviet Union to construct no more than two widely separated ABM sites (with no more than 100 interceptors at each), an essential building-block in the entire damage-limiting concept has now been removed. As I shall discuss later, the treaty has also brought into question the utility of large, dedicated anti-bomber defenses, since without a defense against missiles, it is clear that an active defense against bombers has little value in protecting our cities. The salient point, however, is that the ABM treaty has effectively removed the concept of defensive damage limitation (at least as it was defined in the 1960s) from contention as a major strategic option.

Does all of this mean that we have no choice but to rely solely on the threat of destroying cities? Does it even matter if we do? What is wrong, in the final analysis, with staking everything on this massive deterrent and pressing ahead with a further limitation of these devastating arsenals?

No one who has thought much about these questions disagrees with the need, as a minimum, to maintain a conservatively designed reserve for the ultimate threat of large-scale destruction. Even more, if we could all be guaranteed that this threat would prove fully credible (to friend and foe alike) across the relevant range of contingencies -- and that deterrence would never be severely tested or fail -- we might also agree that nothing more in the way of options would ever be needed. The difficulty is that no such guarantee can be given. There are several reasons why any assurance on this score is impossible.

Since we ourselves find it difficult to believe that we would actually implement the threat of assured destruction in response to a limited attack on military targets that caused relatively few civilian casualties, there can be no certainty that, in a crisis, prospective opponents would be deterred from testing our resolve. Allied concern about the credibility of this particular threat has been evident for more than a decade. In any event, the actuality of such a response would be utter folly except where our own or allied cities were attacked.

Today, such a massive retaliation against cities, in response to anything less than an all-out attack on the U.S. and its cities, appears less and less credible. Yet as pointed out above, deterrence can fail in many ways. What we need is a series of measured responses to aggression which bear some relation to the provocation, have prospects of terminating hostilities before general nuclear war breaks out, and leave some possibility for restoring deterrence. It has been this problem of not having sufficient options between massive response and doing nothing, as the Soviets built up their strategic forces, that has prompted the President's concerns and those of our Allies.

Threats against allied forces, to the extent that they could be deterred by the prospect of nuclear retaliation, demand both more limited responses than destroying cities and advanced planning tailored to such lesser responses. Nuclear threats to our strategic forces, whether limited or large-scale, might well call for an option to respond in kind against the attacker's military forces. In other words, to be credible, and hence effective over the range of possible contingencies, deterrence must rest on many options and on a spectrum of capabilities (within the constraints of SALT) to support these options. Certainly such complex matters as response options cannot be left hanging until a crisis. They must be thought through beforehand. Moreover, appropriate sensors to assist in determining the nature of the attack, and adequately responsive command-control arrangements, must also be available. And a venturesome opponent must know that we have all of these capabilities.

Flexibility of response is also essential because, despite our best efforts, we cannot guarantee that deterrence will never fail; nor can we forecast the situations that would cause it to fail. Accidents and unauthorized acts could occur, especially if nuclear proliferation should increase. Conventional conflicts could escalate into nuclear exchanges; indeed, some observers believe that this is precisely what would happen should a major war break out in Europe. Ill-informed or cornered and desperate leaders might challenge us to a nuclear test of wills. We cannot even totally preclude the massive surprise attack on our forces which we use to test the design of our second-strike forces, although I regard the probability of such an attack as close to zero under existing conditions. To the extent that we have selective response options -- smaller and more precisely focused than in the past -- we should be able to deter such challenges. But if deterrence fails, we may be able to bring all but the largest nuclear conflicts to a rapid conclusion before cities are struck. Damage may thus be limited and further escalation avoided.

I should point out in this connection that the critics of options cannot have the argument both ways. If the nuclear balance is no longer delicate and if substantial force asymmetries are quite tolerable, then the kinds of changes I have been discussing here will neither perturb the balance nor stimulate an arms race. If, on the other hand, asymmetries do matter (despite the existence of some highly survivable forces), then the critics themselves should consider seriously what responses we should make to the major programs that the Soviets currently have underway to exploit their advantages in numbers of missiles and payload. Whichever argument the critics prefer, they should recognize that:

-- inertia is hardly an appropriate policy for the United States in these vital areas;

-- we have had some large-scale pre-planned options other than attacking cities for many years, despite the rhetoric of assured destruction;

-- adding more selective, relatively small-scale options is not necessarily synonymous with adding forces, even though we may wish to change their mix and improve our command, control, and communications.

However strong in principle the case for selective options, several questions about it remain. What kinds of options are feasible? To what extent would their collateral effects be distinguishable from those of attacks deliberately aimed at cities? And what are their implications for the future size and composition of our strategic forces and hence for our arms control objectives in this realm?

Many of the factors bearing on these questions will become more evident later in this statement. It is worth stressing at this point, however, that targets for nuclear weapons may include not only cities and silos, but also airfields, many other types of military installations, and a variety of other important assets that are not necessarily collocated with urban populations. We already have a long list of such possible targets; now we are grouping them into operational plans which would be more responsive to the range of challenges that might face us. To the extent necessary, we are retargeting our forces accordingly.

Which among these options we might choose in a crisis would depend on the nature of an enemy's attack and on his objectives. Many types of targets can be pre-programmed as options -- cities, other targets of value, military installations of many different kinds, soft strategic targets, hard strategic targets. A number

of so-called counterforce targets, such as airfields, are quite soft and can be destroyed without pinpoint accuracy. The fact that we are able to knock out these targets -- counterforce though it may be -- does not appear to be the subject of much concern.

In some circumstances, however, a set of hard targets might be the most appropriate objective for our retaliation, and this I realize is a subject fraught with great emotion. Even so, several points about it need to be made.

-- The destruction of a hardened target is not simply a function of accuracy; it results from the combined effects of accuracy, nuclear yield, and the number of warheads applied to the target.

-- Both the United States and the Soviet Union already have the necessary combinations of accuracy, yield, and numbers in their missile forces to provide them with some hard-target-kill capability, but it is not a particularly efficient capability.

-- Neither the United States nor the Soviet Union now has a disarming first strike capability, nor are they in any position to acquire such a capability in the foreseeable future, since each side has large numbers of strategic offensive systems that remain untargetable by the other side. Moreover, the ABM Treaty forecloses a defense against missiles. As I have already noted in public: "The Soviets, under the Interim Offensive Agreement, are allowed 62 submarines and 950 SLBM launchers. In addition, they have many other nuclear forces. Any reasonable calculation would demonstrate, I believe, that it is not possible for us even to begin to eliminate the city-destruction potential embodied in their ICBMs, let alone their SLBM force."

The moral of all this is that we should not single out accuracy as some sort of unilateral or key culprit in the hard-target-kill controversy. To the extent that we want to minimize unintended civilian damage from attacks on even soft targets, as I believe we should, we will want to emphasize high accuracy, low yields, and airburst weapons.

To enhance deterrence, we may also want a more efficient hard-target-kill capability than we now possess: both to threaten specialized sets of targets (possibly of concern to allies) with a greater economy of force, and to make it clear to a potential

enemy that he cannot proceed with impunity to jeopardize our own system of hard targets.

Thus, the real issue is how much hard-target-kill capability we need, rather than the development of new combinations of accuracy and yield per se. Resolution of the quantitative issue, as I will discuss later, depends directly on the further evolution of the Soviet strategic offensive forces and on progress in the current phase of the Strategic Arms Limitation Talks.

In the meantime, I would be remiss if I did not recommend further research and development on both better accuracy and improved yield-to-weight ratios in our warheads. Both are essential whether we decide primarily on high accuracy and low yields or whether we move toward an improved accuracy-yield combination for a more efficient hard-target-kill capability than we now deploy in our missiles and bombers. Whichever way we go, we have more need than the Soviets for increased accuracy because of our constrained payloads and low-yield MIRVs which have resulted from our lower missile throw-weights.

With a reserve capability for threatening urban-industrial targets, with offensive systems capable of increased flexibility and discrimination in targeting, and with concomitant improvements in sensors, surveillance, and command-control, we could implement response options that cause far less civilian damage than would now be the case. For those who consider such changes potentially destabilizing because of their fear that the options might be used, let me emphasize that without substantially more of an effort in other directions than we have any intention of proposing, there is simply no possibility of reducing civilian damage from a large-scale nuclear exchange sufficiently to make it a tempting prospect for any sane leader. But that is not what we are talking about here. At the present time, we are acquiring selective and discriminating options that are intended to deter another power from exercising any form of nuclear pressure. Simultaneously, as I shall discuss later, we and our allies are improving our general purpose forces precisely so as to raise the threshold against the use of any nuclear forces.

5. Separability of Targeting Doctrine and Sizing of Forces

The evolution in targeting doctrine is quite separable from, and need not affect the sizing of the strategic forces. It is quite feasible to have the foregoing options within the limits set by the ABM Treaty and the Interim Agreement on offensive forces. What is more, none of the options we are adopting and none of the programs we are proposing for research and development

need preclude further mutually agreed constraints on or reductions in strategic offensive systems through SALT. If the Soviets are prepared to reduce these arsenals in an equitable fashion, we are prepared to accommodate them. In fact, I can say that we would join in such an effort with enthusiasm and alacrity.

To stress changes in targeting doctrine and new options does not mean radical departures from past practice. Nor does it imply any possibility of acquiring a first strike disarming capability. As I have repeatedly stated, both the United States and the Soviet Union now have and will continue to have large, invulnerable second-strike forces. If both powers continue to behave intelligently and perceptively, the likelihood that they would unleash the strategic forces is so low that it approaches zero. We are determined, nonetheless, to have credible responses at hand for any nuclear contingency that might arise and to maintain the clear ability to prevent any potential enemy from achieving objectives against us that he might consider meaningful. The availability of carefully tailored, pre-planned options will contribute to that end. They do not invite nuclear war; they discourage it.

I repeat, we are eager to begin a reduction of the strategic forces by mutual agreement and on terms of parity. That is our first preference. We would be quite content if both the United States and the Soviet Union avoided the acquisition of major counterforce capabilities. But we are troubled by Soviet weapons momentum, and we simply cannot ignore the prospect of a growing disparity between the two major nuclear powers. We do not propose to let an opponent threaten a major component of our forces without our being able to pose a comparable threat. We do not propose to let an enemy put us in a position where we are left with no more than a capability to hold his cities hostage after the first phase of a nuclear conflict. And certainly we do not propose to see an enemy threaten one or more of our allies with his nuclear capabilities in the expectation that we would lack the flexibility and resolve to strike back at his assets (and those of any countries supporting the threat) in such a way as to make his effort both high in cost and ultimately unsuccessful.

How we proceed on these counts will depend on the USSR. But I do not believe that we can any longer delay putting our potential countermeasures into research and development. The Soviets must be under no illusion about our determination to proceed with whatever responses their actions may require. And if we undertake the programs that I shall discuss later, the prospects for misunderstanding should be low. More sensible arrangements for both parties may then be feasible.

6. Strategic Balance and International Stability

Until the late 1960s, U.S. superiority in launchers, warheads, and equivalent megatonnage was so great that we could ignore or disparage the importance of such "static" measures in comparing our forces with those of the USSR. Now, however, our numerical superiority has disappeared in almost every category except that of warheads, and it could dwindle very rapidly there as well.

Whether the Soviets believe that with the shift in these indicators they have achieved any meaningful, exploitable, advantage is not clear. However, they have not been reticent in stressing to a variety of audiences their superiority over the United States in numbers of ICBMs and other strategic capabilities. Their words, at least, have suggested that they see these asymmetries as giving them diplomatic if not military leverage.

As far as we can judge, moreover, the Soviets now seem determined to exploit the asymmetries in ICBMs, SLBMs, and payload we conceded to them at Moscow. Apparently, they are considering the deployment of large numbers of heavy and possibly very accurate MIRVs. As I have already indicated, this kind of deployment could in time come to threaten both our bombers and our ICBMs. Admittedly, we would still retain immense residual power in our deployed SLBM force, and the Soviets would surely know it. But to many interested observers, the actual and potential asymmetries (as measured by these "static" criteria) would look even more pronounced in favor of the USSR.

In such circumstances we cannot exclude the possibility that future Soviet leaders might be misled into believing that such apparently favorable asymmetries could, at the very least, be exploited for diplomatic advantage. Pressure, confrontation, and crisis could easily follow from a miscalculation of this nature.

It is all well and good to assert that the Soviet leaders, faced by an adamant and unified America, would come to their senses in time to avoid fatal mistakes in such a situation and would recognize the illusory nature of their advantages. But a crisis might already be too late for such an awakening. It is worth a price in research and development hedges to prevent such illusions from arising in the first place.

None of this should be taken to mean that exact symmetry must exist between the two offensive forces. The United States is willing to tolerate the existence of asymmetries provided that, in an era of alleged parity, they do not all favor one party. But we are not prepared to accept a situation in which all the visible asymmetries point in one direction. And we know from experience

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that the Soviets are not prepared to do so either. The potential for misunderstanding, miscalculation, and diplomatic error is too great to risk. A more equitable and stable arrangement would be one in which both sides maintain survivable second-strike reserves, in which there is symmetry in the ability of each side to threaten the other and in which there is a perceived equality between the offensive forces of both sides.

Accordingly, not only must our strategic force structure contain a reserve for threatening urban-industrial targets, the ability to execute a number of options, and the command-control necessary to evaluate attacks and order the appropriate responses; it must also exhibit sufficient and dynamic countervailing power so that no potential opponent or combination of opponents can labor under any illusion about the feasibility of gaining diplomatic or military advantage over the United States. Allied observers must be equally persuaded as well. In this sense, the sizing of our strategic arsenal, as distinct from our targeting doctrine, will depend on the outcome of SALT. In default of a satisfactory replacement for the Interim Agreement on strategic offensive forces, we will have to incorporate "static" measures and balancing criteria into the planning of our strategic offensive forces.

7. Principal Features of the Proposed Posture

This review of the factors that necessarily shape the planning and programming of the strategic nuclear forces should also indicate the principal features that we propose to maintain and improve in our strategic posture. They are:

-- a capability sufficiently large, diversified, and survivable so that it will provide us at all times with high confidence of riding out even a massive surprise attack and of penetrating enemy defenses, and with the ability to withhold an assured destruction reserve for an extended period of time.

-- sufficient warning to ensure the survival of our heavy bombers together with the bomb alarm systems and command-control capabilities required by our National Command Authorities to direct the employment of the strategic forces in a controlled, selective, and restrained fashion.

-- the forces to execute a wide range of options in response to potential actions by an enemy, including a capability for precise attacks on both soft and hard targets, while at the same time minimizing unintended collateral damage.

-- the avoidance of any combination of forces that could be taken as an effort to acquire the ability to execute a first-strike disarming attack against the USSR.

-- an offensive capability of such size and composition that all will perceive it as in overall balance with the strategic forces of any potential opponent.

-- offensive and defensive capabilities and programs that conform with the provisions of current arms control agreements and at the same time facilitate the conclusion of more permanent treaties to control and, if possible, reduce the main nuclear arsenals.

I will now discuss specific aspects of USSR and PRC strategic activities, together with the programs that we propose for the achievement of our force and employment objectives.

B. SIGNIFICANT DEVELOPMENTS IN THE STRATEGIC THREAT

1. The Soviet Union

One of the most important developments in the strategic threat during the past year has been the Soviet Union's demonstration of a MIRV technology. While this development had been anticipated for many years, the scope of the Soviet program as it has now emerged is far more comprehensive than estimated even a year ago. It is now apparent that all four of the new Soviet ICBM's -- the SS-X-18, a large liquid-fueled missile in the SS-9 class; the SS-X-17 and the SS-X-19, two medium liquid-fueled missiles with three to five times the throw-weight of the early model SS-11; and the SS-X-16, a light solid-fueled missile in the SS-13 class -- employ a post boost vehicle (PBV), commonly known in our country as a bus-type dispensing system. The SS-X-16 thus far has been flight tested with only one RV, but the other three ICBM's have now all been tested with unmistakably MIRVed payloads.

The breadth and depth of this Soviet ICBM program is further manifested by the wide variety of techniques and technology employed in the new systems. All four of these systems have computers aboard the post boost vehicles. New guidance concepts, two different types of post boost vehicle propulsion, and two different types of launch techniques are employed.

Although the SS-X-16 has thus far been tested with only one RV, a MIRV version cannot be precluded at this time. Indeed, if a MIRVed version is not developed, the only benefit to be derived from the use of a PBV in the SS-X-16 would be a possible improvement in CEP. However, it now appears that a land-mobile version

of the SS-X-16 may also be under development. Consequently, this missile may be deployed in both a fixed and land-mobile mode. As you know, the Interim Agreement itself does not restrict the development of land-mobile systems by either side, but the U.S. Government has unilaterally declared that it would consider the deployment of such missiles inconsistent with the objectives of the Agreement.

The SS-X-17 and SS-X-19 are apparently competitive developments of a potential replacement for the SS-11. Of the two, the SS-X-17 is technologically the more advanced. The SS-X-17 has been tested with both a single large RV and with four MIRVs. The single RV version could carry a large warhead and probably has sufficient accuracy to give it a very effective hard target kill capability. The MIRVed version, with much smaller warheads, would be essentially a soft target weapon. The SS-X-19, in contrast, has been tested only with a MIRVed payload of six RVs. We believe that it is not as yet sufficiently accurate to constitute a hard target weapon.

Nevertheless, the SS-X-17 and SS-X-19 MIRVs are clearly designed for greater accuracy, e.g., they have reentry vehicle configurations shaped for high speed atmospheric reentry. Consequently, with further refinements in the PBV guidance systems (and, hence, better CEPs) they may in time acquire a hard target capability. Both of these ICBMs can be deployed in the new type silos. With some modifications to the silos, particularly in the case of the SS-X-19 which is longer than the SS-11 and the SS-X-17, they could also be deployed in the current SS-11 silos.

The SS-X-18, like the SS-X-17, has been tested with both a single large RV and with five relatively large MIRVs. We believe that even the MIRVed version will have a very respectable hard target kill capability. The SS-X-18 can be deployed in the new type large silos, and with some modification to the silos, in the existing SS-9 silos.

In summary, the new Soviet ICBM program represents a truly massive effort -- four new missiles, new bus-type dispensing systems, new MIRVed payloads, new guidance, new-type silos, new launch techniques, and probably new warheads. If all three of the new and heavier missiles are deployed, throw-weight in the Soviet ICBM force will increase from the current 6-7 million pounds to an impressive 10-12 million pounds. This throw-weight, combined with increased accuracy and MIRV's, could give the Soviets on the order of 7,000 one-to-two megaton warheads in their ICBM force alone. This very impressive program appears to have three main objectives -- expanded target coverage (particularly countermilitary) with MIRVs, improved pre-launch survivability with the new hard silo designs, and the attainment of a significant hard target kill capability. Given the warhead yield and CEP currently estimated for the MIRVed version of the SS-X-18, and looking at the fixed land-based portion of our strategic TRIAD in isolation from other elements, a force of about 300 of these missiles (permitted under the Interim Agreement) could pose a serious threat to our ICBM's in their silos, even after those silos are upgraded. Moreover, it is more than likely that the MIRVed

follow-on to the SS-11, whether it be the SS-X-17 or SS-X-19, will also achieve a respectable hard target kill capability during the early part of the next decade.

The most notable development in the Soviet SLBM program during the past year is the flight test of a new multiple RV version of the SS-N-6. These are MRVs rather than MIRVs, i.e., they are not individually targetable. Hence, this SS-N-6 is similar to our POLARIS A-3. There is as yet no evidence of a MRV or MIRV version of the longer range SS-N-8, which is being deployed in the new D-class submarine. Nor is there any evidence of depressed trajectory testing of either the SS-N-6 or the SS-N-8.

We believe that virtually all SSBN production has now shifted to the D-class which carries 12 launchers each. (There is some evidence, however, that a modified D-class submarine with more than 12 tubes may now be under construction.) A total of 33 Y-class submarines (with 16 launchers each) has been completed and 18 or 19 D-class had been launched or were being assembled by the end of 1973, for a total of at least 744 launchers. Thus, it appears that the Soviet Union intends to go beyond the "baseline" SAL ceiling of "740 ballistic missile launchers on nuclear-powered submarines".

The Interim Agreement gives the Soviet Union the option to replace its old SS-7s and 8s (209 launchers) with "modern" SLBM launchers (SS-N-6s and 8s or better) up to a total of 950 launchers and 62 modern nuclear-powered submarines (Y and D-class or better). However, the phase out of the old systems is not required until the submarine with the 741st launcher enters sea trials -- which we now estimate will occur in mid-1975. At the current rate of production, 6-8 per year, the Soviet Union could have 62 operational "modern ballistic missile submarines" by mid-1977.

The major ongoing development in the Soviet strategic bomber force is, of course, the BACKFIRE. We expect the first squadron of BACKFIREs to become operational sometime this year.

The question of range and primary mission of the BACKFIRE has yet to be fully resolved. It now appears that the latest model will have a greater range than estimated for the earlier model. This factor, coupled with its known refueling capability, would seem to indicate that the BACKFIRE could be used as an inter-continental as well as a peripheral bomber, the role for which it appears best suited. Even so, the deployment of this new bomber would not substantially alter the U.S. air defense problem. As long as we cannot defend our cities against ballistic missile attack, there is little to be gained by trying to defend them against bomber attack. I will have more to say about this matter when I discuss our revised air defense program.

With regard to Soviet strategic defensive programs, there is still no evidence that the construction of an ABM defense for an ICBM area has been started. (The ABM Treaty allows both sides a total of 200 ABM launchers, 100 for the defense of the national capital area and 100 for the defense of an ICBM area.) In fact, there have as yet been no additions to the 64 ABM launchers in place around Moscow before the ABM Treaty was signed. The Soviet Union, however, has not lost interest in ABM defense. Flight testing of the new ABMs discussed here last year is continuing.

Modernization of Soviet air defenses is also continuing. The number of active SA-2 sites is declining, but additional SA-3 low altitude and SA-5 high altitude SAMs are being deployed. Similarly, new and more capable interceptors are entering the forces, but at a slower rate than older interceptors are being phased out. Although the Soviet air defense system is the most formidable in the world and is still being improved, it is not likely to offer an insurmountable obstacle to our bomber force in the foreseeable future. Should the Soviet Union develop and deploy an AWACS - FOXBAT "look-down, shoot-down" air defense system, as described in this report in past years, we would of course have to counter it with new penetration devices and techniques such as the cruise missile, bomber defense missiles, and improved ECM.

In this connection, we must be careful not to draw a false analogy from the Hanoi and Suez Canal air defense experiences. In both those cases the air defenses were heavily concentrated in a very limited area; moreover, only conventional weapons were employed by the attacking aircraft. In the case of the Soviet Union, the number of places which have to be defended is very large and, consequently, the air defenses are spread over a vast area. Our bombers, in striking back at the Soviet Union, would be penetrating at very low altitudes to avoid the high and medium altitude SAMs, and would be using SRAMs to attack the low altitude SAM batteries. Moreover, our bombers would be employing nuclear weapons, only one of which need penetrate to destroy the target and probably much of its air defenses.

2. The People's Republic of China

The PRC land-based ballistic missile program is progressing slowly but steadily. Most important from the U.S. point of view is the continuing development of the ICBM, which was flight tested again in 1973. We remain convinced that the PRC will pursue that program to a successful conclusion and achieve an ICBM capability before the end of this decade. Even a small force of operational ICBMs in hard silos -- 20 to 30 -- would give PRC considerable

strategic leverage; it would be able to augment its threat to the principal Soviet cities west of the Urals, and for the first time to extend its reach to the major cities in the United States.

Production of the BEAGLE light bomber in the PRC is continuing at a very modest rate. Neither the BEAGLE nor their BADGER medium bomber has sufficient range to reach the continental United States, but both can threaten our forces and allies in Asia and the Western Pacific, as well as the eastern part of the Soviet Union.

The PRC is also gradually strengthening its air defenses with the deployment of additional MIG-19 interceptors and SA-2 type SAMs. Nevertheless, those defenses, because of their qualitative limitations, are not likely to present much of an obstacle to either the United States or the Soviet Union in the event of war, at least during the balance of this decade.

C. U.S. STRATEGIC FORCES AND PROGRAMS

Although the Interim Agreement on strategic offensive forces expires in October 1977, we are continuing to plan our forces within the bounds of that agreement and the ABM Treaty; and, for intelligence estimating purposes, we are assuming the Soviet Union will do the same. Admiral Moorer will provide a detailed comparison of U.S.-USSR strategic forces in his Military Posture presentation. For convenience, a summary comparison is shown on the following page.

1. Strategic Offensive Forces and Programs

We plan to continue in our strategic forces over the foreseeable future an appropriate mix of bombers, ICBMs and SLBMs -- the so-called TRIAD. Our purpose in doing so is not to provide an independent assured destruction capability in each element of the strategic forces, as some people have presumed. Rather, it is to achieve a sufficient degree of diversification in our forces to hedge against both foreseeable and unforeseeable risks, and to enable us to continue to make available to the President a reasonable range of strategic options as USSR and PRC capabilities evolve.

I am sure the members of this Committee are well aware that each of the three major elements of our strategic forces has its own particular strengths and weaknesses with regard to pre-launch survivability and the ability to penetrate the enemy defenses. By maintaining an appropriate mix of the three, however, we can maximize their collective strengths and minimize the effects of their individual weaknesses, thus ensuring that the force as a whole is not inherently vulnerable to any one type of attack or any one type of defense.

U.S. AND U.S.S.R. STRATEGIC FORCE LEVELS

	Mid-1973		Mid-1974	
	U.S.	U.S.S.R.	U.S.	U.S.S.R.
Offensive				
ICBM Launchers 1/	1054	1550	1054	1575
SLBM Launchers 2/	656	550	656	660
Intercontinental Bombers 3/	496	140	496	140
Force Loadings Weapons	6784	2200	7940	2600
Defensive 4/				
Air Defense Interceptors 5/	559	2800	532	2600
SAM Launchers	481	9800	261	9800
ABM Defense Launchers	-	64	-	64

1/ Excludes launchers at test sites.
2/ Excludes launchers on diesel-powered submarines.
3/ Excludes bombers configured as tankers and reconnaissance aircraft.
4/ Excludes launchers at test sites.
5/ These numbers represent Total Active Inventory (TAI)

Force diversification is also essential to hedge against the unforeseeable risks, such as technological breakthroughs by the other side and unanticipated weaknesses in one or more of our own systems. Last year we encountered an example of the latter, i.e., some unexpected failures in the operational tests of the POSEIDON missile. I will discuss the nature of this problem and the measures being taken to correct it a little later. At this point, I simply want to note that this unanticipated failure, while worrisome, is by no means critical. Aside from the fact that the POSEIDON force even now can carry out most of its intended missions, we have a variety of other systems which can fill the gap until the necessary corrective actions are completed. In short, this is precisely the kind of situation the TRIAD was intended to hedge against.

In addition to hedging against risks, a well diversified force is needed to support the President's request for "other strategic options." As I indicated earlier, these other options imply a much wider range of capabilities than that required for assured destruction only. For example, capabilities are required to destroy military as well as urban, defended as well as undefended, and time urgent as well as non-time urgent targets. Moreover, the forces should include some weapons which are highly reliable, some which are highly accurate, and some which are highly controllable from launch to target. Here, again, each member of the TRIAD has some unique capabilities to offer.

On balance, therefore, I believe the continued support of well diversified U.S. strategic offensive forces clearly remains essential to our national security. Given the increasing size and variety of Soviet strategic capabilities, U.S. force diversification will be much more important in the future than it has been in the past.

MINUTEMAN

The principal impact of the new emphasis on "other strategic options", as far as the FY 1975 Budget is concerned, is on the MINUTEMAN program, particularly MINUTEMAN III. This missile, with its capacity for three RVs, relatively good accuracy, rapid retargeting capabilities, and relatively secure and reliable communications links to the National Command Authorities, is clearly a most versatile and cost-effective weapon.

Even without any additional R&D funding, we believe that the CEP of the MINUTEMAN III will gradually improve with continued testing. Beyond that point, further improvements in the counter-military capabilities of our ICBM force would require the deployment

of more than the currently planned 550 MINUTEMAN III missiles, larger yield warheads, an improved or new guidance system for MINUTEMAN III, terminally guided maneuvering RVs (MaRVs) or the development and deployment of an entirely new ICBM. In view of the on-going SAL talks, we propose in the FY 1975 Budget to take only those first few steps which are necessary to keep open these options; no decisions have been made to deploy any of these improved systems.

First, we propose to keep the MINUTEMAN III production line going at the lowest feasible rate -- five missiles per month. The FY 1974 Budget request included $394 million for the procurement of the last 136 MINUTEMAN III missiles, plus $23 million for long lead-time items to protect the option to deploy more than 550 MINUTEMAN III if that should prove desirable. The Congress approved the procurement of 115 missiles in FY 1974, deferring 21 to FY 1975. To that 21, we now propose to add 40 more for operational test assets, making a total buy of 61 missiles in FY 1975. The $758 million shown for the MINUTEMAN program in FY 1975 on the table beginning on the following page includes $285 million for the procurement of the 61 missiles and initial spares, and $15 million for long leadtime items to keep open the option for a FY 1976 buy. No decision has as yet been made to deploy more than 550 MINUTEMAN IIIs; we simply want to keep that option open.

Second, we have requested the Atomic Energy Commission (AEC) to keep open at the lowest feasible rate the MK 12 warhead production line.

Third, we propose to develop the option for some additional refinements in the existing MINUTEMAN guidance system, mostly in the software program, which should further reduce the CEP. Development of these refinements will cost about $100 million, of which the first $32 million is included in the FY 1975 amount shown for MINUTEMAN.

Fourth, we propose to proceed with engineering development of a new higher yield warhead for the MINUTEMAN III. The new warhead plus the more advanced (i.e., miniaturized) arming and fusing mechanism would be incorporated in a new center section which could be retrofitted into the existing MINUTEMAN III MK 12 RV without any changes in its weight, balance or other flight characteristics. The flight test data base accumulated for the MK 12 RV, therefore, would be directly applicable to the new MK 12A RV, and flight tests of the latter could be limited to the verification of the new arming and fusing components. The R&D and tooling costs (DOD only) for the MK 12A are estimated at about $125 million, the first increment of which -- $25 million -- is included in the FY 1975 amount shown for MINUTEMAN.

Acquisition Costs of Major Strategic Forces Modernization and Improvement Programs 1/

(Dollars in Millions)

Strategic Offense	FY 1973 Actual Funding	FY 1974 Planned Funding 2/	FY 1975 Proposed Funding
Continued Procurement of MINUTEMAN III Missiles, MINUTEMAN Silo Upgrading and Other Related Programs	816	730	758
Preparations for MINUTEMAN II Operational Base Launch (OBL) Tests	-	-	16
Advanced ICBM Technology	8	4	37
Conversion of SSBNs to POSEIDON Configuration, Continued Procurement of POSEIDON Missiles and Associated Effort	698	313	192
Development, Procurement and Military Construction -- TRIDENT Submarines and Missiles	794	1,435 (25)	2,043
Initiation of Design for a new SSBN	-	-	16
Development of Advanced Ballistic Reentry Systems and Technology (ABRES)	93	90	120
B-52D Modifications	46	38	73
Continued Development of New Strategic Bomber, B-1	445	449	499
Procurement of Short Range Attack Missile (SRAM)	203	133	2
Development of the Bomber Launched and Submarine Launched Versions of the Strategic Cruise Missile	53	14	125
Initial Development of Advanced Tanker/Cargo Aircraft	-	-	20

Acquisition Costs of Major Strategic Forces Modernization and Improvement Programs (Con't)

	(Dollars in Millions) FY 1973 Actual Funding	FY 1974 Planned Funding	FY 1975 Proposed Funding
Strategic Defense			
Continued Development of the Over-the-Horizon (OTH) Back-Scatter Radar	3	3	12
Continued Deployment of SAFEGUARD	599	341	61
Continued Development of Site Defense	80	110	160
Development of Advanced Ballistic Missile Defense Technology	93	62	91
Development and Acquisition of the SLBM Phased Array Radar Warning System	-	-	50
Command and Control			
Development and Procurement of Advanced Airborne Command Post (AABNCP)	117	50	90
Development of SANGUINE ELF System	9	13	13
Civil Defense			
Continued Support of the Civil Defense Program	82	82	86

1/ Includes costs of RDT&E, procurement of the system and initial spares, and directly related military construction.

2/ Figures in parentheses are the amounts included in the FY 1974 Supplemental.

Fifth, we plan to initiate advanced development of a terminally guided MaRV for possible retrofit into both ICBMs and SLBMs. This MaRV could give the MINUTEMAN III a very high accuracy, if such a capability should be needed in the future. The $20 million required to start this program is included in the FY 1975 amount shown for Advanced Ballistic Reentry System (ABRES).

Sixth, we plan to flight test a MINUTEMAN III with a larger number of smaller RVs. This payload, if successfully demonstrated, would give us the option to expand the target coverage of the MINUTEMAN force without any increase in the number of missiles deployed. About $8 million will be needed to start the test program in FY 1974 and $19 million to complete the test program in FY 1975. The FY 1974 sum is included in ABRES and the FY 1975 amount in the MINUTEMAN lines shown on the table.

The $758 million requested for the MINUTEMAN program in FY 1975 also includes funds for the continuation of the Silo Upgrading effort, and for the installation of the Command Data Buffer System at all MINUTEMAN III bases. The ability provided by the latter to retarget the MINUTEMAN III missiles rapidly from the launch control centers will greatly enhance the flexible employment possible with the force. Installation of the new system in the first MINUTEMAN III squadron was completed last year and all 50 missiles in the squadron were successfully programmed from the launch control center. Deployment of the 550 MINUTEMAN III missiles will be completed by end FY 1975 but silo upgrading and installation of the Command Data Buffer System in the first two wings, which were deployed before these programs were started, will not be completed until FY 1978. Upgrading of the MINUTEMAN II silos will be completed in FY 1980.

MINUTEMAN II Operational Base Launch Tests

In order to demonstrate the ability of our operationally deployed MINUTEMAN missiles to perform their assigned missions, we now propose to undertake a new Operational Base Launch (OBL) program involving full range flight testing out into the Pacific of eight MINUTEMAN II missiles in as close to an operational configuration and ground environment as possible. Four missiles would be launched from Malmstrom Air Force Base during the winter of 1974-75 and four more from that or some other northern base during the winter of 1975-76.

These would be the first full range flight tests of MINUTEMAN missiles from operational silos. The partial operational base launch tests conducted in 1965, 1966 and 1968, with mixed results, were not actual flight tests. In those tests, the missiles were loaded with just enough fuel for a seven second burn, enough to

reach an altitude of about one mile, out to a range of about one mile. The first seven-second test of a MINUTEMAN I from Ellsworth AFB in 1964 was successful. The other three attempts from Grand Forks AFB in late 1966 were not; in each instance the missile failed to launch because of a variety of mechanical difficulties associated with that particular test missile and silo.

All three major versions of MINUTEMAN have, of course, been repeatedly flight tested from Vandenberg Air Force Base out into the Pacific. But to some extent these were specially configured test missiles launched from specially configured test silos under carefully controlled conditions. While the missiles to be launched in the new OBL program would carry dummy warheads, they would be typical operational missiles in all other respects. Operational flight tests of this sort, i.e., from operational silos, are conducted routinely by the Soviet Union; they have conducted about 100 firings of this sort.

Development and test of the special equipment needed for safety and for directing and monitoring the launches has already been funded in prior year budgets. Funds to initiate preparations for the eight MINUTEMAN II OBL tests would be provided through reprogramming in FY 1974; an additional $16 million is included in the FY 1975 Budget to continue that effort.

Advanced ICBM Technology

To ensure a realistic option to modernize our ICBM forces in the 1980s, we are requesting about $37 million in FY 1975 for advanced technology leading to the development of an entirely new ICBM. We are considering the technologies for both a new, large payload fixed-base missile which could be launched from the existing MINUTEMAN silos, and a new mobile missile, either ground or air launched. As noted earlier, the Interim Agreement itself does not prohibit the development or the deployment of mobile ICBMs. The United States, however, has unilaterally stated that in its view the deployment of operational mobile ICBMs would be inconsistent with the objectives of the Agreement. The Soviet Union has made no response to that statement and, as I noted earlier, we believe that the development of a land-mobile version of the SS-X-16 may be underway. Consequently, we cannot preclude the possibility that a mobile version of the SS-X-16 will eventually be deployed. In that case, we may find it necessary to deploy a mobile ICBM of our own.

In any event, we intend to pursue this new development at a very deliberate pace, pending the outcome of the current SALT negotiations. The initial effort in this new advanced ICBM

technology program will be devoted to basing technology leading to the selection of the preferred basing mode, to guidance requirements which are unique to mobile missiles, both air-launched and ground-launched, and to rocket motor technology to increase the amount of throw-weight per pound of propellant. A new guidance system would be incorporated in the new missile. This system, plus appropriately sized MIRVs would give the new ICBM a very good capability against hard targets.

POSEIDON

The $192 million requested in FY 1975 for the POSEIDON program includes $129 million to complete the funding (except for FY 1976 and subsequent year outfitting and post-delivery costs) of the last three of the 31 SSBN conversions and the last one of the four submarine tender conversions planned, $48 million for the support of POSEIDON missiles, and $15 million for the Poseidon Modification Program.

The original FY 1974 Budget included funds for the last five SSBN conversions, but delays in the completion of certain SSBN overhauls made it necessary to defer the last three conversions to FY 1975. The Congressional committees were notified of this delay in September 1973 and the amounts appropriated for FY 1974 already reflect the related funding adjustments. Of the 28 conversions funded through FY 1974, 20 have been completed and are currently deployed, two are in predeployment status, and six are undergoing conversion. As currently scheduled, the last three conversions will all have been started by April 1975. This stretchout will reduce the number of POSEIDON-equipped submarines on the line, as compared with last year's estimates, by one at end FY 1975 and two by end FY 1976. The last conversion is scheduled for completion in April, 1977.

The POSEIDON Modification Program is the outgrowth of the deficiencies encountered last year in the POSEIDON Operational Test (OT) program, which have already been reported to the Congress. In view of the technical problems revealed as a result of these tests, the Unified Commander suspended the POSEIDON OT program in March 1973.

A thorough review of all the available POSEIDON test data leads to the conclusion that except for a weakness in the RV nose tip, which we believe has been corrected and in any event affects only a small percentage of the force, most of the failures encountered were attributable to random deficiencies in small piece parts such as transistors, electrical connections, fuses, etc., and

in the preparation of operational missiles for flight tests. In contrast to the Demonstration and Shake-down Operations (DASO) test missiles, which come directly from the Navy's missile facility at Charleston, S.C., four OT missiles are selected at random from the complement of 16 carried by a submarine returning from patrol. The selected missiles are then modified by removing the entire payload section and replacing it with a test payload of dummy RVs and instrumentation, and by installing a destruct device -- all while the missile is still in the launch tube of the submarine.

The deficiencies encountered in the POSEIDON OT tests are typical of those experienced in other new weapons systems, and subsequently corrected. None of them is related to the basic design of the POSEIDON missile, which we have every reason to believe is entirely sound.

The POSEIDON Modification Program is designed to correct deficiencies in the POSEIDON missile itself, in the special test hardware, and in procedures. The total cost of the program is currently estimated at $126 million, about $23 million to incorporate the necessary changes in missiles still in production and the balance to modify missiles already delivered to the Navy. About $38 million would be devoted to the more comprehensive testing of small piece parts, $24 million to replace detonating fuses with those of a new design, $18 million to improve gimbal assemblies, $10 million to modify firing units, $2 million to replace flexible hoses with those of a new design, etc. Improved missiles will be installed in the 21st through 31st converted submarines; the first 20 POSEIDON submarines, already deployed, will be retrofitted with the improved missiles over a period of about three years. The entire modification program is expected to be completed by 1977.

TRIDENT

While failures encountered in the POSEIDON operational tests have no direct relation to the TRIDENT missile program, they do remind us once again of the monetary risks involved in moving rapidly into large-scale production of any new major weapon system. Operational testing, of course, cannot commence until the system has actually been operationally deployed. But by holding initial production to a reasonably low rate, we can reduce the costs of correcting those inevitable deficiencies which are not discovered until the system is operationally tested. This is particularly true in the case of such technically advanced and costly weapon systems as the TRIDENT submarine.

Accordingly, after starting the first TRIDENT submarine in FY 1974, we now propose to build the nine remaining TRIDENT submarines discussed here last year at a rate of two a year (instead of three a year) beginning in FY 1975. In addition, we currently plan to procure sufficient TRIDENT I missiles to backfit ten POSEIDON submarines. As you know, the TRIDENT I missile is being designed to fit in the existing POSEIDON submarines as well as in the new TRIDENT submarines. By retrofitting the TRIDENT I missile in some of the POSEIDON submarines, we can improve the overall capability and survivability of the existing SSBN force and at the same time maintain a more economical rate of production for the TRIDENT I.

The IOC of the TRIDENT I missile remains as previously planned, i.e., the fourth quarter of 1978 (the second quarter of FY 1979), which coincides with the IOC of the first TRIDENT submarine. We plan to undertake an advanced development program which will define our capability to improve and measure the accuracy of our SLBMs and which, if implemented by retrofit, could lead to improved accuracy in the future. In addition, the MK 500 MaRV is now under advanced development for the purpose of demonstrating its compatibility with the TRIDENT I missile. This maneuvering RV, however, is not terminally guided since its maneuvering capability is intended to help it evade an ABM interceptor, rather than to increase its accuracy. Indeed, the MK 500 is expected to be less accurate than its ballistic counterpart.

The TRIDENT I IOC date should allow ample time for an orderly missile development and DASO test program. As noted earlier, the OT program cannot be started until the system has been operationally deployed. However, we do plan to conduct OT launches earlier in the TRIDENT program than we did with POSEIDON. Backfitting of the TRIDENT I missiles into POSEIDON submarines is planned to begin in the third quarter of FY 1979.

This revised program will require a total of $2,043 million in FY 1975 -- $107 million for continued component development of the submarine, $927 million to complete the funding of the second and third TRIDENT submarines, $240 million for advanced procurement for two TRIDENT submarines per year in FY 1976 and FY 1977, $662 million for the continued development and minor procurement related to the TRIDENT I missile, and $107 million in Military Construction funds to continue work on the TRIDENT Refit Facility at Bangor, Washington. In addition, about $25 million is included in the FY 1974 Supplemental to protect the option for the procurement of two TRIDENT submarines in FY 1975.

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Although the Interim Agreement on strategic offensive forces, expiring in 1977, would require us to phase out an equivalent number of existing strategic missile launchers as each new TRIDENT submarine enters sea trials, that decision need not be made now.

New SSBN Option

Some $16 million is included in the FY 1975 Budget to initiate design for a new and less costly SSBN than the TRIDENT. This is another application of the high/low mix approach. With a TRIDENT force in being, it is not likely that all of the sea-based force need have the capability provided by the larger and more costly ship.

The current POSEIDON submarines refitted with the new TRIDENT I missile could, of course, fulfill this low end of the spectrum requirement. But because of aging, POSEIDON submarines will have to be replaced at least by the late 1980s and early 1990s. Consequently, more SSBNs, beyond the ten TRIDENT submarines, would eventually have to be built. The design of a smaller, less costly SSBN would give us the option later in this decade to replace the current POLARIS/POSEIDON fleet with a mixed force of high performance and high cost or lower performance and lower cost SSBNs.

The new SSBN would be somewhat larger than the 640-class (the last class of POLARIS/POSEIDON submarines) and would be powered by a NARWHAL-type reactor. In looking toward a smaller and lower cost SSBN, wherein platform numbers rather than large numbers of tubes per submarine are featured, this new design would have about 16 missile tubes using the TRIDENT I missile. Funds requested cover commencement of a conceptual and feasibility design effort, which will identify cost and characteristics trade-offs.

ABRES

Included in the FY 1975 Budget is $120 million for the Advanced Ballistic Re-entry Systems Program (ABRES). This program has been the source of much of the advanced re-entry technology incorporated in our strategic missile programs, and to a considerable degree it is responsible for our technological lead in this area. Moreover, ABRES has made a major contribution to our understanding of ABM defense because of its work on a wide variety of ballistic missile penetration aids. Now that the Soviet Union is catching up with us in reentry technology, we must renew our efforts to stay ahead in this critical aspect of the strategic balance.

The ABRES program is managed by the Air Force, but the work being done also supports Navy and Army projects. In view of its tri-service nature, we have decided to give the Director of Defense Research and Engineering a greater role in the overall direction of the ABRES program. Henceforth, DDR&E will establish the general scope and priorities of the ABRES program and formally review the program twice a year. Following these reviews, DDR&E will provide the Air Force with general and specific guidance, as necessary. The existing ABRES organization structure, which has members of each service as line deputies to the ABRES Program Manager, will be retained to assure that close coordination among the three services is preserved.

B-52 Forces

The bomber forces are essentially the same as those presented here last year, with two exceptions. First, all of the active B-52D's and F's will be retained through FY 1975. Second, beyond FY 1975 our planned B-52 force of 5 D and 17 G/H squadrons will increase by one G/H squadron (17 to 18). This increase reflects the reorganization necessary to form a composite Combat Crew Training Squadron (CCTS). The UE of each B-52 squadron will be reduced from 15 to 14 to provide aircraft for the CCTS.

Last year the Air Force had planned to start in March 1973 the structural modification of 80 B-52Ds to ensure that the proggrammed service life can be safely achieved. The program was later deferred, pending approval by the interested Congressional committees. Meanwhile the condition of the B-52D aircraft was found to be worse than originally anticipated. Accordingly, the Air Force has performed a "fracture toughness" program to test the structures of 94 B-52Ds in order to select the best aircraft for proof test, modification, and retention. Including the cost of this special test program, which entails the procurement of proof test jigs, the total cost for the test of 94 aircraft and the modification of 80 aircraft is now estimated at about $240 million.

Last year the cost of modifying 80 aircraft was estimated at $197 million. The Congress has approved the use of $61 million in FY 1973 and prior year funds for initial engineering, plant layout and tooling. Another $38 million was provided for FY 1974, and $73 million in procurement funds is requested for FY 1975. The program is now scheduled to be completed by the first quarter of FY 1977.

In my judgment, the B-52D modification program deserves the full support of the Congress, notwithstanding its substantial

cost -- about $3 million per aircraft. Recently completed U.S. air operations in Southeast Asia clearly demonstrated the effectiveness of the B-52 in the conventional bombing role. Without the B-52D force, this capability could be provided only at the expense of our strategic capabilities which are already finely balanced in relation to the challenge posed by the Soviet strategic forces.

B-1 Bomber

Indeed, if we are to continue to maintain an effective strategic bomber force through the 1980s and beyond, as I am convinced we should, we will eventually have to modernize that force. The principal improvements needed are (1) faster airfield escape and greater protection against the effects of nuclear detonations in order to avoid destruction by SLBMs which might be launched on depressed trajectories from Soviet SSBNs operating close to our shores, and (2) a capability to fly at very low altitude at high subsonic speed in order to penetrate improved Soviet air defenses. Although we have no evidence as yet that the Soviet Union is developing depressed trajectory SLBMs, or plans to operate its SSBNs close to our shores, or will undertake major new air defense programs at home, all of these capabilities will clearly be within its technical competency and economic capacity.

Accordingly, in planning for the 1980s and beyond, we should provide ourselves the option to replace the existing bomber force with a more capable aircraft. The B-1 is being developed for this purpose. It will have a distinctly shorter escape time and much better resistance to nuclear effects than the B-52, and by virtue of its lower flight altitude, greater speed and smaller radar cross-section, it should have a much better capability to penetrate improved Soviet air defenses. Moreover, because of its wider range of altitude and airspeed options, the B-1 will provide greater flexibility in employment than the B-52, thereby enhancing our ability to execute a wide range of attack options in response to potential enemy action.

The B-1 engineering development program, however, has encountered a number of difficulties and delays, necessitating several major adjustments in the program. The latest of these adjustments was reported to the Congress last summer. First flight was rescheduled from April to mid-year 1974. More time was allowed for the fabrication and assembly of Air Vehicles #2 and #3. The planned production decision date was rescheduled from July 1975 to May 1976.

Last August, shortly after assuming his responsibilities as Secretary of the Air Force, Secretary McLucas appointed a

special committee, headed by Dr. Raymond Bisplinghoff, the Deputy Director of the National Science Foundation, to undertake an independent review of the B-1 program. The principal finding of this group of technical and management experts was that there are no major technical problems which preclude the successful development and production of the B-1 aircraft. The Committee noted, however, that the existing program plan would make completion of the development effort and successful transition to the production phase unlikely within projected cost and time schedules. The Committee also expressed the belief that three aircraft would not be sufficient to complete development of a complex program such as the B-1 and allow the final development aircraft to reflect accurately the initial production aircraft.

With regard to schedule and cost, the Committee's best judgment was that a two to three month delay would be incurred in the projected first flight of Air Vehicle #1 and a six to twelve month delay in completion of the total development program. The Committee also estimated that at least $300 million more would be required to complete the development program as it was rephased in July 1973.

The Committee's major recommendation was that the B-1 program should be restructured to provide for completion of the development effort on a more realistic basis and to provide for a less disruptive transition into the production phase.

Finally, Dr. Bisplinghoff and his associates also furnished Secretary McLucas with their estimates of potential B-1 performance parameters -- ranging from Possible, to Most Probable, to Reasonably Adverse. These potential performance deviations result primarily from an increase in the gross take-off weight of the B-1 aircraft, from about 360,000 lbs to the presently projected 395,000 lbs. The Air Force has conducted a thorough analysis of the utility of the B-1 aircraft within the full range of potential performance deviations provided by the Committee. The Secretary of the Air Force, the Chief of Staff, and the Commander in Chief of the Strategic Air Command have concluded that even under the most adverse estimates of performance the B-1 would be operationally effective against the full target spectrum. Moreover, even with the increased weight there are still 100 airfields in the U.S. which would support continuous B-1 operations and an additional 220 airfields which would be suitable for use in emergency dispersal operations. Thus, although some weight reduction should result as a byproduct of engineering changes for purposes of producibility and cost avoidance, there is no requirement for significant changes to the B-1 program solely to regain performance.

A basic problem highlighted by the Committee was the severe program discontinuity which results from the gap of 24 months between first flight and the production decision. The contractor would not be able to retain critical skills and know-how during such an extended gap in effort. Moreover, any plan which was dependent on the recovery of these critically needed personnel after a production decision is made would expose the program to additional technical risks and costs.

Accordingly, in order to facilitate the B-1 flight test program and to provide a more realistic basis for transition to production, we propose to begin work on Air Vehicle #4 in FY 1975 and, possibly, Air Vehicle #5 in FY 1976. These aircraft would provide needed flight test data 12 to 18 months earlier than would otherwise be possible, and they could also be used to introduce engineering refinements to the basic design.

Although the fourth and possibly the fifth aircraft would be funded with RDT&E funds, they would ultimately be assigned to the SAC inventory. Moreover, the additional aircraft would be built on existing development tooling, modified only as required by aircraft design improvements. Thus, there would be no additional program cost, assuming a subsequent production decision. Nor would these additional aircraft prejudge the production decision. In consonance with our fly-before-buy policy, the B-1 is expected to undergo about two years of flight testing and achieve the essential critical milestones before a production decision is made. Under the currently proposed program plan, this decision could be made in November 1976. The FY 1975 Budget includes $499 million for the B-1 program.

Bomber-Launched Missiles

The acquisition of the SRAM (Short Range Attack Missile) will be essentially completed with FY 1974 funding and the planned complement of operational (UE) missiles, 1140, will be on hand by the mid 1970s. Because of its relatively poor accuracy and aerodynamic drag on the B-52 G/H, a decision has been made to phase out Hound Dog by FY 1976. The number of Quails will be reduced significantly by end FY 1976.

Last year the Congress was informed of the Defense Department's decision to cancel the SCAD engineering development program and to incorporate further work in that area in a joint Air Force-Navy cruise missile technology program. The Air Force was to concentrate on the development of a small turbofan engine suitable for both an air-launched and submarine-launched cruise missile, and the related high energy fuel. The Navy was to pursue the development of the guidance technology which was to be common to both missile systems.

Planning of this joint technology effort has progressed to the point where we can now present a more definitive program for FY 1975 and beyond. As currently planned, the Air Force would commence engineering development of an Air Launched Cruise Missile (ALCM) in FY 1975, making maximum use of the terminated SCAD engineering program for air vehicle design and small turbofan engine development. The new missile would have about the same overall dimensions as the SCAD so that it could be loaded interchangeably with the SRAM missile, one for one, both internally on the rotary racks of the B-52 or the B-1 and externally on the wing pylons of the B-52. It would weigh about 2,000 pounds and would be equipped with a terrain avoidance system which would permit it to fly just a few hundred feet above the surface of the earth.

The ALCM could be made available for initial deployment in the late 1970s, but it would be premature to make a production decision at this time. In the meantime, we have authorized retention of some of the Quail unarmed decoys.

The Navy SLCM, using the common technology base, would be developed in both strategic and tactical variants, and would be sized to take maximum advantage of the standard torpedo tubes. The strategic version would carry a nuclear warhead about 1500 nm. Like the ALCM, the SLCM would have very good accuracy and penetrate at low altitudes.

While the strategic variant would be primarily a submarine-launched missile, the tactical variant would be designed to be launched from surface ships as well as submarines since it would be primarily a conventionally-armed anti-ship missile. The tactical variant would have a range in excess of 300 nm.

A total of $125 million has been included in the FY 1975 budget request for the combined cruise missile program -- $80 million for the Air Force ALCM and $45 million for the Navy SLCM.

Advanced Tanker/Cargo Aircraft

It is clear that if we continue to support a large strategic bomber force for any extensive period of time into the future, a new refueling tanker will eventually be required. The cost of acquiring a sufficiently large number of such tankers would undoubtedly be quite high. It may be possible, however, to satisfy that tanker requirement in conjunction with some other important requirement, such as augmentation of our current airlift capability. Accordingly, we have included $20 million in the FY 1975 Budget for studies and investigations of alternative

approaches to this tanker requirement. The effort will be divided in two parts:

(1) Competitive studies to determine the most effective way to convert a currently available wide-bodied civilian transport aircraft into an efficient military cargo/tanker aircraft.

(2) An initial investigation of the trade-offs between a modified (from a currently available aircraft) and a newly designed strategic tanker/cargo aircraft, with particular emphasis on fast escape and hardness.

2. Strategic Defensive Forces

I believe it is clear from what I have already said that without effective ABM defenses, air defenses are of very limited value against potential aggressors armed with strategic missiles. This interdependency of anti-ballistic missile and anti-bomber defenses has been well understood for many years. But as long as there was some chance that we might deploy at least a thin nationwide ABM defense, it made sense to keep open the option to deploy a complementary air defense. Now that the ABM Treaty limiting both sides to only 100 operational ABM launchers at each of two sites has been signed, the deployment of even a thin nationwide ABM defense has been foreclosed. Indeed, we have deferred all work on the second ABM site for the defense of the National Command Authorities (i.e., the national capital area). Given the very tight defense budget constraints under which we now have to operate, we cannot in good conscience postpone any longer the basic adjustments in our air defense program made necessary by the changing worldwide situation.

You may recall that former Secretary of Defense McNamara in his last posture statement in 1968 set forth six possible purposes that our air defense system might serve in the 1970s:

1. Peacetime surveillance to prohibit free access over North America from the air.

2. Nth country defense to prevent damage from an attack by such countries as Cuba, the PRC, etc.

3. Discourage the Soviet Union from developing and introducing new bomber threats which would be costly to neutralize.

4. Limit damage to our urban/industrial complex from a Soviet bomber attack in the event deterrence fails.

5. Preclude bomber attack on our withheld strategic missile forces.

6. Provide a complete mobile "air defense package", portions of which could be deployed to any part of the world for use in periods of local crisis.

The fourth purpose -- limit damage to our urban/industrial complex -- is now possible only to the extent that we are successful in limiting the scope of any conflict that did occur. Since we cannot defend our cities against strategic missiles, there is nothing to be gained by trying to defend them against a relatively small force of Soviet bombers. I am sure the Soviet leaders understand that an attack on our cities, whether by bombers or missiles, would inevitably result in the destruction of their cities. Even if the USSR uses all of its ballistic missiles against our strategic offensive forces and reserves its bombers for use against our cities, repeated analyses have convincingly demonstrated that under all foreseeable circumstances we would have sufficient surviving forces to retaliate decisively against Soviet cities. It is this assured capability to retaliate decisively against Soviet cities even after absorbing the full weight of a Soviet nuclear attack that offers the best hope of deterring attack and thus protecting our cities, not our ability to defend them against bomber attack.

The fifth purpose -- preclude bomber attack on withheld ICBMs, or bombers, for that matter -- might still have some advantage today. That advantage, however, would be seriously eroded if the USSR deploys its new MIRVed ICBMs up to the limits allowed by the Interim Agreement. If it did so, the USSR would have enough ICBM RVs to launch a series of follow-on attacks against our withheld ICBMs. It would also have enough SLBMs for follow-on attacks against bomber bases or against SLBMs in port. Thus, to protect our withheld ICBMs, SLBMs in-port, and bomber bases, we would need a balanced defense against both missiles and bombers. Such a defense is foreclosed by the ABM Treaty.

With regard to the third purpose -- discourage the USSR from introducing new bomber threats -- I believe we should continue to pursue a broadly based R&D program in the strategic air defense area. That program, however, should be focused on basic research and the advancement of technology, rather than on engineering development of new weapon systems. We already have a number of new and expensive air defense weapon systems developed or under development for general purpose forces applications -- e.g., F-15, F-14 (PHOENIX), AWACS, SAM-D. But we must take care not to fall

behind the Soviet Union in basic knowledge and understanding of the air defense problem. We need this knowledge and understanding, in any event, for our bomber programs. And, we should in prudence hedge against the possibility that a technological breakthrough or some other change in the strategic situation might make the deployment of new systems for continental air defense both feasible and desirable.

The first and last purposes -- peacetime surveillance and control and mobile air defense forces -- and to some extent the second purpose, Nth country defense -- are still feasible and necessary. We must, as a very minimum, ensure the sovereignty of our air space; it would also be very helpful to have available a mobile air defense capability which could be deployed promptly overseas.

Forces provided for the first purpose would also provide a reasonable level of defense against the unlikely contingency of an Nth country air attack on the United States, most conspiciously Cuba. We have no reason to believe that Cuba has nuclear weapons or is likely to acquire any in the foreseeable future. Furthermore, Cuba's air force is very limited in payload and range; it could reach only the southeastern part of the United States. Finally, the consequences to Cuba of a surprise air attack on the United States would be so grave that the chances of its occurrence must be rated at near zero. With regard to the PRC, we have no evidence whatsoever that that nation is seeking an intercontinental bomber capability.

The first purpose requires only a thin area-type defense plus a high quality surveillance capability. Accordingly, we now propose to phase out all of the strategic NIKE-HERCULES batteries (which are all located around nine urban areas) and eventually reduce the interceptor force to 12 squadrons -- six active and six Air National Guard (ANG). The NIKE-HERCULES batteries and their Fire Coordination Centers will be phased out by the end of FY 1975. Also in FY 1975, the active interceptor force will be reduced to six F-106 squadrons, and two F-106 squadrons will be added to the Air National Guard, for a total of six F-106 ANG squadrons. Seven ANG F-102 squadrons will be phased out in FY 1975. Current planning for FY 1976 includes phase-out of the remaining F-102s and evaluation of the continued utility of the F-101. Pending a review of the retention of F-101s, these six interceptor squadrons will be retained until the end of FY 1976.

In addition to these strategic air defense forces, we will have one active Air Force air defense squadron (F-4s) and three active Army NIKE-HERCULES batteries in Alaska, and one ANG air

defense squadron (F-102s converting to F-4s in FY 1976) in Hawaii. (Canada has a number of CF-101 air defense squadrons operational.) We will also continue in place the active Army general purpose forces NIKE-HERCULES and HAWK batteries now operational in Florida. In addition, there will always be other general purpose air defense forces available in the U.S. -- fighters and SAMs, and eventually some tactical AWACS -- which could be used to augment the strategic air defenses in a crisis. And, of course, we will continue to have the option to deploy a new interceptor (e.g., F-15 or F-14) and a new SAM system (e.g., SAM-D) for CONUS defense, since those programs are being pursued in any event for the general purpose forces.

A CONUS air defense system structured primarily for peacetime surveillance would not require an AWACS force, the principal purpose of which is to provide a survivable means of control of air defense aircraft in a nuclear war environment. However, as I noted earlier, a mobile air defense force which could be deployed quickly as a "package" would still be extremely useful in support of our general purpose ground and air forces overseas. We propose, therefore, to retain the AWACS (now designated E-3A) program for that purpose, and I will discuss it later in context with the general purpose air forces.

The Defense Department has been working for a number of years with the Federal Aviation Administration to consolidate the military and civilian radar and control centers in CONUS into a common, jointly operated system designed to serve both military and civilian needs. This work is still going on. Nine joint-use surveillance radars are now in operation. In FY 1978, joint-use radars will replace all military surveillance radars in CONUS. These U.S. radars, and possibly some of the Canadian radars near the border, will feed into 13 USAF/FAA Joint Control Centers; the first four will be operational by end FY 1977 and all 13 by end FY 1979. The six existing Regional Control Centers (SAGE) will be phased out in FY 1978. A new command and control plan tailored to the revised air defense structure and missions is now under development by the Air Force.

As the new joint system becomes operational, one of the two CONUS manual Control Centers and the last CONUS BUIC III Control Center (in Florida) will be phased out. All of the remaining airborne radars will be phased out by end FY 1977. Although no changes are planned through FY 1979 in the surveillance radars and control systems in Alaska and Hawaii, the Air Force is currently investigating the feasibility of employing CONUS BUIC assets for the semi-automation of the Alaskan air defense systems.

OTH-B

For deployment in the 1980s, we propose to continue work on the development of the Over-the-Horizon Backscatter (OTH-B) radar, for which $12 million is included in the FY 1975 Budget. This radar promises to extend the early warning capability against bombers. Three such radars -- one each on the East and West coasts, and one covering the southern approach -- would give good coverage on all except the northern approach to the U.S. For the northern approach, we will have to retain the 31 DEW line radars until such time as we can perfect an OTH radar, or some other system, which can operate successfully in the presence of the intense electrical disturbances which characterize the northern auroral zone.

SAFEGUARD

As my predecessor, Elliot Richardson, reported to you last year, we plan to complete deployment of the one remaining SAFEGUARD site at Grand Forks for defense of MINUTEMAN. Work at all other sites has been terminated. The $61 million included in the FY 1975 Budget for development of SAFEGUARD is principally for completion of the check out and installation of the software; funding for procurement, military construction and system flight testing was essentially completed with the FY 1974 Budget.

The Grand Forks site with 30 Spartan and 70 Sprint launchers, one Missile Site Radar (MSR) and one Perimeter Acquisition Radar (PAR) is scheduled to be completed in FY 1975. The equipment readiness date is still estimated to be October 1974, and an initial operational capability is expected to be achieved by June 1975.

The SAFEGUARD system test program at Kwajalein Atoll in the Pacific is proceeding very satisfactorily. In the first SAFEGUARD system test series (1970-71) 12 out of 16 tests were successful, 2 were partially successful and 2 were unsuccessful. In the second series, which will now be concluded in July 1974, 33 tests were conducted through December 1973 -- 30 were successful and three were unsuccessful. Seven tests remain to be completed, but some of these may be omitted if the current test objectives can be met with fewer tests.

SITE DEFENSE

Included in the FY 1975 Budget is $160 million to continue work on the SITE DEFENSE Program, the objective of which is to demonstrate a development prototype ABM system specifically

designed for the defense of MINUTEMAN. I believe this program is a prudent and necessary hedge. It would give us the option to defend our MINUTEMAN force against a Soviet ballistic missile attack should that become necessary, or in the event that an acceptable permanent agreement on the limitation of strategic offensive arms cannot be achieved. It would also give us the option to deploy a more advanced ABM system for the defense of the National Command Authorities, if that should be found desirable some time in the future.

The SITE DEFENSE Program will be conducted on a very austere basis. It must be borne in mind, however, that SITE DEFENSE must be developed with "system" applications in mind, if the demonstration of the development prototype is to be of any real value. Development of the hardware, e.g., the improvements to the SPRINT missile, the new small (relative to the MSR) radar, and the data processors is well within the state of the art. What needs to be demonstrated is the capability of the system as a whole, including in particular the software.

Advanced BMD Technology

We also plan to continue the Advanced Ballistic Missile Defense Technology effort at about the same level as in recent years, and $91 million is included in the FY 1975 Budget for that purpose.

The rationale for continued research and development in BMD, as well as reentry systems (ABRES) technology, is founded on two specific SALT related objectives. One is to provide the Soviet leaders with strong incentives to negotiate additional strategic arms limitation agreements. The other is to motivate them to keep the treaties and agreements already made.

Nations make treaties, and nations keep treaties, only when they regard such actions to be in their best interests. If the Soviet leaders believe that they could gain an advantage over us in the absence of an agreement, they would have no incentive to reach agreement. But if we confront them with the prospect that even with strenuous efforts on their part they would not be able to shift the strategic balance in their favor, they would have an incentive to reach agreement on maintaining the balance, if for no other reason than to save money. Similarly, if we fail to advance our ABM technology while the Soviet Union continues to pursue its on-going ABM development programs, which are clearly permitted by the Treaty, the Soviet Union might achieve a position where, by abrogating the Treaty, it could shift

the strategic balance drastically in its favor before we could react.

Consequently, we must continue to pursue ABM technology programs of sufficient breadth and depth to ensure that we can:

-- Keep our qualitative lead in ABM technology over the Soviet Union

-- Understand and assess Soviet ABM activities which our intelligence sources reveal to us

-- Achieve the knowledge and skill needed to deploy an effective ABM system if that should become necessary.

Satellite and SLBM Radar Warning Systems

For surveillance and early warning of ballistic missile attack, we now depend on a variety of systems. The most important of these is the satellite warning system. We now maintain on station one satellite over the Eastern hemisphere and two over the Western hemisphere.

The Eastern hemisphere satellite would provide the first warning of a Soviet (or PRC) ICBM launch. This warning would be verified first by the forward scatter Over-the-Horizon (OTH) system and then by the Ballistic Missile Early Warning System (BMEWS). The capability to correlate data from BMEWS, satellite and other sources will provide highly credible warning of ICBM attack.

The Western hemisphere satellites provide the first warning of SLBM launches against the U.S. Complementary warning coverage is now supposed to be provided by the 474N SLBM "dish" warning radars. Unfortunately, these 474N radars -- four on the East Coast, three on the West Coast, and one on the Gulf Coast -- have limitations against Soviet SLBMs, particularly the new longer range SS-N-8. Moreover, there are a number of limitations in the current satellite coverage -- it does not fully encompass all of the areas from which the SS-N-8 could be launched, it is susceptible to temporary solar induced outages which may cause some loss of coverage in those areas not covered by both Western Hemisphere satellites, and it is not entirely free of false alarms. To provide full coverage of the expanded SLBM threat area, and ensure prompt verification of the satellite data, we must have a more effective and reliable complementary warning system than the 474N radars.

Accordingly, we again propose to replace those radars (including the standby SLBM warning radar at Moorestown, N.J.) with two new SLBM Phased Array Warning Radars -- one on the East Coast and one on the West Coast. These much more reliable and capable phased array radars, together with the Western Hemisphere satellites, would provide highly credible warning of a Soviet SLBM launch against the U.S. First warning of such an attack would come from the satellites, and within a very short interval, which increases with the distance the launching submarine is from our coast, verification of the attack would come from the SLBM phased array radars.

The phased array radars would not only verify the signals received from the satellites but would also fill in any gaps which may occur in the satellite coverage as a result of solar reflections. The additional confidence which we would gain in the reliability of the warning would, in my judgment, be worth the acquisition cost of the two radars -- now estimated at approximately $100 million.

The FY 1975 Budget provides for further improvements to the satellite system and includes $50 million to begin acquisition of the SLBM phased array radars.

3. Command and Control

Continuity of command and control of the strategic forces by the National Command Authorities -- before, during and after a nuclear attack on the United States -- is a basic tenet of our national security policy. This means that we must not only ensure, to the best of our ability, the survival of the NCA and their principal advisors, but also the minimum essential communications links with the subordinate commands and the operating forces.

The command and control of U.S. military forces worldwide is normally conducted through the Worldwide Military Command and Control System (WWMCCS). The national level elements of this system include the National Military Command Center (NMCC) at the Pentagon, the Alternate National Military Command Center (ANMCC), and the National Emergency Airborne Command Post (NEACP) based at Andrews AFB, Maryland. The President, no matter where he may be -- in the White House, Camp David, San Clemente, Key Biscayne, or airborne in the Presidential aircraft -- is always kept in continuous communication with the NMCC, and through it, with the alternate national military command centers, the subordinate commands and the military forces.

These national military command centers are linked to the subordinate commands and the military forces worldwide by a wide variety of communication modes -- land lines, underwater cables, VLF, LF, HF, UHF radio, satellite relay systems, etc. During the next few years we propose to increase significantly our efforts to improve the security and survivability of these WWMCCS supporting communications networks, particularly that portion designated as the Minimum Essential Emergency Communications Network (MEECN). MEECN is the basic system for communicating executive orders to our forces in wartime. Consequently, special attention must be given to its survivability under nuclear attack.

With regard to the strategic offensive forces, connections between the national level command centers and the Strategic Air Command and its forces are provided through a deliberately redundant system of communications and command posts. SAC, in addition to its principal command post at Omaha, Nebraska, also maintains two alternate ground command posts and one airborne command post. The SAC airborne command post is in continuous communication with the SAC command post at Omaha. On receipt of warning of a nuclear attack on the United States, the SAC airborne command post would be linked to the SAC forces and the national military command centers, including the NEACP, by the Post Attack Command and Control System (PACCS). One of the PACCS components, the Mid-AUXCP, can assume the CINCSAC function in the event that the primary SAC ABNCP is inoperable.

The national military command centers are linked to the sea-based strategic missile forces, either through the appropriate subordinate commands or directly, by means of a deliberately redundant system of Navy radio transmitters and by the TACAMO relay aircraft. To maximize the survivability of communications from the NCA, these Navy transmitters (including TACAMO) can also be reached via those communications links involved in directing SAC forces. Messages could also be relayed to the ballistic missile submarines via ships at sea, communication satellites, LORAN, etc.

This system of command and control of the strategic offensive forces, however, is not now as survivable as the forces themselves. That is why the Defense Department has proposed, in addition to the improvements in the existing communications network, the continued development and deployment of the Air Force Satellite Communications System (AFSATCOM), the Advanced Airborne Command Post (AABNCP) aircraft, and the SANGUINE extremely low frequency (ELF) radio relay site. These three programs offer the best prospects, at this time, for a substantial advance in the survivability and effectiveness of our national command and control system under nuclear attack.

AFSATCOM and SURVSATCOM

The AFSATCOM system, when fully deployed, will consist of a combination of special communications transponders and channels carried on board "host" satellites placed in orbit for other missions (e.g., Navy FLTSATCOM satellites) plus numerous ground and air terminals. This deliberately redundant satellite system will not only provide greater assurance that essential NCA instructions reach our forces, it will also enable the forces to report back the data needed by the NCA to maintain sure control and to execute a variety of nuclear options. We are also developing the technology needed to improve further the survivability of strategic communications satellites. This technology will lead to a new Survivable Satellite Communications (SURVSATCOM) system which should be available by the time it is appropriate to replace the AFSATCOM system sometime in the 1980s. Funding for AFSATCOM is included in other programs. Funding of SURVSATCOM as a separate program element is expected to begin in FY 1976.

AABNCP (E-4)

The AABNCP program, as currently planned, would be pursued in several stages geared to our growing understanding of the command and control problem in a nuclear war environment, and to the further development of applicable technology. It should be borne in mind in this connection that the aircraft itself (the Boeing 747, now designated the E-4) presents no particular technological problem. It is the equipment which goes into the aircraft that is our principal concern in this program. We would expect the aircraft to have a useful life of about 20 to 25 years. During that period, we would probably re-equip the aircraft, in whole or in part, as new technology becomes available and as changes in national policy dictate new missions to be accomplished by the strategic forces.

Accordingly, the longer range equipping program has been divided into "blocks". Block I is the currently approved configuration of the AABNCP. The airborne computer, which was associated with the original configuration of the AABNCP aircraft, has now been deferred from Block I to Block II.

I believe this deferral is a sensible move; the problems involved in an airborne automatic data processing (ADP) system have not yet been sufficiently resolved. The airborne ADP system must be compatible with the ground-based WWMCCS ADP system, since selected portions of the ground data base must be readily transferable to the airborne ADP. We are currently investing substantial funds in the modernization and standardization of this ground-based

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ADP system. Unfortunately, the ground ADP equipment cannot be used directly in the AABNCP aircraft because that equipment has not been designed for aircraft operations. Also further research must be done on shielding airborne computers against nuclear effects, particularly when the aircraft is airborne.

Finally, we have yet to formulate precisely which portions of the WWMCCS ground data base are actually required in the AABNCP. This would depend largely on how one would conceive the NCA function aboard the NEACP aircraft and the SAC commander's function aboard the SAC airborne command post. If the NCA is to be in a position to exercise a choice among a wide range of nuclear attack response options, including some which may not have been preplanned, the data required aboard the aircraft would be quite extensive. In the case of the NEACP, it would probably include status of forces and damage assessment information for both sides (U.S. and the attacker), status of allied and other national forces, and so forth. The SAC airborne command post might require even more detailed data, e.g., location and status of spare engines, reload weapons, fuel supplies, missile spare parts, maintenance capabilities, etc.

But even without the airborne ADP, the E-4 with the new Block I C^3 equipment (including antennas and terminals for satellite communication) and the greater available space, longer endurance, shorter takeoff, and other features, will greatly enhance our command and control capabilities under nuclear attack, as compared with the existing EC-135s. The new and more powerful communications equipment will help to overcome interferences caused by a nuclear environment or jamming, as well as provide an interface with both the AFSATCOM satellite system and the Defense Satellite Communications System (DSCS). Moreover, the E-4 will have a computer terminal through which it can connect directly into the WWMCCS ground-based ADP system. It can thus acquire the latest data as long as the ground-based system continues to function. Thereafter, it would have to operate in a manual mode, using whatever data is already aboard plus updating by direct communications with the subordinate commands. The additional space would accommodate the larger staffs required for manual operations.

In order to provide an interim NEACP capability with the new aircraft, pending the development of the Block I C^3 equipment, the first three operational aircraft will be equipped with the existing C^3 package to be transferred from three EC-135s. The first two operational aircraft, designated E-4A and the one R&D aircraft, designated E-4B, were funded in the FY 1973 Budget. A third operational E-4A aircraft was funded in the FY 1974 Budget.

The three operational E-4A aircraft constitute Phase 1A of the Block I program.

Phase 1B provides for the development of the Block I advanced C^3 package and for the acquisition of three operational E-4Bs, complete with the new C^3 package, for the NEACP function. The $90 million requested for FY 1975 includes $58.8 million to continue the development of the Block I C^3 package, $22.3 million for the construction of new facilities for the E-4A aircraft and alert crews, and $9 million for the initial increment of the Block II program. The Block II funds would be used to initiate the definition of the airborne ADP system and such further improvements in the communications capabilities of the E-4B as may be found technically feasible, desirable and cost effective. Procurement of the three operational E-4Bs, with the Block I advanced C^3 package, would be funded in FY 1976 and would complete Phase I B.

Phase 1C of the Block I program involves the retrofit of the first three E-4A aircraft with the Block I advanced C^3 package.

The total cost of the Block I program is now estimated at about $550 million. The cost and timing of the Block II program cannot now be estimated since it has yet to be fully defined.

SANGUINE ELF

The SLBM force, when at sea, is still the element of our strategic offensive forces least vulnerable to sudden nuclear attack. The communication links from the NCA to the individual ballistic missile submarines, however, are less survivable than the submarines themselves. Hence, we must make every feasible effort to ensure reliable communications with the SLBM force under all foreseeable circumstances.

The SANGUINE ELF system, in the present state of our knowledge, still holds the best promise of providing such a survivable communications link with our ballistic missile submarines. The SANGUINE transmitters would increase the number of aimpoints the Soviets would have to attack if they were to attempt to disconnect communications to our submarines and have a reasonable assurance of doing so. The SANGUINE signals would decrease susceptibility of our communications to atmospheric disturbances and enemy jamming. SANGUINE would also improve the survivability of the submarines themselves by removing them and their antennas from the near-surface environment. Moreover, notwithstanding popular fears to the contrary, the SANGUINE system would pose no known environmental, ecological, or biological dangers to the area in which it is installed.

The need for a more survivable communications link to our ballistic missile submarines is clear, and the technical feasibility of the SANGUINE system has been reasonably well demonstrated during the four years of work at the Wisconsin test site. In view of the fact that we have no better alternative on hand, I strongly urge this Committee to support the SANGUINE program. We need not decide on the location of the operational site at this time, but we should press forward with the development of the system and prototype testing at the existing Government test sites. Concurrently, we should conduct a comparative analysis of all potential sites with a view to making a final recommendation before the operational system is ready for deployment. A total of $13.2 million has been included in the FY 1975 Budget for the continuation of the SANGUINE program on this basis.

4. Civil Defense

The shift in our strategic deterrence policy which I discussed at the beginning of this section does not diminish the need for a vigorous Civil Defense Program. A Soviet counterforce attack which deliberately avoids our cities -- for example, a large scale attack on MINUTEMAN -- would still produce a large amount of nuclear fallout which could drift over our cities. It would be highly desirable, therefore, to continue our efforts to identify additional fallout shelter spaces for our population.

We expect to identify about eight million more shelter spaces per year, principally from new construction. We do not plan, however, to stock any more shelter spaces with Federal resources; we now have about 108 million spaces stocked for eight days usage. Instead, contingency planning will be continued by State and local governments to complete expeditiously the stocking of all identified spaces from locally available resources in the event of an intense international crisis.

Since it is quite possible that a period of intense crisis would occur before an attack, it may be feasible to relocate non-essential personnel from cities and high risk areas during such a period. Accordingly, some preliminary contingency planning is being undertaken for this purpose, including:

-- The designation of high risk areas. Through our Civil Defense Regions and in cooperation with the States, unclassified maps depicting areas deemed to be at high risk from the direct effects of nuclear weapons are being developed. These maps assume military installations and industrial and population concentrations would be high

value targets. Consideration is also being given to the designation of those areas which may be subjected to high levels of fallout as high risk areas.

-- Development of plans for relocation of the population in a crisis. As the first step in crisis relocation planning we are developing allocation schemes to permit the population from some 250 of our urbanized areas to be assigned to appropriate host areas. The primary end product of this first step is expected to be the publication of information materials for distribution to the public in periods of severe crisis. These publications would advise the public "where to go and what to do" should relocation be implemented. Training of DCPA personnel and State and local personnel in handling relocation is currently underway. During the later portion of fiscal year 1974 we will be conducting some eight to ten pilot projects to provide on-the-job experience and to field test techniques. Concurrent with the pilot projects, research and development efforts will be initiated to provide planning guidance for State and local planning of, inter alia, food distribution during the relocation period, provision of fallout protection in host areas, and emergency services support.

-- The implementation of an "all effects" shelter survey. The survey is designed to identify the best shelter protection available from fallout in all areas, and from the direct effects of nuclear weapons in high risk areas. This data will provide a basis for inplace shelter plans and also should provide input for shelter plans for both the "key operating personnel" who would be located in target areas after implementation of relocation plans, and the evacuated population in host areas. The survey data should be useful for identifying the need to upgrade existing shelter and the usefulness of expedient shelter measures.

The ability to conduct coordinated emergency operations must exist where the people are located -- i.e., in the local jurisdictions throughout the United States. This means that the Federal Government must continue to meet its responsibilities under the Federal Civil Defense Act of 1950, as amended, to provide leadership, guidance and assistance to the State and local governments.

Development of civil defense capabilities which are essential to our national security also generates, as a bonus, an improved readiness on the part of State and local governments to conduct coordinated operations in peacetime emergencies and disasters. This peacetime capability is a secondary, but important, objective of the Civil Defense Program.

Included in the FY 1975 Budget is a total of $86.3 million for the Civil Defense Program. Of that amount, $9 million will be required for the shelters program, $40.3 million for financial assistance to State and local governments, and the remainder, $37 million, for related supporting programs such as training and education, attack warning, and radiation detection.

III. GENERAL PURPOSE FORCES

The resources that we commit to the general purpose forces constitute by far the largest part of the Defense budget. Not only do they include most of the Army, Navy, Marine Corps forces, they also cover the tactical units of the Air Force, all of our airlift and sealift and most of our National Guard and Reserve forces. Our security assistance programs go to the support of the general purpose forces of other nations. In addition, a substantial share of our outlays on intelligence and communications, and research and development, as well as a large percentage of our indirect support programs, are attributable to our general purpose forces. Although there is no precise way to allocate many of these costs, we estimate that more than 70 percent of our Defense expenditures is attributable to the general purpose forces and activities related to them.

A. THE NEED FOR GENERAL PURPOSE FORCES

The allocation of such a large proportion of the Defense budget to general purpose forces may seem perverse in what has come to be known as the nuclear age, but there are a number of powerful reasons for it. With the rise of Soviet nuclear power, which has brought about an approximate parity in U.S.- Soviet nuclear capabilities, the relative contribution to deterrence made by our own strategic forces has inevitably declined, even though these forces continue to have a unique and indispensable role.

In an era of world-wide U. S. interests, power politics and nuclear parity, it is preferable to deter or to repel limited threats by limited means. To do that requires a capability to place boundaries on conflicts and exercise some degree of control over the escalation of violence in the event that deterrence should fail. The general purpose forces, it is generally agreed, are best suited to these purposes.

1. The Role of Theater Nuclear Forces

Of the resources we invest in the general purpose forces, almost all go to conventional rather than to our tactical nuclear capabilities. In part, this is so because many of our delivery systems -- artillery, short-range missiles, and tactical aircraft -- are dual-capable, and therefore the distinction between their nuclear and their conventional role is not clear cut. But in greater part, it is because our forces, in their conventional role, can be used more flexibly, and contribute more to our critical defense posture and to the world-wide military equilibrium we seek.

While it is essential to theorize about the nature of tactical nuclear warfare, we must acknowledge that as a practical matter, the initiation of a nuclear engagement would involve many uncertainties. Acceptable boundaries on such a conflict would be extremely difficult to establish. A nuclear engagement in the theater could well produce much higher military and civilian casualties and more widespread collateral damage than its non-nuclear counterpart, depending, of course, on the character and length of the engagement. What is more, it is not clear under what conditions the United States and its allies would possess a comparative military advantage in a tactical nuclear exchange.

Why, then, do we maintain such large and diversified nuclear capabilities in our main theater commands? The answer is threefold. First, maintaining these capabilities is essential to deterrence so long as opposing forces maintain similar capabilities. They help to deter a limited first-use of nuclear weapons by an opponent and along with the conventional and nuclear forces help create a general deterrent against either conventional or nuclear aggression. Second, should deterrence fail, the tactical nuclear capabilities provide a source of nuclear options for defense other than the use of the strategic forces. Third, given our doctrine of flexible response, we do not preclude the use of nuclear weapons by the United States and its allies in order to prevent a successful aggression.

There are, in other words, ample grounds for the continued maintenance of tactical nuclear weapons. I do not wish to argue, however, that our current posture -- particularly in Europe -- is ideal or that we do not need to improve it in a number of respects. To the contrary, it is already evident that we must, at a minimum, improve the survivability of these systems and upgrade their command and control.

At the same time, I must stress that our tactical nuclear systems do not now and are most unlikely in the future to constitute a serious substitute for a stalwart non-nuclear defense. In fact, we must recognize in our planning that the decision to initiate the use of nuclear weapons -- however small, clean, and precisely used they might be -- would be the most agonizing that could face any national leader. Accordingly, we and our allies must keep strong conventional forces at hand. Tripwire strategies or a "planned insufficiency" of non-nuclear capabilities are not sufficient for credible deterrence.

2. Sizing the General Purpose Forces

While the basic justification for the general purpose forces is generally understood and accepted, it is more difficult to determine the size, composition, and deployment of these forces. This is regrettable but hardly surprising, for the process of establishing requirements (both quantitative and qualitative) does not lend itself to the simple mathematics of the strategic nuclear exchange.

Of course, one way to dispose of the sizing problem is simply to produce a carbon-copy of the main threats. To adopt such a course, however, would impose impossible demands on our resources, overlook the facts of allies and geography, and ignore such phenomena as the Sino-Soviet split. Right now, for example, the USSR deploys nearly a fourth of its ground forces in the vicinity of the PRC's borders; unless the political situation in the Far East changes quite dramatically in the near future, it would be conservative planning at its worst (and most expensive) to count these forces as part of the threat to NATO which would necessitate countervailing forces of our own there.

A more complex but at the same time more practical procedure is to define theaters of vital interest to the United States -- theaters such as Europe, the Middle East, Southeast Asia, Korea, Japan, and essential sea lanes --, estimate specific threats that could materialize in these theaters and the contributions of allies, and then determine what forces we should provide to maintain an equilibrium. Once that is done, we can go on to decide how many of these contingencies might arise simultaneously.

Obviously, such a procedure is not without its problems. For example, how appropriate is this kind of planning in an era of detente -- and what is the alternative to some form of capabilities planning ? If specific contingencies are selected as the basis for determining our requirements, what evidence do we have that they, rather than some unanticipated event, will occur? And what is to prevent such planning from degenerating into an effort to anticipate every eventuality, however remote?

I confess that there are no easy answers to these questions. But to pretend that efforts at detente have suddenly made the world a safe place for our citizens and their pursuits would be to fly in the face of recent evidence to the contrary and ignore the role of the general purpose forces in producing deterrence, stability and the possibility of going beyond detente to a more durable peace. The time has not yet come, in short, to abandon capabilities planning.

a. The Planning Process

To overcome the drawbacks of capabilities planning, and particularly to keep our force requirements from becoming open-ended, we have developed a planning algorithm which makes the general purpose forces the function of several factors, namely:

-- our analysis of the most demanding contingencies that could arise in theaters of primary interest to the United States and the requirements they would levy on allied and U.S. forces;

-- a determination of the number of contingencies, considering the international situation, that might occur more or less simultaneously and for which we should have active and reserve forces available;

-- the initial strategy that we and our allies should adopt, such as forward defense;

-- the length of the initial phase of the conflict and its implications for the mix of active and reserve forces, strategic mobility, anti-submarine warfare (ASW), and logistics.

To the extent that this planning algorithm has become a matter of public knowledge, it has been used in a somewhat mechanical fashion primarily to advocate a reduction in general purpose forces. To avoid future misunderstandings about its application, a number of points about the algorithm should be kept in mind.

Its purpose, in focusing on selected theaters and contingencies, is not to prepare only for those eventualities. Rather, the objective

is to discover what we would need if major challenges occured in areas of vital interest to the United States. Once this need is determined, the general purpose forces can be sized to these very demanding contingencies. With these baseline forces established, we should then have in hand the capability both to deal with other contingencies that arise and to perform a variety of other functions in support of our foreign policy.

This means, in turn, that once we have established our baseline requirements, we should test their adequacy against a number of "off-design" cases to see whether what can lick the cat can also lick the kitten. Indeed, we have recently had just such a test thrust upon us -- and a very empirical one at that -- in the form of the Middle East war. As it turned out, our attack carriers (used as enroute airfields) and our strategic airlift, bought for quite other purposes, proved themselves very smartly and efficiently in an "off-design" contingency.

b. The Strategic Concept

In the 1960's, as a result of this planning process, we adopted a strategy and force structure that purportedly enabled us to deal simultaneously with the initial stages of a war in Europe, a war in Asia, and a minor contingency elsewhere. Since 1969, with explicit acknowledgement of the Sino-Soviet split and the President's opening of detailed negotiations with both the USSR and the PRC, the strategic concept has been changed in the following major respects.

We now plan our forces to deal with a major conflict in Europe or Asia and to respond simultaneously to a minor contingency elsewhere. Thus, we have dropped one of the big contingencies for which we must be simultaneously prepared and have adopted, in the jargon, a 1 1/2 war strategy instead of the 2 1/2 war strategy of the 1960's.

The change in strategic concept has accompanied the reduction in the baseline general purpose forces. The principal change was the reduction in the number of active Army divisions from 16 1/3 in 1964 to 13 in 1973. (Although the number of naval combatants has also declined substantially, the result is more a function of budgetary constraints and the retirement of obsolescent ships than of the change in strategy).

The U.S. withdrawal from Vietnam, the Nixon Doctrine, and the modified strategic concept -- accompanied by these reductions in active forces -- have led to the recurrent expectations that large savings in the budget for the general purpose forces could be realized. Yet in current dollars, the costs of the reduced general purpose forces have continued to rise. Part of the reason for this seemingly perverse effect is, of course, inflation and the disturbingly rapid increase in the price of new weapons systems. But the most important factor has been the increased cost of manpower as we have adopted pay comparability and phased out the draft. As a consequence, we have to recognize that:

-- the general purpose forces tend to be manpower-intensive so that unit costs are bound to be higher than they were a decade ago;

-- substantial general purpose forces will nonetheless be required if we are to maintain a worldwide equilibrium and at the same time avoid increased reliance on nuclear weapons;

-- even so, we still need to practice greater efficiency in the utilization of the manpower that we acquire.

3. The Planning Contingencies

The strategic concept determines the overall requirement for general purpose forces. But the planning contingencies are what generate the specific demand for divisions, air wings, war reserve stocks, strategic mobility and naval forces. The two contingencies that constitute the main basis for force planning are:

-- an attack on NATO by the nations of the Warsaw Pact, led by the USSR;

-- an attack in either Northeast or Southeast Asia with the direct involvement of the forces of a major power.

While these may be considered unlikely contingencies, we find them useful for several reasons:

-- They provide a measure of the threats that could be deployed against us.

-- They take account of allied contributions in key theaters.

-- Their low probability may well be a function of the fact that we prepare for them.

-- They provide the principal variables that determine the qualitative aspects of our forces.

a. The Center Region of NATO

The most demanding feature of the NATO contingency is the potential threat to the Center Region. It creates two sets of risks for the Alliance. The first is the danger of a surprise attack launched by the deployed forces of the Warsaw Pact. The second is the possibility of an assault after a period of mobilization and deployment by the Pact.

(1) The Deployed Threat

We estimate that the forces which the Pact could launch against the Center (that is, the Federal Republic of Germany) with very little warning consist of:

-- the 27 divisions deployed by the USSR in East Germany, Poland and Czechoslovakia;

-- the 31 divisions deployed by East Germany, Czechoslovakia and Poland;

-- about 2,800 aircraft, of which the majority are primarily air-to-air fighters.

These 58 divisions represent a very immediate and palpable threat to the Center Region. Moreover, we believe that the 27 Soviet divisions (which do not include the four Soviet tank and motorized rifle divisions in Hungary) constitute a much larger force than would be required by any defensive mission in Eastern Europe. The more than 8,000 tanks which we estimate these Soviet forces to possess further underlines their offensive potential. It should be recalled, however, that:

-- Warsaw Pact division forces are substantially smaller than their NATO counterparts;

-- deployed Pact manpower in these ground forces amounts to about 925,000 men;

-- the Warsaw Pact maintains less of its logistics structure in peace time than does NATO.

To counter this immediate threat, NATO has in the Center Region of Europe about 29 1/3 divisions and more than 2,700 aircraft in a roughly comparable area of Western Europe. The total includes five French and 4 1/3 United States divisions (but not our Berlin brigade or two armored cavalry regiments). Manpower in ground forces amounts to about 777,000, including French forces in Germany. Around half of our tactical aircraft are fighter-bombers.

As a consequence of these deployments, there is an approximate balance between the immediately available forces of NATO and the Warsaw Pact in the Center Region. The Pact has an advantage over NATO in the number of men in ground forces. The Pact also has a large numerical superiority in tanks (about 15,500 to 6,000 for NATO.) But NATO possesses important quantitative or qualitative advantages in tank destroyers, antitank weapons, trucks, logistic support, and -- most important of all -- modern fighter aircraft.

Our Army forces in West Germany and our tactical air wings in West Germany and the United Kingdom make a vital contribution to the maintenance of this balance in Central Europe. They constitute about one-fourth of the total ground forces and the modern fighter attack aircraft in the Center Region.

As the arithmetic of the situation demonstrates, the Pact has some quantitative advantages. Unilateral withdrawals of United States ground and tactical air forces from Europe, despite the continued massive Soviet presence, could begin to tilt what has proven to be a relatively stable balance dangerously in favor of the Warsaw Pact.

In the circumstances, I cannot in good conscience recommend that we take out units short of an agreement with the Pact on mutual and balanced force reductions. Whatever their other roles -- and they are important -- the United States forces in Europe, in their current size and composition, perform a critical military function, and it is much more than to serve as part of a tripwire. They are sized to help maintain a stalwart conventional defense against an attack by the Pact after little warning, and I believe that mission continues to be essential despite the steps we have taken toward detente.

To stress the importance of the United States contribution to the defense of Western Europe, and to the maintenance of a conventional balance of deployed power between NATO and the Warsaw Pact, is not to argue that we can be complacent about the situation in the Center Region as it now exists. The Soviets continue to add to and improve their capabilities there. And, as I have stressed to our allies in NATO, the relative weight of the European contribution to the common defense needs to increase still further. Our confidence in the balance, which is not yet very high, must also be

strengthened by a series of specific improvements in the allied posture. In particular, I have proposed:

-- actions to reduce the balance of payments and budgetary costs of current U.S. deployments so that we can comply with the Jackson-Nunn Amendment and at the same time avoid unilateral troop withdrawals;

-- measures to increase our defense effectiveness which include an expanded program of aircraft shelters, improved coordination among allied tactical air forces, more antitank weapons, and a more substantial position in war reserve stocks.

(2) The Mobilized Threat

The adoption of these and other programs does not signify any change in basic NATO strategy; nor does it preclude the use of nuclear weapons should a Pact assault prove of overwhelming weight and speed. However, our efforts should contribute to the deterrence not only of attack by the deployed forces but also of the other and larger attacks of which the Pact is capable.

I am reasonably optimistic about our ability to deter even the largest of these attacks, provided that the Alliance continues with and expands its force improvement programs. As matters now stand, however, the probability of a successful forward defense by conventional means only is lower than I consider prudent. How the Soviet marshals would rate their own chances for a successful attack is uncertain.

While caution is appropriate about the numbers, we believe that the Warsaw Pact could, with a few weeks mobilization, deploy on the order of 80-90 divisions to the Center Region. The bulk of the reinforcements would have to come from the Soviet Union and would probably be drawn from the military districts in Western Russia. With additional time and risk, further reinforcements could be deployed from as far away as the Sino-Soviet border.

This latter threat would have a significant probability of breaking through NATO's forward defense. But the USSR, like NATO, must also be concerned about theaters other than the Center. Consequently, while we aspire to deal with even the high threat, we concentrate for current planning purposes on the "designated" threat of 80-90 divisions.

How rapidly the Pact could make this total force ready for attack is a matter of uncertainty. There is little doubt about the ability of the Soviets to call up and move large numbers of men into East

Germany, Poland, and Czechoslovakia at a very rapid pace. Whether these forces would be fully combat ready with all of their logistics support in place is debatable. Nevertheless, we assume for planning purposes that the Pact could have its 80-90 divisions essentially on line and ready to attack in the Center Region within a relatively short period of mobilization.

The speed and power with which NATO could respond to the "designated" threat within the same timeframe is another factor surrounded by uncertainty. That we would acquire very prompt indications of so massive an undertaking is hardly in doubt. Essentially in question is how the Alliance would evaluate this information and how long it would take to decide on NATO's response. For planning purposes, we assume that NATO would start its mobilization somewhat later than the Warsaw Pact.

Whether these are reasonable assumptions can be argued. During the Berlin crisis of 1961, the United States actually mobilized two National Guard divisions, alerted two others, and moved about 40,000 men to Europe prior to any action by the Pact to mobilize additional forces. In 1968, however, NATO did not take overt action when the Soviets deployed forces into Eastern Europe for the invasion of Czechoslovakia.

If a reasonable amount of time is available for a NATO mobilization and deployment, a great deal can be done to defend against the "designated" threat. Exactly what forces would be required from the United States, and how rapidly, would depend on the size and speed of the Soviet reinforcement.

In terms of manpower, the U.S. contribution could be substantial and quick. Indeed, if manpower alone were the only test of effectiveness, the European Allies could match the "designated" threat with very little additional U.S. effort. However, numbers of organized units, levels of equipment, stocks of war consumables, and other variables are also important, and substantial numbers of U.S. ground and air forces would be needed.

In addition to the 4 1/3 divisions and 22 tactical air squadrons already deployed, we stockpile the equipment for at least 2 2/3 divisions in Europe. In CONUS itself, we maintain 3 2/3 heavy Army divisions in the active forces that we could commit to SACEUR. To these eight divisions (4 1/3 + 3 2/3), we could add at least four other active divisions and several Reserve component brigades. To complement the ground forces, we could also provide at least 38 active and reserve fighter-attack squadrons along with supporting reconnaissance and ECM aircraft.

With the war reserves that we propose to stockpile, we should be able to fight these forces longer than we believe that the Pact could sustain its attack.

To stress that we and our NATO allies have the ground and tactical air forces to mount a stalwart defense against the "designated" (or expected) Pact threat does not mean that we can view the situation in Europe with complacency. As I have indicated, NATO has somewhat fewer forces than the Pact, and if more pessimistic assumptions are made about several key variables (such as Pact mobilization and deployment time, warning and allied responses), the NATO position begins to look more precarious and the nuclear threshold becomes lower. It is also the case that while a rough balance of forces is essential to deterrence, it by no means guarantees an acceptable outcome for NATO if deterrence should fail. Even as we preserve the equilibrium, there remain a number of quantitative and qualitative weaknesses in our collective posture that must be removed.

b. The Flanks of NATO

While the needs of the Center Region of NATO and our sea lines of communication provide the basis for most of our general purpose forces, it would be imprudent to assume that these would be the only theaters of conflict. The flanks of NATO -- the Northern and Southern Regions -- could easily come under attack separately or simultaneously in default of adequate deterrent forces.

The Soviets maintain ready divisions in the vicinity of Norway's lightly-defended northern frontier. In the South, the four Soviet divisions in Hungary, other units in the USSR itself and Hungarian, Bulgarian and Rumanian forces, constitute a potential threat to Italy, Greece and Turkey. As a consequence, both flanks may require additional support both on the ground and in the air.

c. Asia

Asian requirements have greatly affected our general purpose forces planning in the past decade. Beginning in 1969, with the advent of this Administration, significant reductions in the size of our forces in Asia have taken place. These reductions stem from major changes in our relations with Asian powers in the last few years, especially with the PRC; the withdrawal of United States forces from South Vietnam; and the growth in capabilities of our Asian Allies -- capabilities which are now quite considerable. As a result of these changes, the requirement to maintain Asia-oriented forces is less demanding than in the past.

Nevertheless, we consider the possibility of conflict in Asia in deciding upon the characteristics and forward deployment of United

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States forces, because the continuing instabilities in Asia could involve the United States, and because having the visible capability to act can help to avoid, through deterrence, the necessity for action. A further large-scale or rapid reduction of United States forces in the Western Pacific would have unsettling effects in the region. Therefore, we continue to deploy one Army division to South Korea; a Marine Amphibious Force in Japan, including Okinawa, three tactical fighter wings at various bases in the Pacific, tactical fighter squadrons in Thailand, and B-52 aircraft on Guam and in Thailand; and naval deployments, including three carrier task forces, in the Western Pacific and, on occasion, in the Indian Ocean.

In Northeast Asia, South Korea's defense capabilities have been considerably improved in the last five years -- to such an extent that, when the present modernization program is completed, we may have reasonable confidence in South Korea's ability to defend itself against an unaided attack by North Korea. At the moment, the principal role of our forces in Korea is to provide a hedge against the uncertainties and deficiencies in South Korea's defense posture, and to provide an inducement to caution on the part of North Korea against the precipitation of new hostilities.

As we look forward, we see the most useful role for United States forces in the Pacific as providing a strong measure of visible support for our Allies, a credible deterrent to those who might risk new hostilities, and a general umbrella under which our Allies can pursue negotiations and internal development in an environment that encourages cooperation and discourages hostilities. Therefore, our present plans call for maintaining our forward deployments in the Pacific.

We also intend to retain capabilities for Asian contingencies in our general purpose forces. For instance, we maintain both Army and Marine divisions in the United States which are rapidly deployable and have a capability to operate in the Asian environment. Our tactical air forces retain a rapid deployment capability and are able to operate under austere conditions if necessary. We also retain a naval presence in the Pacific and must be able to defend the long supply line to the Far East.

We do look to the possibility of additional reductions in our air forces in Thailand and our B-52 force on Guam, when the situation in Southeast Asia permits.

We are also strongly recommending to the Congress a continuation of the essential military assistance programs needed by our Allies to strengthen their general purpose forces and improve their defensive capabilities in this difficult period until more lasting peace arrangements are achieved. The stronger our Allies, the greater is the

incentive for North Vietnam and North Korea to seek negotiated solutions, thus enhancing the possibility for peace in this troubled part of the world.

d. Maritime Missions

(1) Antisubmarine Warfare

Although we would have to depend primarily on active forces and airlift for a quick NATO mobilization and the early stages of a war in Central Europe, there are obvious risks in placing such heavy reliance on only one form of mobility. Moreover, we should be able to start delivering very large tonnages by sea within a relatively short time after having established our sea lines of communication (SLOC). These tonnages could be of great value in a prolonged mobilization; they might contribute to the initial stages of a large-scale defense, and they would be essential to a more protracted conflict. For all these reasons we maintain some sealift, would charter more in an emergency, and would deploy substantial antisubmarine warfare (ASW) forces -- principally in the form of attack submarines, patrol aircraft, carrier air, and escorts -- for protection of the sea lanes.

The precise justification for the size and composition of our ASW forces is quite complex and I do not propose to discuss it in detail. It should be evident, however, that the main threat to our Atlantic (and Pacific) shipping comes from the large Soviet attack and cruise missile submarine force. Our most effective strategy against this threat is a defense in depth, based on a series of barriers -- manned primarily by submarines and aircraft -- between the enemy threat and allied shipping. In addition, we would want to provide close-in protection for our merchant marine (particularly in convoy) with surface escorts and carrier-based aircraft.

These functions permit calculations of kill probabilities for various types and numbers of ASW systems against the threat, and thus lead to the establishment of force requirements. Our current estimates are that with existing and planned U.S. and Allied ASW forces, we could eventually turn back the enemy submarine threat without an unacceptable loss to our merchant shipping or to our naval forces.

(2) Sea Control

While I have placed primary emphasis on the submarine threat, I do not wish to underestimate the emergence of the Soviet surface fleet and land-based naval aircraft as factors of increasing weight in the maritime balance of power. We have estimated in the past that most of these ocean-going vessels, the long-range aircraft, and portions of the attack and cruise missile submarine forces were intended to counter our carrier task forces.

Now, however, Soviet objectives may be more ambitious. With the launching of one 40,000-ton carrier (comparable in size but not in mission to our Essex class) and the construction of another underway, with continuing efforts to establish overseas bases on the coasts of Africa, in the Indian Ocean, and in Cuba, and with a gradual growth in open-ocean operations, the Soviet leaders are clearly intent on making their naval presence felt on a worldwide basis. With the re-opening of the Suez Canal, this objective will become more easily attainable.

These expanded forces and operations may be primarily designed to establish a political presence, but for the first time they put the Soviet Union in a position to challenge the United States and its allies for control of the seas. Certainly that has already been the effect of their naval deployments in the Mediterranean.

Whichever may be the correct interpretation, we are determined to maintain our own sea lines of communication on a worldwide basis and to ensure that the naval balance of power does not tilt against us. In the long run, we anticipate that, with homeporting, 12 carrier task forces -- five in the Atlantic and Mediterranean, and seven in the eastern and western Pacific -- are adequate to any challenge from the Soviet surface navy and long-range aircraft in regions of interest to the U.S. However, qualitative improvement in those task forces and in our other surface combatants, will be necessary in order to upgrade their defenses against antiship missiles and to improve the range and accuracy of our own attack ordnance. I shall discuss these improvements when I come to the specific programs for the Navy general purpose forces.

As part of the effort to ensure a naval balance, we plan to expand our facilities at Diego Garcia and maintain a more frequent presence in the Indian Ocean. We may also wish to consider the use of long-range land-based aircraft for patrol in that general area.

4. Other Planning Factors

a. Strategic Mobility

I do not propose here to review what constitutes the preferred choice among such options as deployed forces, prepositioned equipment, and various types of strategic mobility (airlift and sealift). As a result of previous decisions and because we support the strategy of forward defense, we are committed to a mix of deployed forces, prepositioned equipment, and heavy dependence on strategic airlift in the form of C-141's and C-5A's. An earlier deployment concept

designed to deliver the required number of divisions within a relatively short time called for a larger number of C-5A's than we have procured, plus a fleet of Fast Deployment Logistic Ships that we have not acquired at all. As a consequence, while we have adequate forces to reinforce the Center Region, we do not have sufficient lift to get them all there as rapidly as we would like.

We may be designing to a scenario that is excessively demanding. If it were to take the Pact longer than we assume to deploy its 80-90 divisions, the timetable for our own deployments could be relaxed somewhat. Furthermore, if the European allies continue to improve their reserve forces, as the Federal Republic of Germany is doing with its Territorial Army, the pressure to deploy all the U.S. reinforcements by a very early date may decline. In either of these circumstances, a late arriving division may be more valuable to the defense of the Center Region than we currently assess it to be. I should add that even under the current scenario, forces deploying after D-day may still have an important role to play in strengthening NATO's defenses.

I do not consider it wise, however, to bank on all the uncertainties turning out in our favor. In any event, our strategic airlift demonstrated its worth during the recent war in the Middle East, and other occasions may arise when we will want to exploit its capability on an even larger scale. Accordingly, I believe that we should expand our airlift so as to enhance our NATO reinforcement capability. That, in turn, should give us ample capacity for Pacific contingencies and the "off-design" cases that I have mentioned earlier.

If we are to increase our strategic airlift to handle the requisite amount of tonnage for the NATO contingency, we should also improve the readiness of our ground forces to exploit it. It is not efficient to have a large and costly capacity for long-range mobility if equipment and men are not ready for loading as it becomes available. Nor will the lift have been fully utilized if units, having debarked from their aerial ports, cannot move to their combat positions in a timely fashion. Therefore, I shall also propose specific measures to accelerate the deployability of our forces.

b. National Guard and Reserve Forces

As should be evident, our contingency planning depends heavily on the National Guard and Reserve as well as on our active forces. This means that to be useful, they should have a high standard of readiness. Whether, in fact, they do, and whether they are worth their costs, is a recurrent question. It is perhaps most relevant to the Army ground forces.

During the past decade, the costs of the Army Reserve and National Guard forces have nearly tripled, and they now have received substantial quantities of modern equipment. Yet despite repeated efforts to increase their readiness, even the highest-priority Army Reserve brigades do not become available for deployment as early as we would like. Except under very optimistic assumptions about the time required for Pact mobilization and deployment, the upshot is that the majority of Army Guard and Reserve units cannot play a role in the early and critical stages of a war in Central Europe.

I recognize, of course, that the Army Guard and Reserve have other important functions to perform in circumstances where mobilization and deployment proceed at a more leisurely pace, as was the case during the Berlin crisis of 1961. I also believe that we should take out some insurance against the possibility of a war in Europe continuing at high intensity for a protracted period even though our first priority must go to outlasting the Pact in the first phase of an assault. The National Guard and Reserve provide that insurance.

However, we must examine whether we are getting an adequate return from our investment in these forces in terms of their contribution to our more demanding contingency plans. My initial examination last fall led to my decision that some cuts should be taken in those units that are only marginally effective, with the savings that result to be applied to increasing the capability of other Reserve Component units. I have directed that a more comprehensive study of the Reserve and National Guard be made, and this study is now underway.

5. Summary

It should be clear from the foregoing that we place considerable emphasis on NATO in our planning algorithm. However, because we are planning on a moderate basis to respond to the various NATO contingencies, we have the forces available for, and largely suitable to, other eventualities. At the same time, we are avoiding the extremes of an open-ended demand for general purpose forces and a completely arbitrary sizing and deployment of the forces related only to intuition (however well informed) about the current political climate. To follow the moderate course I have outlined does not, however, absolve us from continuing to test our baseline forces against "off-design" contingencies. Nor should it cause us to ignore well-established political trends that warrant changes in our basic force structure and deployments.

I realize that in laying out the basis on which we plan our general purpose forces, I may invite controversy. Challenges no

doubt can be leveled at the assumptions we make about contingencies, scenarios, threats, warning times, allied contribution and the other factors that are so critical to the size, composition and deployment of our forces. But since controversy already exists about these forces, I would prefer to see the public informed to the fullest extent possible so that we can join with our critics to see where, specifically, our differences lie. Only then can we consider systematically the options and their implications.

My own view is that:

-- The general purpose forces will continue to grow in importance as nuclear parity continues.

-- We have a minimum of these forces considering the extent of our interests and responsibilities and the capabilities of potential opponents.

-- To reduce the force structure further would undermine the stability that comes from a basic equilibrium, and would lower the chances for a more enduring peace.

-- We are, however, reassessing the types of forces we have and, in particular, the size and contribution of the support structure, to see whether adjustments can produce a more effective overall force balance with greater combat capability.

Whether or not there is agreement with these judgments, I trust that there will be no doubt about the basis for them. I will now proceed to the specific programs we propose to support the general purpose forces.

B. LAND FORCES

In consonance with the foregoing policy considerations, we propose to maintain in FY 1975 a land forces structure of somewhat more than 25 Division Force Equivalents (DFEs) -- 21 1/3 Army active and reserve component divisions and four Marine Corps active and reserve divisions. This force is 1/3 of a division larger than that planned for FY 1974, but it provides about 7 2/3 fewer DFEs than we had at the end of FY 1968, the Vietnam peak. The Army intends to strive for a greater than planned combat strength in its FY 1975 force structure by reducing headquarters and support elements.

The land forces structure is expressed here in terms of Division Force Equivalents because that concept provides a good standard of measure for land forces capabilities. In the Army (active and reserve) it encompasses the division itself plus two support increments (SIs), totaling about 48,000 men. A comparable Marine Corps force, totaling about 32,000 men, would include the division itself, supporting force troop units, and selected helicopter, helicopter support, and anti-air missile units which are organic to a Marine Aircraft Wing.

The DFE is a notional concept in the sense that it is an average used for the planning and management of the overall force structure, particularly in the Army. For example, an Army force structure of 21 DFEs would require more than one million men when deployed abroad for sustained combat. In peacetime, however, some of the support increments for the active forces, including those deployed abroad, are maintained in the reserve components, as shown below for end FY 1974.

	Div	SI
Active Army		
Deployed in Europe	4 1/3	6 2/3
Deployed in Korea	1	1 1/3
Deployed in the U.S.	7 2/3	6
Total Active	13	14
Army Reserve Components	8	27 2/3
Total Army	21	41 2/3

The support increments include not only such familiar service support units as medical, supply, maintenance, transportation, and construction, but also combat and combat support units such as separate brigades and battalions, armored cavalry regiments,

artillery battalions, air defense battalions, surface-to-surface missile battalions, and aviation units.

Obviously, the composition of a particular force would be tailored to the requirements of the combat theater for which it is designed. An Army Corps designed for deployment in Western Europe, for example, would differ markedly from one designed for deployment in South Korea or Southeast Asia. These differences are taken into account in planning the total Army force structure.

While 48,000 may still be a good estimate of the number of personnel required to man and support a U.S. Army division in sustained combat abroad, I am by no means satisfied that the allocation between combat and support spaces is at the optimum. Nor am I satisfied that the number of service support units deployed abroad is at the proper level, considering our rapid reinforcing capabilities and the service support functions which our allies could provide both in peacetime and in wartime. As I indicated earlier, we are now actively reexamining these so-called "teeth to tail" issues, not only in the Army but also in the other services.

1. Force Structure Changes

In FY 1975, we will begin to see the effects of our efforts to reallocate Army resources from support and headquarters into combat forces; about nine maneuver battalions will be added to the active Army structure. The 25th Infantry Division, with only six active maneuver battalions, will continue to rely on one National Guard infantry brigade (two Bns), plus one separate Reserve infantry battalion for roundout. However, the Army has an independent brigade (197th) which is counted as part of the 13 1/3 division force and which could be used to roundout this division in a non-mobilization situation. The associated reserve component units will be closely supervised by the parent division staff and will take their summer training with that division.

In addition, four reserve component brigades (1 airborne and 3 infantry) are being converted to two mechanized and two armored brigades in FY 1974. These four new "heavy" brigades will be added to the five existing mechanized and one existing armored brigade (making a total of seven mechanized and three armored brigades) now earmarked for early deployment in a major contingency. Two more infantry brigades may be converted to mechanized brigades in FY 1975, depending upon the availability of equipment. We know from experience that a reserve component brigade can be made ready for deployment much sooner than a reserve component division. Hence the emphasis is being placed on brigades, rather than on divisions, for the early deployment role.

Over and above these two ongoing efforts to make the total force concept a reality, we are now considering a plan to affiliate a substantial number of reserve component battalions with the active Army divisions and the early deployment reserve brigades. The brigades of an Army division are normally assigned three or four battalions but are organized to control as many as five battalions. By taking advantage of this broader control potential, we can significantly increase our early reinforcing capability, since in the event of a war the affiliated battalions could mobilize and deploy as part of the active Army divisions and early deployment reserve brigades.

This concept is a new departure for the United States Army. We will be watching with great interest the progress of this experiment in total force planning.

A comprehensive study is now underway to provide an in-depth analysis of all the factors involved in enhancing the contribution of the National Guard and the Reserve under the Total Force policy. Organization, manning, recruiting, retention, equipment, training requirements, operational readiness, mobilization deployment objectives, management systems and structures, programming, budgeting and funding procedures, and possible trade-offs between Active and Guard/Reserve forces will all be considered in this study.

Meanwhile, it would be inefficient to maintain units no longer needed, or units which cannot be adequately equipped or trained. Accordingly, we are now taking steps to make improvements in reserve component readiness, both in equipment and training. To provide resources for these improvements, I am proposing some reductions in the size of the Army reserve components, both in structure and in paid drill strength. The reductions in structure will come from units which are excess to our needs and from other management actions. We will provide the details on these structure changes as our planning progresses.

With respect to the combat support forces, the first CHAPARRAL/ VULCAN air defense batteries are scheduled to be introduced into the Army reserve component in FY 1975. Subsequently, the first Aerial Fire Support Units will enter the forces.

In the active Army forces, the deployment of the new LANCE surface-to-surface missile will permit the last of the SERGEANT and HONEST JOHN units to be phased out. A modified version of the AH-1G equipped with the TOW missile, the AH-1Q (COBRA-TOW), will also be introduced into the active Army.

No significant changes are planned in the Marine Corps force structure. However, beginning in FY 1975 one rifle company in each of 18 of the 27 active infantry battalions may be carried at zero strength. (In FY 1973-74 one company in each of nine battalions was carried at zero strength.) This arrangement, or some suitable alternative, is made necessary by the general squeeze on active duty personnel. The equipment for these companies could be placed in storage. In an emergency, given the additional personnel authorization, the Marine Corps could quickly man these 18 companies by drawing on trained personnel in other less essential assignments.

2. Land Forces Modernization

In contrast to the naval, air and mobility forces, the land forces are organized primarily around formations designed to accomplish specific functions rather than around equipment. Hence, the same kinds of equipment are used by several different types of organizations, including both Army and Marine Corps. Accordingly, this discussion will be focused on specific items of equipment without reference to the kind of units that will employ them.

As I noted at the beginning of this section of the Report, in addition to continued equipment modernization we now need to improve substantially the materiel readiness of our general purpose forces, including the replacement of assets provided to Israel or otherwise consumed in connection with the recent Middle East conflict. Shown on the following table are the major land forces equipment modernization and improvement programs proposed in the FY 1975 Budget, as compared with the amounts provided for those programs in FY 1973 and now planned for FY 1974. The FY 1974 figures include the FY 1974 Supplemental requests, shown in parentheses.

a. Close Combat (Tank/Antitank) Program

The recent Middle East conflict reaffirmed our earlier conclusion that modern anti-tank weapons fired from the air as well as the ground can provide an effective counter to the modern tank. The anti-tank weapon, however, is primarily a defensive weapon and cannot take the place of the more versatile tank, particularly in the offensive role. Hence, a proper balance of both types of weapons is required in any combat theater that lends itself to mobile armored operations.

Placed in the NATO-Warsaw Pact context, where our overall strategy is primarily defensive while the other side's strategy is primarily offensive, modern anti-tank weapons in sufficient

Acquisition Costs of Major Land Forces Modernization and Improvement Programs [1]

(Dollars in Millions)

	FY 1973 Actual Funding	FY 1974 Planned Funding [2]	FY 1975 Proposed Funding
Close Combat (Tank/Anti-Tank)			
Continued Modification and Procurement of M60 Series Tanks (Including Marine Corps)	178	227 (47)	250
Modification and Procurement of M88 Recovery Vehicle (Including Marine Corps)	-	3	59
Procurement of Armored Personnel Carrier (M113A1)	-	(44)	-
Development of New Main Battle Tank	22	54	69
Development of Mechanized Infantry Combat Vehicle (MICV)	8	12	9
Development and Procurement of Armored Reconnaissance Scout Vehicle	12	10	33
Development and Continued Procurement of TOW and DRAGON Anti-Tank Missiles (Including Marine Corps)	97	217 (92)	278
Attack Helicopters			
Procurement of TOW Modification for COBRA Attack Helicopter (AH-1)	-	73	87
Procurement of COBRA-TOW Attack Helicopter (AH-1Q)	-	-	28
Procurement of SEA COBRA Attack Helicopter	34	26	31
Development of Advanced Attack Helicopter	20	49	61

Acquisition Costs of Major Land Forces Modernization and Improvement Programs (Cont'd)

(Dollars in Millions)

	FY 1973 Actual Funding	FY 1974 Planned Funding	FY 1975 Proposed Funding
Air Defense			
Acquisition and Testing of Foreign Short Range Air Defense System (SHORADS) Missile and CHAPARRAL Modifications	4	3	61
Stinger Missile System	20	25	34
AN/TSQ-73 Air Defense Control and Coordination System	5	13	7
Acquisition of Improved HAWK Surface-to-Air Missile Systems (Including Marine Corps)	144	137	110
Continued Development of SAM-D Surface-to-Air Missile System	171	194	111
Fire Support (Surface-to-Surface Missiles)			
Development, Modification and Procurement of PERSHING Missile System	56	64	31
Acquisition of LANCE Missile System	104	81	65
Combat Support (Air Mobility-Helicopter)			
Continued Development of Utility Tactical Transport Aircraft System (UTTAS)	50	103	54
Continued Development of Heavy Lift Helicopter (HLH)	38	60	58

1/ Includes costs of RDT&E, procurement of the system and initial spares, and directly related military construction.

2/ Figures in parentheses are the amounts included in the FY 1974 Supplemental.

numbers can help to offset the Warsaw Pact's superiority in numbers of tanks. Accordingly, we plan to continue our efforts to improve NATO's anti-tank capabilities while at the same time we continue to modernize our tank forces.

M60 Series Tanks

For the near term modernization of our tank forces we propose to continue the procurement of the M60A1 series tanks. Last year, it was planned to increase the rate of production of the M60A1 series tanks from 360 per year (for the Army only) to 480 and then to about 515 per year through FY 1976 to provide the Marine Corps 428 M60A1 tanks to replace their old M48s and M103s. Now, in view of the lessons learned from the recent Middle East war and to replace the tanks furnished to Israel, we have decided to increase M60 series tank production to about 665 per year over the next few years.

Furthermore, we believe the Army should replace more of the gasoline powered M48 tanks still assigned to its reserve components. Accordingly, we have included in the FY 1974 Supplement about $47 million for an additional 133 M60A1 tanks, some of which will replace tanks sold to Israel. (In addition, the Army will buy 155 M60A1 tanks with the funds received from the sale of less costly, earlier model tanks to Israel.) Thus, a total of 768 M60A1 tanks would be funded in FY 1974 -- 648 for the Army and 120 for the Marine Corps.

For FY 1975 we are requesting a total of $250 million for M60 tanks, including $234 million for the procurement of 664 tanks (510 Improved M60A1s for the Army and 154 M60A1s for the Marine Corps), $8 million for RDT&E, and $8 million to equip some existing M60A1s with add-on gun stabilization, top loading air cleaner, improved reliability engines, and improved electrical systems.

The last of the 428 Marine Corps M60s are scheduled for procurement in FY 1976, at which time the Army plans to buy the M60A3 which, in addition to the add-on stabilization and other improvements mentioned above, will have a laser range-finder, solid state ballistic computer, tube-over-bar suspension, and commander/gunner passive nightsight. The M60A3s (and the M60A1s to be retrofitted to the M60A3 configuration) will replace the earlier M60s in the active Army, and the earlier M60s in turn will replace old M48s in the reserve components.

M88 Recovery Vehicle

The M88 recovery vehicle, which has been out of production since the early 1960s, is designed to retrieve disabled tanks of M60 size from the battlefield under combat conditions. The existing M88s are powered by gasoline engines. We now propose to buy a diesel-powered version of this vehicle and convert all the existing M88s in the inventory to diesel power. A total of nearly $59 million is included in the FY 1975 Budget -- $50.3 million for procurement of 117 M88s (77 for the Army and 40 for the Marine Corps), and $8.4 million for the conversion of the first increment of M88s to the M88A1 diesel engine configuration. A final buy of the M88A1 is planned for FY 1976, and retrofit kit procurement is planned through FY 1978.

Armored Personnel Carrier (M113A1)

We are also requesting about $44 million in the FY 1974 Supplemental for the procurement of 923 M113A1s -- some to replace vehicles provided to Israel and the bulk of them to replace the M114 three-man, command and reconnaissance vehicles used in the reconnaissance role. The M114 has proven to be very difficult to maintain and the Army needs a more dependable vehicle, such as the M113A1. The use of the M113A1 in place of the M114 in Europe is intended as an interim measure since the M114s now in use there are scheduled to be replaced eventually by the Armored Reconnaissance Scout Vehicle (ARSV) which is now in development. These additional M113A1s, when no longer needed in Europe, would be used to replace other M114s in the active Army.

New Main Battle Tank

For the longer term modernization of the Army tank inventory, we are proceeding with the development of the new main battle tank, the XM-1. This program is the successor to the XM-803 (MBT-70) which was terminated by the Congress in 1971. The XM-1 development program was approved by the Deputy Secretary of Defense in January 1973, and in June 1973 contracts were placed with two firms to develop prototypes for competitive evaluation. The $69 million request for the XM-1 in FY 1975 is to continue development.

The XM-1 will probably have the same main armament as the M60A3 (i.e., the 105mm gun), improved fire control, and a new type of armor which promises increased survivability against modern anti-tank weapons. The acquisition cost of the tank itself will be about twice as much as the M60A3,

but on a ten year system cost basis (i.e., the cost of buying the tank plus ten years of operation) the cost would be only 20 percent higher. Even so, the question remains: Is the XM-1 likely to be worth 20 percent more than the M60A3? The answer is not yet clear; it depends largely on how much better the new type armor proves to be as compared with the M60A3 armor.

Our M60A1 is certainly as good, if not better than the Soviet T-62. We cannot prudently assume, however, that Soviet tank technology has come to a standstill; they may be working even now on a new, significantly improved medium tank. Furthermore, as the recent Middle East war again has demonstrated, our tanks must not only be able to defeat the opposing tanks, they must also be able to survive against the opposing tanks and anti-tank weapons. In this respect, the XM-1 should have a distinct advantage over our M60 series tanks.

Accordingly, I believe it would be wise to proceed with the XM-1 development program to provide both an option for the production of a new, more survivable main battle tank for the 1980s, as well as a hedge against a Soviet breakthrough in tank technology.

MICV

The $9 million included in the FY 1975 Budget for the MICV program will continue development of this new lightly armored, tracked, infantry fighting vehicle and its primary armament, the Bushmaster system. First procurement for the operational inventory is scheduled in FY 1977. The initial procurement objective is 1,186 vehicles, enough to replace the M113A1 armored personnel carriers for the rifle squads of a portion of our Mechanized Infantry battalions and to provide for a training base. The MICV, which will carry a fully equipped squad of combat troops, is designed to operate as a companion vehicle with tanks as part of the combined arms team.

Armored Reconnaissance Scout Vehicle (ARSV)

The $33 million requested for the ARSV in FY 1975 includes $8 million for continued development, and $25 million for production tooling and the first 35 production vehicles for test. Three tracked prototype vehicles from one contractor and three wheeled prototype vehicles from a second contractor are now being subjected to competitive testing. No decision on the production test contract will be made until these tests have been satisfactorily completed.

The ARSV is a three-man lightly armored combat vehicle which is intended as the ultimate replacement for the M114 three-man command and reconnaissance vehicles with our cavalry units in Europe. As noted earlier, the M113A1 will serve as an interim replacement until the ARSVs are delivered. The initial procurement objective is 1,147, sufficient to equip most of our cavalry units and provide for a training base.

TOW and DRAGON

As I indicated earlier, our assessment of the results of the Middle East conflict has led us to the conclusion that the production of TOW and DRAGON anti-tank missiles should be substantially accelerated.

Production of the TOW missile is now running at 12,000 per year, all for Army. Procurement of the TOW missile for the Marine Corps was scheduled to begin in FY 1975. We now propose to increase FY 1974 procurement to 23,425 missiles -- 6,000 more for the Army and a first quantity of 5,425 for the Marine Corps. In addition, we plan to buy 985 more TOW launchers for the Army in FY 1974, making a total of 1,518. The first procurement of launchers for the Marine Corps was originally scheduled for FY 1975. We plan to buy the first 100 in FY 1974. A total of $92 million is included in the FY 1974 Supplemental for these purposes.

In FY 1975, we propose to buy a total of 30,319 missiles and 1,041 launchers -- 24,000 missiles and 762 launchers for the Army, and 6,319 missiles and 279 launchers for the Marine Corps. These procurements are substantially higher than planned for FY 1975 last year. A total of $149 million is included in the FY 1975 Budget for the TOW program -- $138 million for procurement and $11 million to continue development of a night sight for TOW.

Under this accelerated program, the Army will achieve its TOW inventory objective by FY 1977 instead of FY 1978 as planned last year, and the Marine Corps, by FY 1976 instead of FY 1977.

Procurement of the DRAGON anti-tank missile began in FY 1972 with the purchase of a limited production test quantity of 560 missiles and 28 trackers for the Army. Last year it was planned to buy 9200 missiles and 900 trackers for the Army in FY 1975. We now propose to increase the FY 1975 procurement for the Army to 15,200 missiles and 1,200 trackers, and buy the first increment of 1,378 missiles and 158 trackers

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for the Marine Corps. A total of $129 million is included in the FY 1975 Budget for the DRAGON program.

Both the vehicle mounted TOW and the one-man portable DRAGON anti-tank missile systems offer significant improvements in combat effectiveness as compared with the weapons they will replace. The TOW is replacing the jeep-mounted 106mm recoilless rifle, and the DRAGON is replacing the two-man portable 90mm recoilless rifle. Army forces in Europe will receive first priority in the delivery of these weapons.

b. Attack Helicopters

Our experience in Vietnam confirmed our judgment on the usefulness of TOW-armed attack helicopters in the anti-armor role, particularly with respect to Europe where the Warsaw Pact enjoys a substantial superiority over NATO in number of tanks. Accordingly, we intend to press forward with our TOW-armed helicopter programs during the coming fiscal year.

Cobra-TOW Modification

Last year $73 million was provided to modify the first 101 AH-1G Cobra helicopters (out of a prospective total of 298) to carry the TOW missile. Eight R&D prototype Cobra-TOW helicopters (designated the AH-1Q) had been previously funded.

We still plan to complete the modification of the remaining 189 AH-1Gs to the Cobra-TOW configuration in FY 1975. Evaluation of the performance of the prototype vehicles, however, indicates that engine upgrading and a change in the transmission will be needed if the AH-1Q is to carry a full load of eight TOW missiles in addition to the normal armament and fuel load of the AH-1G. The AH-1Q as presently configured can carry 2 to 6 TOWs (depending on the weather and altitude) in addition to its other armament and fuel load.

Accordingly, we now propose to increase the power of the current AH-1 engine and substitute the gear boxes and transmission used in the Marine Corps AH-1J for those now used in the AH-1G. We are requesting a total of $87 million in the FY 1975 Budget for the modification of the 189 AH-1Gs to this upgraded configuration. A final decision on the procurement of these modifications, however, will not be made until the test and evaluation of the improved AH-1Q has been satisfactorily completed.

Cobra-TOW Procurement

In addition to modifying a total of 298 AH-1Gs to the upgraded configurations, we also propose to buy about 300 new improved configuration AH-1s during the FY 1975-79 period. The Army needs a total of about 1335 attack helicopters to equip the current force structure (active and reserve). The current inventory is now about 260 below that figure, and the shortfall is expected to increase even further due to peacetime attrition and the phasing out of approximately 300 UH-1M utility helicopters now used as substitute attack helicopters.

The only new attack helicopter in development, the AAH, is expected to cost more than twice as much as the upgraded AH-1Q. Consequently, we would buy only enough AAHs to meet the most demanding requirement. The procurement of some 300 upgraded AH-1s in the FY 1975-79 period would not only avoid the potential shortage but also maintain a "warm" production base. A total of $28 million is included in the FY 1975 Budget for the procurement of the initial increment of 21 upgraded AH-1Qs.

Sea Cobra Attack Helicopter

The Marine Corps in recent years has been buying a twin engine version of the AH-1 for over-water operations. Forty-nine of these AH-1Js were procured in FY 1969 and prior years, 20 in FY 1973, and 20 more were funded in FY 1974. Another 35 are needed to complete the equipping of three active squadrons and two training elements (a total of 84 UE aircraft).

We believe that some of the AH-1Js should be configured to carry TOW, and all should be configured to carry the newly developed protective devices (e.g., infrared suppressors, detectors, jammers, and decoys), in addition to their current payload. In order to do so, however, the payload capability of the aircraft clearly needs to be improved substantially. The AH-1J (Improved) will cost about a half a million dollars more per aircraft than the current AH-1J ($1.5 million vs. $1.0 million). But we believe that the enhanced capabilities of the AH-1J (Improved) will fully justify the additional cost.

Accordingly, we now propose to buy 15 of the improved AH-1Js in FY 1974, instead of the 20 current model AH-1Js previously planned. The $31 million included in the FY 1975 Budget for this program would provide $27 million for another 20 AH-1J (Improved) Attack Helicopters, plus about $4 million for advanced procurement for the final 20 to be procured in FY 1976.

Advanced Attack Helicopter (AAH)

The FY 1975 Budget also includes $61 million to continue development of the AAH for the longer term modernization of our attack helicopter force. As you know, the AAH is the successor to the Cheyenne attack helicopter program that was terminated by the Army in August 1972. The Army, OSD, and the Special Subcommittee on Close Air Support of the Senate Armed Services Committee (in its Report issued in June 1972) have all concluded that there is a need for both fixed wing and attack helicopter close air support on the modern battlefield. The AAH would help to fulfill the attack helicopter portion of this mission in the 1980s and beyond.

The AAH program is being pursued on a design-to-cost basis in the hope that we can develop a suitable attack helicopter that is less costly and less complex than the Cheyenne. Development contracts have been awarded to two contractors. Each will fabricate two flying prototypes to be evaluated in a competitive fly-off in March 1976. If all goes well, the first production AAHs, for test and then inventory, would be procured in FY 1978-79.

c. Air Defense

Air defense of the army in the field has come under a great deal of scrutiny as a result of the recent Middle East conflict. One conclusion upon which there is general agreement in the Defense Department is that major improvements in our theater army air defense capabilities are urgently needed.

Air defense of an army in the field is usually provided by a mix of aircraft, SAMs, and AAA weapons systems supported by radars, command and control systems, electronic warfare equipment, and passive (camouflage, dispersion, etc.) defense measures. The air defense objective is to limit the opponent's effectiveness in attacking our critical assets and to counter the air attack in such a way as to permit our field army forces to maneuver as required.

The evolving Soviet field army air defense doctrine features highly mobile SAMs and AAA which are designed to provide protection for fast moving tank and mechanized infantry forces. In the recent Middle East conflict, however, Soviet field air defense equipment, particularly in the case of Egypt, was also employed in a heavy barrier defense involving three SAM systems (SA-2, SA-3 and SA-6) each operating in a different but overlapping altitude and range regime. This mode of deployment was

probably peculiar to that situation; it would not be consistent with a highly mobile Soviet offensive in Europe.

Compared with the Soviet Union, the low-to-medium altitude air defenses (other than aircraft) of the U.S. Army in the field are considerably less mobile. The principal mobile elements of the Soviet system are the SA-4 and SA-6 SAMs, and the twin 57mm and ZSU-23-4 guns. The comparable U.S. elements are the HAWK and VULCAN/CHAPARRAL. The SA-6, for example, moves in two tracked vehicles -- the missile launcher vehicle and the radar van -- and can fire with little preparation. The HAWK, in contrast, moves in several wheeled vehicles and requires considerably more time to set up and fire, but it is quite effective in the medium altitude regime. The Soviet ZSU-23-4 is track-vehicle mounted and radar directed. The U.S. counterparts, the VULCAN gun and CHAPARRAL short range missile, are also mounted on tracked vehicles but they are not radar directed and therefore lack an all-weather capability.

Thus, our most immediate need for air defense of the army in the field is an effective all-weather, highly mobile, low altitude system. We also need an improved follow-on to the REDEYE man-portable SAM. For the longer term modernization of ground forces air defense, we are continuing the development of the SAM-D as a potential replacement in the 1980s for the NIKE HERCULES as well as for the Improved HAWK.

Development of Short Range Air Defense Systems (SHORADS)

Several of our allies have developed SHORAD systems which may be able to meet our need for an all-weather capability. By drawing on these developments, we can conserve our R&D funds for other essential development programs which we, in turn, can share with our allies.

Accordingly, we have conducted preliminary firing tests of three foreign short range air defense missile systems -- the French CROTALE, the German ROLAND II, and the U.K. RAPIER. We plan this summer to select one of the three systems for further intensive tests to determine whether it can be modified, and at what cost, to meet our particular requirements.

Inasmuch as it will take some time to test and produce the selected foreign system, and in view of the fact that the need for improvement in this area is urgent, we also propose to continue, as a hedge, the improvement program for the CHAPARRAL. The current improvements being tested would significantly enhance the effectiveness of the CHAPARRAL missile, but not to the level of effectiveness promised by the foreign systems.

The $61 million included in the FY 1975 Budget for the SHORADS program would provide $35 million to acquire from the U.S. licensee (there is a U.S. licensee for each of the three foreign missiles) a limited test quantity (about five sets of equipment and 100 missiles) of the selected SHORAD system, and $26 million to modify the first 1500 CHAPARRAL missiles. If we decide to acquire the foreign SHORAD for the operational inventory, it will be produced in the U.S. by a U.S. licensee, and the excess CHAPARRAL assets will be turned over to the Reserve Components.

STINGER

The STINGER is an advanced man-portable air defense system being developed to replace the Army and Marine Corps REDEYE, which will need replacement in the late 1970s. STINGER will be faster than REDEYE, and will utilize a more effective guidance system.

The $34 million requested in the FY 1975 Budget would provide for continued development. The first production quantity is scheduled for procurement in FY 1976 for the Army. Procurement for the Marine Corps is scheduled in FY 1977.

AN/TSQ-73 Air Defense Command and Control System

The current AN/MSG-4 ground force Air Defense Command and Control system was deployed in 1958; it is extremely costly to operate and maintain, does not integrate easily into other services' C^2 systems, and can be easily jammed. Accordingly, we plan to replace that system with the new AN/TSQ-73. The $7 million included in the FY 1975 Budget for the AN/TSQ-73 is needed principally for the continued testing and engineering changes on the five units procured with FY 1974 funds. Procurement of additional units has been deferred pending the satisfactory completion of the tests and the successful accomplishment of the necessary engineering changes.

Improved HAWK

A total of about $110 million is included in the FY 1975 Budget for the Improved HAWK program -- $89 million for the Army and about $21 million for the Marine Corps. The Army amount includes $81 million for the procurement of the last 9 battery conversion kits, 520 missiles and the last increment of 38 Improved Platoon Command Posts (IPCPs), and $8 million for the development of further modification to improve the performance of the HAWK system. The Marine Corps amount ($21 million) provides $17 million for the procurement of 230 missiles, about $2 million for three IPCPs, and about $2 million for the installation and check-out of six battery sets.

The Improved HAWK conversion program is on schedule; the first Basic HAWK battalion was converted to Improved HAWK in November 1972 in USAREUR/Seventh Army. The Army will complete procurement of this system in FY 1977 with a total of 90 battery sets and the Marine Corps in FY 1976 with a total of 14 battery sets.

SAM-D

The SAM-D, which is intended as a potential replacement for the NIKE HERCULES and Improved HAWK, is a very complex surface-to-air guided missile system. The performance specifications call for a high single shot kill probability in a sophisticated electronic countermeasure environment, and an ability to conduct multiple simultaneous engagements against the type of high performance targets that potentially could be employed against U.S. forces in the field in the 1980s and beyond.

After an intensive review of the status of this program last year, we have decided to reexamine SAM-D in order to provide emphasis on austerity, and to ensure adequate testing of the guidance system and the phased array radar before we proceed with Engineering Development. Past experience with such complex systems has conclusively demonstrated that it is faster and cheaper in the long run to ensure the proper performance of the key components before proceeding with full scale development. A total of $111 million is included in the FY 1975 Budget to continue the SAM-D development program.

d. Fire Support (Surface-to-Surface Missiles)

The two current acquisition programs in this area are the PERSHING and the LANCE.

PERSHING

The $31 million requested in the FY 1975 Budget would provide $20 million for the PERSHING I and $11 million to demonstrate technology for a major upgrading of the system.

The PERSHING I amount includes $11 million for the last increment (88 missiles) of a four-year missile modification program designed to extend system life, $1 million for spare parts and $8 million for the procurement of 58 automatic azimuth reference systems.

The current PERSHING IA Missile System is a good example of "modernization by modification". Since the system was first fielded in 1962, it has been repeatedly modified through modular product improvements which have provided increased weapon system reliability and maintainability, better mobility, survivability, and flexibility in nuclear fire support for SACEUR's General Strike Plan. Recent additions to the system include the automatic azimuth reference system which enables the PERSHING to be fired from unsurveyed firing positions, and a sequential launch adapter which provides a reduction in firing response time in the Quick Reaction Role in support of the NATO mission.

Nevertheless, we now believe that we should start to examine the technical feasibility of a major upgrading of the PERSHING system that would incorporate the latest available technology. The $11 million would support that effort.

LANCE

A total of $65 million is included in the FY 1975 Budget for the LANCE surface-to-surface missile system. Of that amount, $30 million is for the procurement of another 194 missiles (less warhead sections) for the U.S. Army. The balance of $35 million is needed for the procurement of warhead sections (excluding the nuclear device which is provided by the AEC) both for the U.S. Army and for the support of LANCE systems sold or expected to be sold to our NATO allies.

The Congress has stipulated that a study of the cost-effectiveness of the non-nuclear warhead for LANCE be submitted prior to the request of funds for the procurement of such warheads or missiles to carry them. The Defense Department, of course, will comply with that request if our analyses indicate this option is worth pursuing.

e. Combat Support (Air Mobility-Helicopter)

The United States in recent years has led the rest of the world in the use of helicopters to enhance the mobility of the land forces. Although the Soviet Union is now placing considerably more emphasis on this aspect of land forces mobility, we are still well ahead in this area, except for heavy lift helicopters. And, of course, we must also develop a successor to the Army UH-1 tactical transport helicopters, most of which were acquired during the Vietnam war build-up.

Utility Tactical Transport Aircraft System (UTTAS)

The UTTAS is the intended successor to the UH-1 in the tactical transport role. The development program, for which $54 million is requested in FY 1975, is proceeding well. The engine development contract was awarded in March 1972, and contracts for the development of prototype aircraft were awarded to two competing contractors in August 1972. The selection of a single contractor for final development and production is scheduled for November 1976, after a prototype fly-off and evaluation of the two competing designs has been completed.

The UTTAS would provide the Army in the 1980s with a utility transport helicopter that emphasizes reliability, maintainability, and survivability in sustained combat or field operations. In contrast to the UH-1, the UTTAS would be able to carry a full combat equipped Army squad. Also, it would be more effective than the UH-1 in the resupply and medical evacuation roles.

Heavy Lift Helicopter (HLH)

The current Army helicopter designed for the heavy lift mission is the CH-54. The lift capacity of this helicopter is about ten tons, not enough to lift many types of land forces equipment which are subject to damage in battle. Accordingly, the Defense Department is now developing the technology for a new helicopter, the HLH, that could lift about 22 1/2 tons. We envision that this helicopter would be used to satisfy the heavy vertical lift requirements of all the services in both a combat support role, such as air-mobile operations or recovery of damaged vehicles, and in a combat service support role to move supplies and unload ships.

To continue development of the HLH, we are requesting $58 million for FY 1975. This amount will continue design and fabrication of the first prototype with rollout scheduled for May 1975. In addition, fabrication of a second prototype will be initiated. Extended reliability endurance testing will be accomplished on major dynamic components, the flight control system and engines. A full prototype flight test program will be undertaken in FY 1976 and a decision will then be made as to the future course of the HLH program.

3. Equipment of the Reserve Components

Emphasis on the modernization of equipment in reserve components continued during the past year in consonance with the

Total Force Policy. Significant improvement in the levels and quality of equipment on hand in Guard and Reserve units has been achieved. Issues of major items of equipment to the Army Guard/ Reserve and the Marine Corps Reserve during FY 1973 totaled $714 million, of which Army received approximately $682 million and the Marine Corps $32 million. As of the end of FY 1973, on hand combat-capable equipment in the hands of troops for the Army National Guard and Reserve totaled approximately $3.66 billion (about half of the mobilization requirement), and in the Marine Corps, about $155 million (almost all of the mobilization requirement).

It is interesting to note that from the end of FY 1969 through the end of FY 1974 a total of almost $3.3 billion of equipment will have been delivered to the Army reserve components compared with a total of less than $.7 billion of equipment retired. Nevertheless, some important Army reserve component equipment deficiencies remain to be corrected. These are mainly in the newer items of equipment -- TOW/DRAGON anti-tank missiles, M60 series tanks, CHAPARRAL air defense missiles and modern communication equipment. Action is being taken to alleviate these deficiencies as fast as the needs of the active Army permit.

With the exception of long leadtime production items, which are funded but not yet delivered, the equipment required for the Marine Corps Reserve Division is either in the hands of existing units or in Prepositioned War Reserve Stocks.

Associated with the equipment program is the requirement to provide adequate storage and maintenance facilities, as well as field training areas, to complement the influx of equipment. To meet this requirement, the Department of Defense in 1970 undertook a facilities improvement program designed to provide adequate facilities for all Army Guard and Reserve units by the end of 1980. A total of $242.7 million has thus far been provided for this program, and another $102.7 million is requested for FY 1975.

C. NAVAL FORCES

As I indicated earlier, one of the major objectives of the General Purpose Forces Program is to ensure, together with our allies, the maintenance of an appropriate naval balance with the Soviet Union, taking into account the differences in the objectives of the two forces. In planning our naval forces during the past few years, we have had to take into account two internal considerations.

The first was the need, given the prevailing fiscal constraints and the block aging of many World War II-constructed ships, to reduce force levels over the near term in order to provide the funds needed for modernization over the long term. The number of commissioned general purpose ships in the fleet (including the Naval Reserve Force) has, in fact, been reduced from 951 at the end of FY 1968 to 588 at end FY 1973, and is programmed at 522 for the end of FY 1975. Beginning in FY 1977, the trend will be markedly reversed as the number of new ships delivered to the fleet exceeds the number being retired.

The second consideration -- the need to pursue assiduously the so-called "high-low mix" approach to weapon system acquisition -- has already been discussed. This concept is particularly applicable to the ship construction program, and the Navy has made a valiant effort to apply it, particularly to the surface escort and major aircraft platform categories.

1. Aircraft Platforms

The planned program for sea-based aircraft platforms is an excellent example of the high-low concept in practice. As you know, we are now building three NIMITZ-class nuclear powered aircraft carriers, the last of which is expected to cost almost one billion dollars. These will be very large multi-purpose aircraft carriers capable of operating the Navy's most sophisticated fighter/attack and ASW aircraft under the most demanding conditions in high threat areas. This extensive capability, however, is not needed in low threat situations, such as escorting merchant ships or Naval underway replenishment groups in ocean areas outside the range of Soviet land-based aircraft. For this latter purpose, a relatively small and austere aircraft platform capable of launching V/STOL aircraft and helicopters for air defense and ASW protection would be sufficient. The Sea Control Ship, which is expected to cost less than $120 million in escalated, "then-year" dollars (excluding the lead ship and all outfitting and post delivery costs), is intended to fulfill this low cost/limited performance aircraft platform requirement.

a. Aircraft Carriers

The United States, since the Korean War, has kept five or more carriers continuously deployed -- two in the Mediterranean and at least three in the Pacific. The wisdom of maintaining forward deployed carrier forces on a continuous basis has again been impressed upon us by recent events in the Middle East.

Normally, with all carriers homeported in the U.S., a total of 15 active carriers would be required to support five forward in peacetime. Indeed, the attack carrier force level has varied between 14 and 17 ships since 1960, with an average of 15.

Two years ago, in the face of increasing fiscal and manpower pressure, it was decided that the attack carrier force would have to be reduced. In order to support the five carrier forward deployment with fewer total carriers, it was also decided to locate the dependents of the crews of two carriers overseas -- one in the Pacific, and one in the Mediterranean. With this arrangement, the five carrier forward deployment could be adequately supported on a continuous basis with a total of 12 carriers. For contingency operations of relatively short duration, the 12 carrier force could support more than five forward; and in wartime, of course, all available ships would be deployed forward. Accordingly, it was planned last year to reduce the carrier force from 15 at end FY 1974, to 13 at end FY 1975, and eventually to 12.

Now, however, in view of the difficulties encountered in completing the homeporting arrangements for a carrier in Greece and the need to retain a capability to deploy a carrier periodically in the Indian Ocean, we have decided to hold the carrier force at 15 through FY 1975, reducing to 12 in later years. The first of the three NIMITZ-class carriers (the NIMITZ) is now expected to be delivered to the fleet in FY 1975, and the second (the EISENHOWER) is contracted for delivery 21 months later (which now would be late FY 1976 or early FY 1977). The last NIMITZ-class carrier, the CARL VINSON, is expected to be delivered in FY 1981.

While no further changes in the estimated costs of the three NIMITZ-class carriers have been reported to my office in the past year, delays in the delivery of the NIMITZ and the EISENHOWER could increase their costs. The delays being encountered with the NIMITZ and the EISENHOWER are not expected to affect the delivery schedule for the VINSON which, as shown on the table beginning on the next page, was fully funded in FY 1974.

Acquisition Costs of Major Naval Forces Modernization and Improvement Programs 1/

(Dollars in Millions)

	FY 1973 Actual Funding	FY 1974 Planned Funding 2/	FY 1975 Proposed Funding
Aircraft Platforms			
Procurement of CVN-70 Aircraft Carrier	299	657	-
Design and Procurement of the Sea Control Ship	13	29	143
ASW Aircraft			
Development and Procurement of S-3A Carrier-Based ASW Aircraft	618	548	562
Modification of SH-3 Helicopter	9	17	24
Development of the HSX	-	-	2
Continued Procurement of the P-3C Land-Based ASW Aircraft	132	202 (50)	152
Other Surface Combatants			
Procurement of DD-963 Destroyers	249	612	464
Procurement of DLGN Nuclear-Powered Frigates	-	81	256
Acquisition of Patrol Frigate	204	6	437
Continued Development of AEGIS Ship Air Defense System	79	40	67
Acquisition of the Light Airborne Multi-Purpose System (LAMPS)	51	32	34
Development and Test of Surface Effect Ship	32	61	58
Acquisition of Patrol Hydrofoil Missile Ship	30	23	108
Anti-Ship Missiles			
Acquisition of the HARPOON Anti-Ship Missile	60	81	136
Development of Encapsulated HARPOON	12	12	13

Acquisition Costs of Major Naval Forces Modernization and Improvement Programs (Cont'd)

(Dollars in Millions)

	FY 1973 Actual Funding	FY 1974 Planned Funding	FY 1975 Proposed Funding
Anti-Ship Missiles (cont'd)			
Acquisition of Active STANDARD Anti-Ship Missile	20	8	35
Acquisition of CONDOR Anti-Ship Missile	28	33	30
Attack Submarines			
Procurement of SSN-688 Class Nuclear Attack Submarines	1,048	921	548
Continued Development and Procurement of MK-48 Torpedo	176	183	160
Acquisition of the AN/BQQ-5 Sonar System	30	57	72
Undersea Surveillance Systems			
Development and Deployment of SOSUS and Improved SOSUS and Development of TASS	127	144	137
Underway Replenishment and Support Ships			
Procurement of Underway Replenishment and Support Ships	189	-	209

1/ Includes costs of RDT&E, procurement of the system and initial spares, and directly related military construction.

2/ Figures in parentheses are the amounts included in the FY 1974 Supplemental.

When the VINSON is delivered, the MIDWAY will be retired and we will then have a 12-ship force comprised entirely of large post-World War II carriers, including four nuclear powered. By 1985, however, the first of the FORRESTAL-class carriers will be 30 years old and we must be prepared to replace them some time in the 1980s if a force of 12 ships is to be maintained. Accordingly, we have tentatively programmed the first of a new class of lower-cost carriers, designated the CVX. The characteristics of the CVX have not yet been defined, but conceptual studies and preliminary design work are underway. We expect this effort to be oriented toward ship dimensions, propulsion system and other features that would be compatible with a design-to-cost goal of about $550 million in FY 1973 dollars. The study and preliminary design phase should result in completion of a Development Concept Paper (DCP) in 1974 that will better define the characteristics of the proposed new carrier and the alternatives available.

The program to convert attack aircraft carriers (CVA) to the multipurpose or CV configuration is being continued. The CV operates fighter, attack and ASW aircraft and combines the role of the CVA and the ASW carrier (CVS). Experience to date has shown that the problems associated with operating all three types of aircraft on the large deck (ENTERPRISE/FORRESTAL class) carriers can be overcome. Three FORRESTAL-class carriers are now being operated as CVs, and three more are planned to be converted to that configuration in FY 1975. The ENTERPRISE and NIMITZ will be converted to the CVN configuration in FY 1976, and EISENHOWER will be delivered as a CVN. The last two FORRESTAL-class ships will be converted by FY 1977. After that we expect to operate 11 CV/CVNs and one CVA until the VINSON is delivered and the MIDWAY is retired.

b. Sea Control Ship

The Sea Control Ship (SCS), as I noted earlier, is expected to be the key element on the "low" side of the spectrum of sea-based air capability. Its primary mission is to provide sea-based aircraft (V/STOL and helicopter) for protection of underway replenishment groups (URGs), amphibious groups, and convoys when operating in low air threat areas where protection by the much more capable and costly CVs is not available. In fulfilling this primary mission, the SCS with its embarked aircraft and accompanying escorts will provide surveillance against surface and submarine threats, localization and attack of identified submarine threats, and attack of surface and limited air threats beyond surface combatant range.

The SCS will be a relatively low-cost, austere vessel of about 14,000 tons, with a planned complement of 14 helicopters and three V/STOL aircraft, plus maintenance facilities for two LAMPS helicopters (which would be deployed aboard accompanying surface combatants).

Last July the Navy completed a lengthy test of the SCS concept in a coordinated fleet environment using a helicopter assault ship, the USS GUAM, as the test platform and AV-8A HARRIERs and SH-3H helicopters as the initial test aircraft. These tests have verified the basic concept, but some deficiencies were identified, particularly with respect to the ability of the planned helicopter complement to sustain the continuous ASW and surveillance operations needed to fulfill the mission. The Navy plans to correct these deficiencies and conduct additional tests with a full complement of SH-3H helicopters and AV-8As, modified as required to ensure their suitability for the SCS role.

I am well aware of the uneasiness expressed in the Congress with regard to the SCS program. I am convinced, however, that the high-low concept offers the only feasible solution to the problem of maintaining the required total combat capability within current budgetary constraints. We must have quantity as well as quality if we are to maintain an appropriate naval balance with the Soviet Union.

The SCS with the SH-3H and the AV-8A would provide a useful capability at a relatively low cost, thus facilitating its acquisition in quantity. Moreover, like all air-capable ships, the SCS would be equipped, over its lifetime, with several generations of aircraft. Development of a new, more capable ASW aircraft, the HSX, is now under consideration, and eventually a new, improved V/STOL fighter will become available. These new aircraft would further improve the combat capabilities of the SCS.

In view of the fiscal constraints which are likely to prevail in the foreseeable future, we are proposing a program of eight SCSs. The lead ship would be funded in FY 1975, the next three in the following year, and two each in FY 1977 and 1978. We hope to hold the average cost of the follow-on ships to $117 million in escalated "then-year" dollars (excluding outfitting and post-delivery costs) through such techniques as rigid design to cost, competition between shipbuilders, and an independent design validation by a second shipbuilder. (The lead ship would cost $172 million.) Under this schedule, delivery of the ships to the fleet would be spread over the FY 1978-1981 period.

The FY 1975 Budget includes $143 million, which together with $29.3 million provided in FY 1974, will finance the construction of the first SCS (the lead ship). As directed by the Congress, none of these funds will be obligated, pending approval by both the House and Senate Appropriations Committees.

2. ASW Aircraft

The Navy plans to operate its CVs and CVNs with two squadrons of fighters, three or four squadrons of attack aircraft, and one squadron each of ASW fixed-wing aircraft and ASW helicopters per carrier. This aircraft mix can be varied within limits, depending upon the specific mission of the carrier, e.g., primary attack or primary ASW.

S-3

We plan to acquire one squadron (10 aircraft) of the new S-3s for each of the 12 carriers expected to be in the fleet in the late 1970s. If intensive ASW operations are required, two squadrons (20 aircraft) per carrier could be provided by drawing on the S-3 complements of other carriers -- e.g., those undergoing overhaul or those which are least likely to encounter large submarine threats.

Procurement of 93 aircraft has already been funded, including 45 in FY 1974. A DSARC review of the S-3 program in October 1973 indicated that testing up to that point had been successful. Accordingly, execution of the contract option on the FY 1974 quantity of 45 aircraft was approved under the Continuing Resolution Authority. A total of about $562 million is provided in the FY 1975 Budget for the continued acquisition of the S-3, including $504 million (in addition to the $54 million provided for advance procurement in FY 1974) for the procurement of another 45 aircraft and $56 million of advance procurement funds for the remaining 41 aircraft to be procured in FY 1976.

The first few S-3s are expected to become operational this year. Five squadrons are expected to be available in FY 1975 and the full 12 squadrons by the end of FY 1977.

SH-3

The ASW helicopter force currently consists of nine squadrons (8 UE aircraft per squadron) of SH-3s. Eight squadrons are allocated for CV use and one squadron for testing aboard the "interim" SCS (i.e., the GUAM). Procurement of the SH-3 is tentatively

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scheduled to be resumed in the FY 1976-79 period to provide additional helicopters for the multi-purpose carriers and for the SCSs.

In addition, a program is now underway to modernize the current force of SH-3 A/D/G helicopters to the new SH-3H configuration (the one we plan to buy in the FY 1976-79 period) which will have significantly improved ASW and surveillance capabilities. The first two squadrons of SH-3s are being converted to the H model in FY 1974-75. Another $24.4 million is included in the FY 1975 Budget for the modification of an additional 14 SH-3s.

HSX

As noted earlier, the HSX is being developed as an eventual replacement for the SH-3H, as well as the Marine Corps' CH-46 medium assault helicopter, sometime in the 1980s. The HSX would have better ASW sensors and avionics than the SH-3, and greater endurance and payload. Thus, it would provide an improved ASW capability against the quieter and more capable Soviet submarines expected in the 1980s. Some $2 million is included in the FY 1975 Budget to initiate development of the HSX.

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The Navy carrier-based ASW forces also include six S-2 and four SH-3 squadrons in the Naval Reserve. These units would be used to replace attrition in the active force. The S-2s will have this role only until FY 1978, when the active force will complete the transition to S-3s. The S-2s, however, could also be operated from forward land bases during a contingency, thus increasing our capability to conduct ocean surveillance and to provide protection to convoys.

P-3

In addition to the carrier-based ASW aircraft forces, the Navy also has a total of 36 squadrons of land-based ASW aircraft -- 24 active and 12 reserve. The active force is now equipped with the A, B and C models of the P-3, but the older P-3As are being replaced, one squadron per year, by the new P-3Cs. The P-3C has a more capable, computerized avionics system which permits it to operate more effectively with the more advanced ASW sensors, including the new DIFAR directional sonobuoy system. The P-3As released from the active force are being transferred to reserve units to replace the obsolete SP-2 ASW aircraft.

Replacement of the P-3As in the active force is scheduled to be completed in FY 1979, at which point we would have 15 squadrons of P-3Cs and 9 squadrons of P-3Bs. Procurement of P-3Cs to replace the P-3Bs would be initiated with FY 1979 funds and the first P-3B squadron would be replaced in FY 1980. The FY 1975 Budget includes $139 million (in addition to the $9 million provided in FY 1974) to procure another 12 P-3Cs, plus $12 million of advance procurement funds for the planned FY 1976 buy, and $1 million for construction of a P-3 Tactical Support Center (TSC) Training Building.

The upgrading of the reserve force with P-3As and Bs released by active units will also continue through the decade. All 12 of the Naval Reserve units will be equipped with P-3As by the end of FY 1981.

3. Other Surface Combatant Ships

In addition to aircraft platforms, the Navy's surface combatant force includes cruisers, frigates, destroyers, and ocean escort ships. These other surface combatants have many potential missions, but the size of the force and the configuration of individual ships are determined primarily by the need to provide perimeter defense for high-value naval forces and, in conjunction with our allies, for military resupply shipping during a major conflict with the USSR. Surface combatant screens constitute the final defensive barrier protecting high-value surface ships, while tactical and patrol aircraft and attack submarines provide the outer defenses against enemy air and submarine threats.

Notwithstanding the substantial improvement in the Soviet surface navy during the past decade, the Soviet submarine force is still the principal threat to our naval forces and military resupply shipping. This is so because the submarine force is the only element of the Soviet Navy that can operate, in wartime, at long distances from bases for sustained periods without air cover. Accordingly, ASW screening needs must take precedence over AAW needs in determining the size and character of our surface combatant force.

Recent analyses tend to confirm our conclusion that surface combatant screens could contribute significantly to attrition of both the air and submarine threats to escorted units. These ships would be particularly important for close-in defense against the quieter Soviet torpedo attack submarines. Moreover, surface combatant screens can make a major contribution in AAW protection by attrition of incoming cruise missiles, which are a potent and steadily growing threat to our ships at sea.

The U.S. requirement for other surface combatants is related to the size and character of the Soviet threat, the number of forces and groups requiring protection, the level of defense desired for each protected force or group, and the contributions of surface combatants that can be expected from our allies. In addition, an allowance must be made for ships in overhaul at any one time.

The U.S. forces to be protected by surface combatants in a conventional war in Europe, the most demanding force planning contingency, include the 12 carriers, the amphibious shipping for 1 1/3 Marine division/wing teams, about ten Underway Replenishment Groups (URGs), and five merchant ship convoys.

Based on discussions with our NATO allies, we conclude that a substantial number of ships capable of open-ocean escort duty would be made available for use in the Atlantic sea lanes in the event of a war with the USSR during the late 1970s and early 1980s. We would also expect significant help from allies in the Pacific. There is some doubt, however, that allied ships would be on hand where required for convoy duty early in a conflict. Consequently, we plan to provide enough U.S. surface combatants to protect the military convoys which would be sailed during the first month of a major war. As the allied ships become available, the U.S. surface combatants initially used for convoy duty would be made available as replacements for losses which would inevitably be suffered in the early stages of a major war against the USSR. In view of the many uncertainties involved in calculations of this sort, as well as the need to maintain a balanced modernization program, the Defense Department has established an interim goal of 250 escorts, including a large number with at least an austere area AAW capability.

At the end of the current fiscal year we will have a total of 198 such surface combatants, including 37 Naval Reserve ships in commission and two ships in conversion. In FY 1975 the downward trend will be reversed as one more DLGN and the first three DD-963s are delivered to the fleet. By the end of that fiscal year we will have 202 ships, including 72 dual-purpose (i.e., AAW-ASW) and 130 ASW-only. Of the latter, 37 will be Naval Reserve ships in commission. This force would be supplemented in wartime by 12 modern Coast Guard cutters which carry ASW weapons and sensors.

Some 137 of the 202 Navy escorts expected to be in the force at the end of FY 1975 will still be serviceable in the mid-1980s. By that time, three more DLGNs already funded, as well as 27 more DD-963s of the 30 now planned, will have been delivered to the

fleet, giving us 167 serviceable ships. Adding the currently planned 50 Patrol Frigates (PF) and the proposed two additional DLGNs, will bring the total to 219, of which 115 would have at least an austere area AAW capability (the PF will have one surface-to-air missile launcher). If we include the Coast Guard Cutters, which have an ASW capability equivalent to that planned for the PFs, the total becomes 231.

The proposed program would still leave us somewhat short of the overall force goal. To remedy this apparent short-fall and to maintain an orderly replacement program, the Navy has proposed two new ship construction programs. The nearer term program would be a new class of area air defense destroyer, now designated the DGX, which would replace the older DDG and DLG type ships as they reach retirement age beginning in the early 1980s. The longer term program involves the development of a new type, high-speed "surface effect" destroyer, now designated the DSX. This latter effort has not yet progressed beyond the stage of experimenting with small scale (100 ton) test craft, and the mission and configuration of the ship are still undefined. Both ships are far enough in the future that no attempt has been made to fix the size of the programs, and there is ample time for further review of surface combatant requirements before it will be necessary to do so.

DD-963

With regard to the DD-963 destroyers, the FY 1975 Budget includes $464 million which, together with the $198 million provided in FY 1974 for advance procurement, would complete the funding for the last seven ships at the initial target price established in the contract with Litton Industries. That contract, in addition to the customary provision for the escalation of wage rates and materials costs, also provides for a resetting of the target price on the basis of actual cost experience, but not to exceed the ceiling price. On October 29, 1973, the contractor submitted such a repricing proposal. Negotiations are expected to take about four months, and a firm agreement on the increase in cost should be reached by the Spring of 1974.

On the basis of the data available at the time the FY 1975 Budget was prepared, it appeared that the cost increase on the 30 ships could amount to about $260 million -- about $200 million for an increase in the target price, plus about $60 million in additional escalation charges resulting from the increase in the target price. The $200 million increase in target price, however, is still short of the $351 million difference between the initial total target price ($1,789 million) and the

total ceiling price ($2,140 million). Moreover, the contractor's repricing proposal is higher than our estimate. Hence, we cannot now preclude the possibility that the firm agreement on the adjustment of the target price may exceed this $200 million increase.

Escalation of wage rates and material costs must be added to both the target price and the ceiling price. Escalation computed on the basis of the initial target price is estimated at about $397 million; this, together with the $60 million of additional escalation resulting from the increase in the target price, would bring the total escalation cost to $457 million. Adding that amount to our estimate of the revised target price, i.e., $1,989 million, would bring the total cost of the Litton contract up to $2,446 million. Including the costs of other DD-963 related contracts (GFE, etc.) the total cost of the 30-ship program would be more than $3 billion.

Since an agreed figure on the Litton contract cost increase was not available at the time the FY 1975 Budget was prepared, and since the additional funds will not be required for obligation in FY 1975 in any event, we propose to finance any cost increase in the FY 1976 Budget.

Given the labor shortage at the Litton shipyard in Pascagoula, we cannot rule out the possibility that progress on the DD-963 program will be affected by the delays encountered with the LHA program, which was to have preceded it in construction. Work on the two programs is now proceeding simultaneously and the first LHA, as well as the first three DD-963s, are now expected to be delivered during FY 1975. The DD-963 lead ship was launched on November 10, 1973, and all 30 destroyers are now expected to be delivered by the end of FY 1978. In FY 1979, the last of the World War II destroyers are expected to be phased out of the active force.

DLGN

We now have five nuclear-powered frigates (DLGNs) under construction. Delivery of these ships, together with the cruiser and two frigates now in the fleet, will give us a total of eight nuclear-powered surface combatants -- enough for two nuclear-powered attack carrier task forces when none are in overhaul. Two DLGN-36 class ships funded in FY 1967 and FY 1968 are nearing completion; the first, CALIFORNIA, is now scheduled to be delivered to the fleet in FY 1974, and the second, SOUTH CAROLINA, in FY 1975. Delivery of the first three DLGN-38 class ships, which were funded in FY 1970-1972, will be delayed about seven months each because of a shortage of skilled labor in the shipyard. Based on the revised schedule, DLGN-38 is expected to be delivered in FY 1976, and DLGN-39 and 40 in FY 1977.

Last year the Congress added to our FY 1974 budget request $79 million for advance procurement of long leadtime items for two more DLGNs (DLGN-41 and 42). Notwithstanding the high cost of this class of ships, we have decided to go ahead with one in FY 1975 and protect the option to go ahead with the second in FY 1976. Accordingly, we have included in the FY 1975 Budget a total of $256 million -- $152 million to complete the funding of the first of these two ships (DLGN-41) for which $116 million ($46 million in FY 1970-71 and $70 million in FY 1974) has already been provided, $92 million in additional advance procurement funds for the second of these two ships (DLGN-42) for which $19 million ($10 million in FY 1970 and $9 million in FY 1974) has already been provided, and $12 million for escalation and post-delivery costs on the five DLGNs already under construction. Another $167 million would be required in FY 1976 to complete the funding of DLGN-42. Thus, the total funding would amount to at least $268 million for DLGN-41 and $278 million for DLGN-42.

Clearly, we will not be able to afford many surface combatant ships at these prices. Yet, as I noted earlier, we must in this decade phase out all of the remaining World War II surface combatants from the active forces. If we are to procure the large numbers of ships that will be needed to maintain a force of even 200-225 other surface combatants, it is evident that the bulk of them must come from the "low" side of the spectrum. It is for this reason that we want to press forward with the Patrol Frigate program.

PF

The PF will be much smaller and less costly to procure and operate than the DLGN-38 and DD-963 class ships currently under construction, but it will be designed to provide protection against both air and surface, as well as submarine attack. With a displacement of 3,500 tons, the ship will have a launcher and fire control system for surface-to-air and anti-ship (i.e., STANDARD and HARPOON) missiles, a 76mm gun, ASW torpedoes and accommodations for two LAMPS helicopters. The "design-to-cost" approach is being applied vigorously to the PF program, and the average unit procurement cost to completion for 50 ships, including both an allowance for inflation and outfitting and post-delivery costs, is now estimated at about $70 million (i.e., in then-year dollars). The production contract for the lead ship, funded in FY 1973, was recently awarded, and construction is scheduled to begin in late 1974. The FY 1975 Budget includes $437 million to finance the currently estimated cost of the first seven follow-on ships (excluding outfitting and post-delivery costs). Another 11 ships are scheduled for procurement in FY 1976, and the remaining

31 ships would be funded in the FY 1977-1979 period under the current plan. The PF lead ship would be delivered to the fleet by the end of FY 1977 and the follow-on ships during the 1978-1983 period.

While the PF program as currently planned will provide significant numbers of austere but capable ships for the modernization of the surface combatant fleet, we must also be prepared to replace the current DLG/DDG ships which will begin reaching retirement age in the early 1980s. The DGX, mentioned earlier, is being planned for this role. This ship would be equipped with the new AEGIS fleet air defense system which has a high power, long range phased array radar with a greatly improved target tracking and designating capability, and which uses the modified STANDARD missile. The Navy believes that engineering development of the AEGIS system will be sufficiently advanced by FY 1977 to warrant funding of the first DGX in that year. The preliminary design goal calls for a ship with a displacement of about 6,000 tons and an average cost per follow-on ship of about $125 million in FY 1973 dollars.

AEGIS

The AEGIS system, which has been in engineering development for four years, is now being oriented toward the new DGX. But because of its modular design, the system will be adaptable to other classes of ships as well. DGX is currently planned to have a one launcher system, but a two launcher version is still an option for ships of DLGN size. Another $67 million has been included in the FY 1975 Budget to continue development of the AEGIS system.

LAMPS

Another important system that is being acquired to improve the capabilities of our surface combatants is the Light Airborne Multi-Purpose System (LAMPS). This system involves a helicopter operating from a destroyer-type ship, together with the associated support, communication and acoustic data processing equipment aboard the ship. Its role is to provide surveillance and detection of hostile submarines and surface ships, localization and attack of detected submarines, and targeting information on surface ships. LAMPS could be used on all surface combatants which are equipped for helicopter operations.

LAMPS is being acquired in two phases. The MK I, which involves installation of shipboard equipment and conversion of H-2 helicopters already in the inventory to an SH-2 configuration,

became operational in FY 1972, and the bulk of the modifications have been funded. The MK III, the second phase, includes the development of improved avionics and shipboard systems to be used with a modified version of a current or new airframe. Three H-2 helicopters are being modified to test components and the integration of the new airborne and shipboard systems. After the airframe has been selected, now scheduled for late 1975, contracts will be let for the eight prototype LAMPS MK III helicopters and the related avionics and sensors for test and evaluation. A production decision on LAMPS MK III will not be needed until the late 1970s.

The FY 1975 Budget contains $34 million for LAMPS -- $14 million for the MK I modification program, $18 million to continue the MK III development effort, and $2.5 million for a LAMPS helicopter maintenance hangar.

SES

For the modernization of the surface combatant force in the more distant future, the Navy is pursuing the development of the Surface Effect Ship (SES). The SES, as you know, is a variation of the air cushion vehicle and will use rigid sidewalls integral to the hull structure to contain the air cushion. If the required technology can be successfully developed, it would make possible the construction of ocean-going ships with speeds of 80 knots or more.

The development effort to date has concentrated on testing of the two 100-ton test craft completed in 1972, the preliminary design of a 2000-ton prototype ocean-going ship, and the development of the key subsystems for the larger ship. The preliminary design studies, recently completed by several competing contractors, have examined the technical feasibility and cost of a 2000-ton SES and provided technical proposals for the development of such a ship.

The SES development program is admittedly a high risk venture from the technological point of view, but it could also have a high payoff in terms of combat effectiveness. The central problem is to develop an ocean-going version of the SES with sufficient range, payload capacity and sea-keeping capability to warrant its cost. The key technical areas which must be mastered are the air cushion seals, the waterjet inlets, and ride control systems, i.e., the subsystems unique to this type of craft.

Accordingly, the principal emphasis in the FY 1975 program will be on the further development of the technology required for

the principal subsystems, including additional testing of the 100-ton craft. When these steps are completed, we will again review the status of the program and decide on whether to undertake full scale development of the propulsors, transmissions, lift fans and seals, and complete the detailed design of the 2000-ton prototype. Pending that decision, which would be reflected in the FY 1976 Budget, we are requesting $58 million for the SES development program in FY 1975.

PHM

In addition to the major surface combatants, which I have just discussed, the Navy also operates a small number of "minor" combatants, i.e., patrol ships of less than 300 tons. These ships normally operate against surface combatant ships as well as other surface craft in the conduct of surveillance, screening and special missions in coastal areas, island waters, and inland or narrow seas. The force now consists of 14 Patrol Gunboats, all of which were built since 1965. In FY 1975 this force will be augmented by the first two of a new class of Patrol Hydrofoil Missile ships (PHM).

The PHM is a cooperative NATO development program in which the U.S. is sharing its hydrofoil technology with other NATO nations. A Memorandum of Understanding signed by Italy, the Federal Republic of Germany and the United States in November 1972 provides for a cooperative development and production effort.

Two U.S. lead ships are currently under construction, and we tentatively plan to build 28 more of these ships for our use. The FRG has indicated its intention to have its ten ships built in the U.S. Italy expects to have at least one ship built here, and may build additional ships in its own yards. A production agreement among the three participating governments is expected to be signed later this year.

These hydrofoil ships will be capable of both hullborne and foilborne propulsion, and the U.S. version will be equipped with the U.S. HARPOON anti-ship missile, an Italian designed rapid-fire gun, and a Dutch designed fire control system. The ships produced for the FRG and Italy are expected to be equipped with an anti-ship missile of a European design.

Out of a total of $108 million in the FY 1975 Budget for this program, some $16 million in RDT&E funds is for the completion of construction and initial operational test and evaluation of the two leadships and for the preparation of a development data package for use in competitive bidding for

the construction of the follow-on ships. The remaining $92 million is for construction of the first four follow-on ships for U.S. use. But before these follow-on ships are placed on contract, the results of the initial operational test and evaluation of the two leadships, now scheduled to be completed in early 1975, will be carefully reviewed together with analyses of mission requirements to ensure that the ship is ready for quantity production and to verify the quantity required.

HARPOON

One of the most urgent needs of our surface combatant force is an ability to cope effectively with the large and still growing Soviet anti-ship missile threat, particularly when operating beyond the range of our land-based airpower and unaccompanied by sea-based airpower. Under these conditions, Soviet surface ships armed with SSMs can greatly outrange our gun-equipped surface combatants. In response to this need, the Defense Department has undertaken several anti-ship missile development programs, including aircraft and submarine launched, as well as surface launched systems.

The principal Navy anti-ship missile program is the HARPOON. This missile is designed to be launched from all of our surface combatants (except the Patrol Gunboats), the S-3 and P-3 ASW aircraft, the Navy's A-6 and A-7 attack aircraft and, in a special encapsulated version, from all but the oldest SSNs. The status of the program was reviewed by the DSARC in May 1973, and the conclusion reached was that developmental progress had been excellent and that initiation of engineering development was fully warranted. Accordingly, the weapon system development contract was awarded in June 1973, and the program is proceeding satisfactorily. Test firings have verified the missile design concepts, and test vehicles have been launched successfully from a P-3 aircraft and from the ASROC launcher of a Destroyer Escort.

The next phase of the HARPOON program involves the fabrication and testing of actual prototype missiles. The June 1973 contract provides for 40 prototype missiles as well as command and launch systems for P-3 and S-3 aircraft and a variety of surface combatants. These equipments will be used for the development test and evaluation phase to be conducted by the contractor with the assistance of Navy personnel, beginning in early 1974.

The progress in this testing and evaluation effort will be reviewed in the summer of 1974, and if the results up to that point are satisfactory, we will initiate production of pilot line missiles. Accordingly, we have included in the FY 1975 Budget a

total of $136 million -- $58 million to continue the HARPOON development effort, and $78 million for the procurement of 150 pilot line missiles (58 for operational test and evaluation and 92 for the first operational deployment of HARPOON).

Encapsulated HARPOON

The encapsulated HARPOON is a HARPOON missile fitted with a launch capsule that would make it compatible with existing torpedo tubes. It would give our first line SSNs a longer range weapon, to complement their torpedoes, for use against surface ships. Prototype capsules are being developed and will be given structural and hydrodynamic tests during FY 1974. The Navy plans to complete system test and evaluation and to initiate pilot line production during FY 1975. The FY 1975 Budget includes about $13 million to continue this program -- $10 million for development and $3 million for procurement of the first 20 capsules. (The missiles themselves are included in the 58 HARPOONs being procured for OT&E.)

STANDARD SSM

The STANDARD SSM program was initiated in 1971 to provide an interim anti-ship missile capability until the HARPOON could be developed and deployed. The STANDARD SSM is operational in two versions, with a third now in development. The first version, the semi-active STANDARD missile (SM-1-MR) is now installed in six DEG and two Patrol Gunboats (PG) not previously missile-equipped. The second version, the STANDARD anti-radiation missile (ARM) is planned for installation on 12 DDGs and four PGs (two PGs already have this system installed). The third version, Active STANDARD with a radar seeker, is still in development. This version of the STANDARD missile will have a range capability beyond the ship radar horizon.

The range of the STANDARD semi-active missile is limited to the range of the ship's radar, since the missile's target must be illuminated by a ship radar. The STANDARD ARM and Active STANDARD, equipped with an anti-radiation homing capability and an active terminal seeker, respectively, eliminate the need for illumination of the target by a ship radar and thus permit engagement of targets beyond the ship radar horizon.

Unfortunately, Active STANDARD has encountered development delays and can no longer be regarded as an interim program. It is now concurrent with HARPOON, and under current schedules, could be introduced to the fleet only a few months before HARPOON. Development of the HARPOON, however, is not sufficiently advanced to

warrant cancellation of the Active STANDARD at this time. Accordingly, we are continuing development of the Active STANDARD missile, but only as a backup to HARPOON. Both programs will be carefully reviewed later this year, following completion of development testing of both systems, to assess the need for the continuation of Active STANDARD as a backup to HARPOON.

Meanwhile, FY 1974 funds will be utilized to initiate an 18-missile Active STANDARD test program -- eight for development test and evaluation and ten for operational test and evaluation. If the DT&E firings are successful, and if HARPOON experiences development delays, then we would proceed with the ten operational tests and authorize long leadtime procurement for the Active STANDARD missiles needed to equip and support 12 DDG/DEG ships. This number of ships would give the Navy a reasonable interim capability pending availability of HARPOON.

Since procurement of the Active STANDARD missiles could be started in FY 1975 if OT&E is successful, we have included $35 million in the FY 1975 Budget for this program -- $1 million to continue development and $34 million for the procurement of the 74 missiles needed to equip the 12 ships. Thus, if HARPOON development does slip, we will be in a position to start procurement of Active STANDARD without further delay.

CONDOR

The Navy is also developing a long-range, electro-optical air-to-surface missile, CONDOR, for use by attack aircraft against both land and sea targets. This stand off missile could significantly improve the capability of our aircraft carrier forces to bring opposing surface ships under attack.

Development of the basic missile is essentially complete, and pilot line production missiles are being procured with FY 1973-74 funds for operational test and evaluation of CONDOR. Engineering development and flight testing of the dual mode radar and electro-optical seeker version of CONDOR will be conducted in FY 1975-76. This version would have a night/all weather capability. To reduce unit cost, a non-secure data link is also under development. Operational test and evaluation of the dual mode CONDOR is now scheduled to be completed in FY 1976. The FY 1975 Budget includes about $30 million for this program -- $10 million for continued development and $20 million for the procurement of 35 pilot line missiles, the minimum number needed to keep the line going pending a decision on full scale production, now expected in early 1975.

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4. Attack Submarines

Attack submarines are potentially the most effective element of our varied ASW forces. Nuclear-powered attack submarines (SSNs), because they are uniquely able to operate covertly, can be used to establish effective ASW barriers in waters which are otherwise under the control of enemy surface and air forces, and in which it would be untenable for other types of U.S. ASW forces to operate. SSNs could also be used in open ocean search for opposing submarines, and some would be needed in the Mediterranean.

In addition to the foregoing missions, the Navy is also investigating the use of SSNs for escorting high-value surface ships such as carriers in open ocean areas, a role now being fulfilled primarily by surface ships. There are, however, several tactical employment problems to be resolved; for example, the difficulties involved in coordinating a "friendly" submarine with other types of ASW forces in wartime.

Given the prevailing fiscal constraints, we believe that a force of about 90 SSNs should be sufficient, together with other ASW forces, to support the essential requirements as we see them now. At the end of FY 1974 we will have 61 SSNs in the fleet and 27 funded but not yet delivered -- for a total of 88. Of the 23 688-class nuclear powered SSNs funded through FY 1974, none will have been delivered to the fleet by the end of that fiscal year. Indeed, all 11 SSNs funded in FY 1973-74 were placed on contract within the last six months and the last one is scheduled for delivery in FY 1981. Thus, the shipbuilders involved have a very large backlog ahead of them. The submarine building program proposed for FY 1975 and subsequent years takes this backlog into account and is designed to maintain at least the 90 SSN force level over the next several years.

SSN-688

Our current plan is to procure three 688 class SSNs in FY 1975 and five every two years thereafter for the remainder of the 1970s. That will not only support a force level of 90 SSNs but also permit the early retirement of some of the older SSNs. Looking to the longer term future, I believe we should examine the feasibility and desirability of building a new class of SSNs that would be smaller and less costly than the 688 class which is now costing us almost $200 million each.

The 688-class leadship, LOS ANGELES, was originally scheduled for commissioning in August of this year. This ship will be delayed about six months due to late delivery of contractor-furnished

equipment and a slower-than-planned buildup of the workforce at Newport News, which is also building a variety of surface ships. Thus, the first SSN-688 class ship is expected to be delivered in FY 1975, with an additional 22 to be delivered by the end of FY 1981. The $548 million included in the FY 1975 Budget would provide $503 million, which together with $78 million provided in FY 1974 for advance procurement, would complete the funding of the three submarines proposed for procurement in FY 1975, plus $45 million for escalation, outfitting and post-delivery costs on prior year programs.

MK-48 Torpedo

The effectiveness of our attack submarines is being significantly improved with the acquisition of the MK-48 Torpedo. This wire-guided, acoustic homing torpedo was designed primarily for use against submarines, but it also has a good capability against surface ships. Operational evaluation of the MK-48 was completed in 1972, and the system was finally approved for fleet use in October 1972.

Procurement of the MK-48 in quantity began in 1972, and some 500 torpedoes were funded in both FY 1973 and FY 1974. The FY 1975 Budget includes $155 million for the procurement of another 450 torpedoes, plus about $5 million for RDT&E. When these 450 torpedoes are delivered, a large part of the current Navy procurement objective will have been fulfilled.

AN/BQQ-5 Sonar

While the MK 48 torpedo will be the primary weapon of the attack submarine force, the new digital, multibeamed sonar system, with both hull mounted and towed acoustic arrays, will be the principal sensor. This system, designated the AN/BQQ-5, underwent extensive developmental testing during 1972 and 1973, and was approved for production last year. It is being installed in all of the new 688-class SSNs, and it will be backfitted into all PERMIT and STURGEON-class SSNs during regular overhauls commencing in FY 1976. The FY 1975 Budget includes a total of about $72 million for this program -- $16 million for development and $56 million to procure eight systems for the backfit program, plus one training unit. When the AN/BQQ-5 enters service in FY 1975 not only will current Soviet submarines be detectable at significantly greater ranges than currently possible, but also the advanced beam forming and display features of this equipment will allow our SSNs to substantially increase their search rates.

5. Undersea Surveillance Systems

The primary U.S. undersea surveillance system is now the fixed Sound Surveillance System (SOSUS), but mobile and deployable Towed Array Surveillance Systems (TASS) are also under development. In addition, the Navy is examining the potential usefulness in the future of different types of systems, such as the Moored Surveillance System (MSS), which would employ buoys, and the Suspended Array Surveillance System (SASS), which would use large, fixed, buoyantly suspended hydrophone arrays.

Towed arrays have also shown considerable potential as tactical sensors. In the tactical escort role the towed array would be used by surface combatants in much the same manner as current active sensors. The ships would have a processing capability on board to evaluate contacts, and LAMPS or other ASW aircraft would be used to prosecute the attack. Navy analyses and at-sea tests have shown that towed arrays should make a significant contribution to the ASW effectiveness of surface combatants.

The Navy plans to award a contract and start design and fabrication of an engineering development model of the surveillance TASS in FY 1975 and subject this model to at-sea test and evaluation in FY 1976. Work would also be started in FY 1975 on an advanced development model of the Escort TASS.

A total of $137 million has been included in the FY 1975 Budget for the SOSUS and the TASS programs -- $116 million for SOSUS improvements and $21 million for the development and test of the two versions of TASS.

6. Amphibious Lift and Mine Countermeasure Forces

The current amphibious lift force objective is to provide a sufficient number of modern 20 knot ships to transport simultaneously the assault elements of 1 1/3 Marine Amphibious Forces (MAFs), i.e., 1 1/3 Marine division/wing teams together with their unit equipment (excluding fixed-wing aircraft which are transported on attack carriers or flown to the theater) and initial stocks of supplies. This force would enable us to conduct a division-size amphibious assault in a major combat theater (e.g., on the northern or southern flank of NATO), while at the same time retaining limited amphibious assault capability to cope with a minor contingency elsewhere.

The present amphibious force of 65 ships has sufficient capacity to lift just over one MAF, but is short of helicopter platform ships. We are now able to maintain three battalion landing team amphibious

forces (corresponding to about 1/9 of a MAF) deployed forward continuously, one without helicopters because of the shortage of helicopter decks. A fourth unit, usually without helicopters, is deployed on an intermittent basis in the Caribbean.

When the five large general purpose Amphibious Assault Ships (LHAs) now under construction are delivered to the fleet, the remaining older, less efficient, ships will be retired, the helicopter platform shortage will be eliminated, and the overall lift capacity will be increased to 1 1/3 MAFs (including ships in overhaul). At that time (late FY 1977) the amphibious lift would consist of 66 ships, all with speeds of about 20 knots. With this force, we will be able to maintain four battalion-size amphibious forces, all with major helicopter ships deployed forward continuously. However, even with the LHAs, it would be necessary to transfer ships from the Pacific to the Atlantic to be able to mount a division-size amphibious assault in the NATO area.

LHA

As you know, the LHA program has experienced numerous delays and contractual disputes. The first LHA was finally launched in December 1973 and is expected to be delivered to the fleet in March 1975, a delay of about two years from the original contract delivery schedule. Two more ships are scheduled to be delivered in each of the next two fiscal years, the last about 33 months beyond the originally scheduled date.

The current dispute concerns the contractor's (Litton Industries) request for an equitable adjustment of $271 million in the contract price, which was submitted in March 1972. The Navy found this request to be unsubstantiated, and on 28 February 1973 the Navy Contracting Officer issued a unilateral decision setting the new target price at ceiling. Litton thereupon filed an appeal with the Armed Services Board of Contract Appeals, and the Navy subsequently filed its response. Hearings before the Board are yet to be scheduled.

On the basis of the Contracting Officer's decision, the total cost to the Government of the five LHAs will amount to about $1,145 million. Of that amount, the Congress has provided about $1,127 million, leaving about $18 million in outfitting, post-delivery and escalation charges to be funded as the ships are delivered.

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The active mine countermeasure forces have undergone substantial reductions in recent years and further reductions are planned in the FY 1974-75 period as additional ships are transferred to the reserve forces. In part, this reduction has been offset by the greater use of mine countermeasures helicopters, of which there are now 21 specially equipped RH-53Ds in the force. These 21 helicopters, alone, could support a MAF-size amphibious assault against a medium mine threat, assuming several days' time to clear the area.

7. Underway Replenishment and Fleet Support Ships

The Navy operates a total of about 120 underway replenishment (UNREP) ships, large tenders, and other fleet support ships such as salvage ships, tugs, and submarine rescue vessels. These ships provide wartime underway logistics support and mobile, forward area maintenance and repair facilities for deployed naval forces. In peacetime, support ships deploy to the Mediterranean and Western Pacific to support the Sixth and Seventh Fleets. Additional support ships can be deployed from the United States to sustain increased combatant ship activity in these or other areas during a crisis or in wartime.

Support ship force levels reflect requirements for both wartime and peacetime support of naval forces. The wartime requirements for UNREP ships are derived from estimates of the number of naval forces to be supported simultaneously, their expected location and distance from logistic bases, consumption rates for ordnance, fuel, stores, and repair parts, and the projected duration of the conflict. Peacetime requirements are derived from calculations of what is needed to support a smaller number of deployed ships operating in more widely dispersed areas.

Planned UNREP ship forces will provide a wartime capability to support deployed carrier and amphibious task groups in up to about four or five locations simultaneously. Denial of foreign bases, however, would reduce the number of simultaneous fleet operating areas which could be supported with our programmed UNREP forces. For example, a requirement to conduct sustained wartime operations, including carrier operations and a division-size amphibious assault, without foreign bases in an area such as the Eastern Mediterranean would force a drawdown in combatant ship deployments elsewhere because of the increase in UNREP ship cycling distances involved.

Forward deployments of UNREP ships in peacetime generally include about 16 to 18 ships. With the continuing decrease in the size of the UNREP force, however, it is becoming increasingly

difficult to sustain this deployment without undue personnel hardships. Accordingly, the Navy plans to homeport a few support units overseas and operate others through the Military Sealift Command (MSC). MSC-operated ships are manned almost wholly by U.S. civil service crews. The ships remain abroad, even for overhauls, and the crews are rotated annually by air. Consequently, MSC-operated ships can achieve greater time on-station and, hence, higher utilization rates in peacetime than active Navy-operated ships. Five Fleet Oilers and one Store Ship would be operated by MSC in FY 1975, and three more Oilers in FY 1976, for a total of nine UNREP ships under MSC control.

Tender force level goals are derived from planned wartime roles based on estimates of the number and location of ships to be deployed, the estimated volume of repair work needed, and the availability of overseas bases. Current forces can provide sustained maintenance and limited battle damage repair capability for most deployed surface ship forces in wartime, assuming concurrent availability of U.S.-operated ship repair facilities in either Japan or the Philippines. Peacetime forward deployment of tenders is generally limited to two ships in each ocean, which can easily be maintained within planned force levels.

Force levels for minor fleet support ships are derived from estimates of the likelihood of major damage to combatants requiring salvage or towing in a forward area, routine towing and other tug duties, and other service support requirements. Planned forces can support early deployment of several tug-type vessels for salvage support in a contingency. In peacetime, forward deployments are limited largely to a few submarine rescue vessels, ocean tugs and salvage ships, which can be accommodated within the planned force. As in the case of the UNREP force, the Navy plans to operate more of the minor fleet support ships in the MSC. A total of 13 ships will be MSC-operated by the end of FY 1976, and five more will be added from new construction by the end of FY 1979.

Because of their lower priority, the large scale modernization of the support ship forces has been repeatedly deferred and now lags far behind modernization of the combatant ship forces. Consequently, there will still be more than 50 World War II-constructed support ships in the active fleet at the end of FY 1977, the year in which the last of the ships now under construction or funded is delivered to the fleet. Clearly, a major effort to modernize the support ship force can no longer be deferred.

AE, AFS, AO, AD and ATF

Accordingly, we propose to undertake in the FY 1975-1979 period a substantial ship building program in this area. A total of 32

ships would be built, at a currently estimated cost of about $2 billion. The program would include ten Fleet Oilers (AO), five Destroyer Tenders (AD), two Submarine Tenders (AS), two Ammunition Ships (AE), three Combat Stores Ships (AFS), and ten Fleet Ocean Tugs (ATF). These ships would be delivered to the fleet between FY 1978 and FY 1983, leaving about 25 World War II-constructed ships still in the active fleet at the end of FY 1983. A total of $209 million is included in the FY 1975 Budget to procure the first three ships -- an AD, an AO, and an ATF.

D. TACTICAL AIR FORCES

The general purpose air forces -- comprising the Navy carrier air wings, the Marine Corps aircraft wings, and the tactical air units of the Air Force -- are the most expensive component of the general purpose forces in terms of investment costs. In contrast to the land forces, which are heavy in personnel, the tactical air forces are heavy in equipment. And, because of the incessant growth in complexity, as well as in capability, each new generation of aircraft in the past has cost several times as much as the one it replaces, even after an appropriate adjustment is made for inflation. This growth in the cost per unit has, in turn, placed increasingly severe constraints on the number of new aircraft which could be procured each year.

But quantity as well as sophistication is essential if our general purpose air forces are to be able to perform successfully their assigned missions. No matter how effective a particular tactical aircraft may be, a certain minimum number is needed to cover a battlefield, a front or a combat theater; or to equip an aircraft carrier force. In view of the growth in the size and quality of the Soviet tactical air forces during the past few years and the further growth in capabilities projected over the next few years, I believe we stand in danger of falling below that minimum quantitative level if present trends are allowed to continue unabated. Consequently, here again we must apply the principle of the "high-low" mix, and the programs proposed in this area for FY 1975 reflect that application.

I noted in my discussion of the land forces that one conclusion drawn from the recent conflict in the Middle East is that major improvements in our field army air defense capabilities are required. Another conclusion we have drawn is that the defense suppression capabilities of our tactical air forces must be further improved. We learned that lesson earlier in Vietnam and a variety of actions, both technical and tactical, were taken to improve our capabilities in this regard. But the intensity and effectiveness displayed by the ground air defenses in the Middle East conflict impressed upon us even more compellingly

the need to take still further actions to enhance the defense-suppression capabilities of our tactical forces.

Our tactical air forces not only represent a great investment of national resources, they are also a most essential element in our national defense strategy. We count on them to offset in part possible numerical inferiorities in land forces as compared to potential adversaries. And, particularly in the NATO-Warsaw Pact context, where we bear in relation to our allies a proportionately greater responsibility for tactical air, our tactical air forces serve as an "equalizer". Hence, we must ensure their continuing ability to perform their mission effectively.

That objective can be achieved, we believe, by providing our tactical air forces with improved self-protection radar warning (RW) equipment, tactical electronic warfare (EW) support forces, and a greater number and variety of improved defense-suppression weapons and devices. Both in Vietnam and in the Middle East, it has been demonstrated that tactical air forces which are provided with this type of support can successfully accomplish their mission even in the face of heavy, sophisticated air defenses. Accordingly, special attention is given to this need in the FY 1974 Supplemental and the FY 1975 Budget.

1. Force Structure

The Navy will operate 15 aircraft carriers in FY 1975 with a total of 14 air wings. This arrangement is temporary, since the number of carriers is scheduled to decline to 12 later in this decade. At that time the number of wings will equal the number of carriers. Each carrier wing is normally assigned three attack squadrons (one medium and two light) and two fighter squadrons. The wings associated with the new NIMITZ-class carriers, however, will be provided an extra light attack squadron. When the last two HANCOCK-class carriers are retired, all the remaining A-4 and F-8 squadrons will be phased out of the active forces.

By end FY 1974 the three Marine Corps wings will consist of ten attack squadrons (five A-4s and five A-6s), three HARRIER (AV-8A) squadrons, and 12 fighter squadrons (all F-4s), for a total of 25 squadrons. This structure will be continued through FY 1975, except that one squadron of F-4s will be replaced by the first squadron of F-14s.

The Navy and Marine Corps reserve, which at the end of FY 1974 will have a total of 18 squadrons (11 attack and 7 fighter), will be reduced to 17 squadrons in FY 1975 (11 attack and 6 fighter). These units, however, will be modernized over the next several years as F-4s and A-7s are released from the active forces.

The active Air Force at the end of FY 1975 will have a total of 69 squadrons in 22 wings. We propose to modernize substantially the equipping of this force during the next several years. All of the A-7 squadrons would be phased out and replaced by A-10s, and about half of the F-4 squadrons would be phased out and replaced by F-15s.

The A-7s and F-4s released from the active Air Force would be used to modernize the Air Force reserve components. The Air National Guard at the end of FY 1975 will have a total of 27 tactical fighter and attack squadrons, 17 of which will be F-100s. All of these F-100s will eventually be replaced with A-7s and F-4s. The Air Force Reserve, which now has four A-37 and three F-105 squadrons for a total of seven squadrons, would be modernized by replacing the F-105s with F-4s.

In addition to the attack and fighter aircraft discussed above, the Navy, Marine Corps and Air Force also have a number of specialized electronic countermeasure aircraft which are specifically designed for defense suppression. The principal aircraft in this category is the EA-6. The Navy now has about 30 EA-6Bs and the Marine Corps has 23 EA-6As. The Navy's EA-6B inventory will be built up during the next few years to equip fully the 12-carrier force.

2. Acquisition Programs

As shown on the table beginning on the following page, the FY 1975 Budget provides for both the near term and long term modernization of the general purpose air forces.

F-14

The largest single aircraft acquisition program for the Navy and Marine Corps is the F-14. We now plan to buy a total of 334 F-14s, enough to equip 12 squadrons for the Navy carrier air wings and four squadrons for the Marine Corps wings.

The F-14, as you know, is a two-place, twin engine, variable geometry, supersonic high performance carrier-based aircraft that has been designed particularly for fleet air defense. It has an all-weather capability to deliver the long range PHOENIX and medium range SPARROW air-to-air missiles, as well as a visual attack capability using an M-61 gun and the SIDEWINDER short range missile for close-in, air-to-air combat. Its primary role in fleet air defense is to destroy enemy bombers carrying air-to-surface missiles (ASMs) before the ASMs can be launched. Hence, the F-14/PHOENIX system's ability to operate at extended ranges from an aircraft carrier is crucial to successful fleet defense in the face of a significant air-to-surface missile threat at sea.

Acquisition Costs of Major Tactical Air Forces Modernization and Improvement Programs [1]

(Dollars in Millions)

	FY 1973 Actual Funding	FY 1974 Planned Funding [2]	FY 1975 Proposed Funding
Navy and Marine Corps Aircraft			
Continued Development and Procurement of F-14 Multi-Mission Fighter	628	737	756
Acquisition of PHOENIX Missiles	99	100	100
Development of a New Austere Fighter, the VFX	-	-	34
Acquisition and Modification of A-6 Attack Aircraft	241	184	199
Acquisition of A-7E Attack Aircraft	181	150	159
Procurement of A-4M Aircraft	2	116 (58)	67
Procurement of AV-8A HARRIER Aircraft	125	56	-
Development of Navy V/STOL Fighter	11	24	19
Acquisition of EA-6B Aircraft	157	124	129
Acquisition of E-2C Fleet Early-Warning Aircraft	175	160	119
Procurement of F-5E Aircraft	-	(10)	-
Air Force Aircraft			
Continued Development/Procurement of F-15 Air Superiority Fighter	908	1,129	1,076
Development of Lightweight Fighter Prototypes (Including Engine)	43	47	23
Development of Air Combat Fighter	-	-	36

Acquisition Costs of Major Tactical Air Forces Modernization and Improvement Programs (Cont'd)

(Dollars in Millions)

	FY 1973 Actual Funding	FY 1974 Planned Funding	FY 1975 Proposed Funding
Development and Advanced Procurement of A-10 Close-Air Support Aircraft	48	107	268
Acquisition of MAVERICK Missiles	79	61	88
Development and Procurement of E-3A (AWACS)	194	163	770
Development of EF-111 Jamming System	3	15	37

1/ Includes costs of RDT&E, procurement of the system and initial spares, and directly related military construction.

2/ Figures in parentheses are the amounts included in the FY 1974 Supplemental.

Procurement of the F-14 began in FY 1971 and the first two squadrons entered the forces in FY 1973. The program, from a technical point of view, is progressing satisfactorily, but the financial aspects have caused great difficulties.

In March 1973, however, Grumman (the prime contractor), finally agreed to build the 48 aircraft in Lot V (FY 1973 funding) under the terms of the original contract (i.e., at the contract ceiling price) thus bringing the total number of aircraft under the contract to 134. In September 1973, the Navy and Grumman successfully completed negotiations on all outstanding issues relating to Lots IV and V (FY 1972-73 procurements) and signed a contract for the procurement of the next 50 aircraft funded in FY 1974. An equitable adjustment of $18.3 million was allowed on Lot IV to cover both a six-month slip in the commencement of that Lot due to the effects of the crash of aircraft No. 1 and to provide for some additional tooling to increase production from four to six aircraft per month in order to recover the schedule. No adjustments were made on Lot V. The new airframe contract for the 50 aircraft funded in FY 1974 is a fixed-price incentive instrument with a target cost of $281.5 million, a target price of $306.5 million and a ceiling price of $325 million.

The FY 1975 Budget includes a total of $756 million for the F-14 program -- $12 million for R&D, $674 million for the procurement of the next increment of 50 aircraft, and $70 million for advance procurement. The production rate will be built up to six per month as previously planned, but two per month (for a period of 15 months) will be produced for the Iranian Air Force. The Government of Iran, as you know, placed an order for 30 F-14s and associated spares, missiles, etc. Twenty-four of these aircraft will be delivered to Iran in FY 1976 and the remaining six in FY 1977.

PHOENIX

The PHOENIX long range air-to-air missile program is proceeding on schedule. The first units are now operational and about $100 million is included in the FY 1975 Budget for the procurement of another 340 missiles and initial spares.

VFX

While some minimum number of F-14As is clearly essential for fleet air defense, we cannot afford, nor do we need, an all F-14A carrier or Marine Corps fighter force. Consequently, the Navy is now studying the characteristics of a new austere, lower cost fighter (designated the VFX) to serve as the eventual replacement for the remaining F-4s, in both the Navy carrier and Marine Corps

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air wings. We believe this practical application of the high/low concept should be pursued as expeditiously as possible. Accordingly, $34 million is included in the FY 1975 Budget to provide the option to commence engineering development of the VFX.

A-6E

A total of $199 million is included in the FY 1975 Budget for the A-6E program -- $10 million for R&D, $130 million for the procurement of 12 more A-6Es for the Navy, $2 million for advance procurement, $57 million for the modification of 48 A-6As to the A-6E configuration and $.5 million for military construction. It is currently planned to complete the conversion of all Navy and Marine Corps A-6 squadrons to the A-6E configuration by FY 1978. Beginning in FY 1979, the Navy A-6E squadrons would be increased from the current nine UE to 12 UE per squadron. The Marine Corps A-6 squadrons already have 12 UE aircraft each.

A-7E

The FY 1975 Budget also includes about $159 million for the A-7E program -- $8 million for R&D, $147 million for another 34 A-7Es and $4 million for advance procurement. During the next five years, all of the remaining A-7A and Bs in the active Navy units will be replaced with A-7Es and the older aircraft transferred to the Navy Reserve to modernize those forces.

A-4M

The $58 million requested in the FY 1974 Supplemental for Marine Corps A-4Ms would provide for the replacement of aircraft furnished to Israel. The $67 million requested in the FY 1975 Budget would provide $58 million for the procurement of 24 more A-4Ms for the Marine Corps plus $2 million for advanced procurement and about $7 million for RDT&E. All of the remaining A-4Es and Fs in the active Marine Corps will be replaced by the much more effective A-4M, and the A-4Es and Fs to be transferred to the Marine Corps Reserve will replace the still older A-4Cs which were produced in the 1958-62 period.

New V/STOL Fighter

The $56 million provided in FY 1974 will complete the funding of AV-8A (HARRIER) V/STOL fighter procurement for the three Marine Corps squadrons. The Navy, however, is now working on an advanced V/STOL technology development program consisting of three separate aircraft designs: the XFV12A prototype, with the thrust-augmented wing (TAW); a design with the lift-plus-lift cruise engine; and

the Advanced Harrier. Because of the TAW's great potential, the Navy has given it first priority among the three designs, pending successful completion of development milestones in 1974. The first and most critical milestone, the thrust augmentation demonstration, is scheduled in March 1974. A full-scale lift demonstration is planned by the end of 1974. If successfully developed, this aircraft would be the prime candidate for use aboard the Sea Control Ship. The FY 1975 Budget includes $19 million to continue this development effort.

EA-6B

As noted earlier, the Navy is still in the process of acquiring sufficient EA-6B electronic countermeasure aircraft to equip the 12-carrier force. The $129 million included in the FY 1975 Budget would provide $6 million for R&D and $123 million for the procurement of an additional six aircraft.

E-2C

Last year the Navy planned to acquire a total of 30 E-2Cs, which together with the earlier model E-2Bs, would provide one squadron (4 UE aircraft) of Fleet Early Warning Aircraft for each of the planned 12 carrier air wings. The funds requested in the FY 1974 Budget were to provide for the procurement of the last nine of the thirty aircraft.

A recent review of the fleet early warning capabilities has persuaded me that it would be desirable to acquire at least six more E-2Cs. An inventory of 36 E-2C aircraft would permit the formation of a sixth squadron. This, in turn, would enable the Navy to maintain two squadrons forward (one each with the 6th and 7th Fleets) at all times on a normal one-in-three rotation cycle. The E-2C is markedly superior to the E-2B, particularly in a high threat environment and in overland target detection.

A total of about $119 million is included in the FY 1975 Budget for the procurement of the six E-2Cs.

F-5E

The $10 million included in the FY 1974 Supplemental for the F-5E would provide five aircraft for the Navy Fighter Weapons School to replace five A-4s furnished to Israel. These F-5Es would be used in place of A-4s to simulate the MIG-21 in the training of Navy fighter crews, a purpose for which they are much more suitable than the A-4s.

F-15

The F-15 is the first fighter in many years which has been specifically designed to excel in air-to-air combat. It will be armed with a new medium range air-to-air missile system and an improved close-in air-to-air missile system, as well as the proven M-61 20 mm gun, and it should be superior to any fighter the Soviet Union is likely to deploy in the next 10-15 years.

Flight testing of the F-15 is proceeding satisfactorily and the aircraft has met all of its performance milestones on or ahead of schedule with the exception of engine qualification. The problem with the engine encountered last year has been resolved and the qualification test is now complete. On the basis of the test results to date, we believe the aircraft is technically sound and will be able to perform in full the mission for which it has been designed.

We now plan to buy a total of 729 F-15s. The first procurement of 30 F-15s was funded in FY 1973. Another 62 aircraft were funded in FY 1974. The FY 1975 Budget includes a total of $1,076 million -- $183 million for R&D and $893 million for the procurement of a third increment of 72 aircraft. The remaining 565 aircraft are scheduled to be procured in the FY 1976-80 period.

This schedule represents a stretchout of the procurement program planned last year. There are a number of reasons why this action would be desirable.

First, the revised production rate will better match the aircraft to the availability of its new air-to-air weapons.

Second, a slower production build-up will preserve options on the total quantity of F-15s to be procured, and allow a more orderly introduction of improved versions of the aircraft. Given the interest of several allies in this aircraft, keeping the production line open beyond the originally planned date may well result in some foreign orders for the F-15.

Third, while lower unit cost can be achieved at higher production rates, the cost of slowing the F-15 production build-up will be more than matched by the higher force and readiness levels which could be achieved during FY 1975 and 1976 through the use of funds that would otherwise have to be expended for a higher rate of F-15 production in those years. In sum, we believe the trade off between a faster rate of F-15 procurement and the retention of near term combat capabilities should be resolved in favor of the latter.

The FY 1973 and 1974 procurements will permit the Air Force to form a training squadron and the first two operational F-15 squadrons in FY 1976.

Lightweight Fighters and Air Combat Fighters

As in the case of the Navy, we cannot afford, and we do not need, an all high-capability fighter force in the Air Force. It was to meet the need for a fighter at the low-cost end of the high/low mix that the "lightweight" fighter prototype development program was initiated in FY 1972. This program involves prototype development by two contractors of two different experimental versions of a low-cost, visual combat fighter aircraft incorporating new, advanced aircraft design concepts. At the same time, the prototype development of a new advanced technology, high thrust-to-weight turbojet engine was also initiated.

The first of these "lightweight" prototype fighters (General Dynamics' YF-16) was rolled out last December and flew in January; the second (Northrop's YF-17) is expected to fly in April of this year. These experimental prototype fighters (two from each contractor) will be put through a comprehensive 12-month flight test program during which we intend to assess the combat value of the many technological innovations incorporated in these aircraft.

On the basis of the work already accomplished in the experimental prototype lightweight fighter program, we believe that the development of a new low-cost, high performance fighter which can perform tactical air missions under visual flight conditions is entirely practical and should be vigorously pursued. Accordingly, we have included in the FY 1975 Budget $23 million ($13 for the aircraft and $10 million for the engine) to proceed with the experimental prototype lightweight fighter program on an accelerated basis, and $36 million to start the development of a new Air Combat Fighter.

A-10

The A-10 represents another major application of the high/low mix concept. It incorporates in a relatively low-cost airframe all of the principal characteristics that are essential for close air support -- maneuverability, responsiveness, lethality, survivability, long loiter time and simplicity. Armed with the high velocity 30mm GAU-8 gun, the MAVERICK air-to-surface missile and other ordnance, the A-10 promises to be very effective against tanks and other armored vehicles. Consequently, it would be particularly valuable in Europe, since the Warsaw Pact ground forces are very heavy in armor.

Testing of the two Fairchild prototype aircraft and the GAU-8 30mm gun is continuing. While Fairchild is now fabricating six full-scale development models of the A-10, the first of these is not expected to be delivered until December 1974. Furthermore, the GAU-8 gun, which is a key element of the A-10's armament, will not be ready for full-scale testing until late this year. Hence, the fly-off between the A-10 and the A-7, directed by the Congress last year, will have to be conducted with one of the two available prototype aircraft, which is not fully representative of the A-10 we propose to produce, and which will not have the GAU-8 gun.

By the end of this year, however, the GAU-8 gun/aircraft compatibility tests and two back-to-back 150-hour engine qualification tests should be completed. Based on the results of these tests and the A-10/A-7 fly-off, a decision will be made on the production of the A-10. Pending this production decision, we have included a total of about $268 million in the FY 1975 Budget for the A-10 program -- about $94 million to continue development and to provide for the fabrication of four RDT&E aircraft, $145 million for the procurement of the first 26 production aircraft, and $29 million for advance procurement. We tentatively plan to buy a total of 729 A-10s to equip the planned active and reserve component squadrons.

MAVERICK

The MAVERICK air-to-ground missile promises to be one of the most cost-effective air-launched weapons in our inventory, particularly against such small, hard, moving targets as tanks and armored personnel carriers. The MAVERICK's performance in the recent Middle East conflict was quite impressive, although the conditions there were much more favorable for such electro-optical weapons than would be the case in Europe. The FY 1975 Budget includes about $88 million for the procurement of another 6,000 MAVERICK missiles for the Air Force.

AWACS

Defense planners have been convinced for some time that future demands on our surveillance, warning and control capabilities in support of tactical air operations, particularly in the context of a European conflict, will be quite severe. This conviction was reinforced by the complexities of the surveillance, warning and control function in both the Southeast Asia and the Middle East conflicts.

Recent flight demonstrations in Europe, as well as the U.S., have confirmed the high potential of AWACS to meet this requirement for long-range airborne surveillance and warning, and positive and

precise control of forces engaged in the full range of tactical air operations. We believe AWACS would also be capable of supporting ground, naval and amphibious operations by providing commanders with an integrated air-ground situation summary in real time. Finally, AWACS could assist in the NORAD air defense mission, since some of these aircraft would normally be based in CONUS as part of our general purpose forces mobile air defense pool.

Because of its potential effectiveness in the tactical role, as well as its inherent flexibility and mobility, we propose to continue AWACS engineering development and procure the first 12 aircraft in FY 1975. The final production decision would be made in December 1974, and would be based on the successful completion of the System Integration Demonstration flight tests, the Airborne Integration Laboratory and Software Development Laboratory testing, and studies of additional command, control and communications equipment needed to support the tactical mission. The FY 1975 Budget includes a total of about $770 million for the E-3A program -- about $220 million for R&D and $550 million for procurement.

We tentatively plan to buy a total of 34 aircraft, including the three test aircraft already available, which will be reconfigured as operational AWACS. Twelve more aircraft would be bought in FY 1976 and the last seven aircraft in FY 1977. In contrast to the first 12 (Block I) aircraft, the Block II aircraft would be fully configured for the tactical mission. Current planning for the Block II buy includes identifying joint Service requirements to assist in determining alternative equipment configurations and evaluating the impact of these alternatives for long lead time funding. We are also working with our NATO Allies, who have expressed interest in AWACS as a common system to improve NATO's air defense and command and control capabilities.

EF-111

The current inventory of tactical aircraft with the primary mission of defense suppression consists of two squadrons of F-105G Wild Weasel aircraft, two squadrons of F-4C Wild Weasel aircraft, and 35 EA-6Bs. The F-105Gs are scheduled to be replaced with advanced F-4 Wild Weasel aircraft in the late 1970s, and, as noted earlier, the authorized inventory of EA-6Bs is scheduled to increase.

The F-105G and F-4C Wild Weasel systems were developed using off-the-shelf hardware as a quick-reaction counter to the surface-to-air missile (SAM) threat in North Vietnam. Combat experience in that conflict, however, disclosed a number of

deficiencies which the advanced F-4 Wild Weasel system, now under development, is intended to correct. But as the Middle East conflict demonstrated, our tactical air forces should be prepared to operate in a very intense air defense environment. To be able to do so effectively, the Air Force needs an airborne jammer with a much greater capacity than can be fitted into an F-4. The EF-111A, which would be an Air Force F-111A equipped with ALQ-99 jammers of the type used in the Navy EA-6B, is intended to fulfill that requirement. The $37 million included in the FY 1975 Budget for this program would permit a continuation of the prototype development effort now in progress.

Defense Suppression Weapons and Equipment

In addition to specialized electronic countermeasure aircraft, defense suppression involves a wide variety of weapons and equipment, and these also deserve greater emphasis than they have been receiving. Accordingly, funds are included in both the FY 1974 Supplemental and the FY 1975 Budget to augment our capabilities in these areas.

The following are some examples of the increases that are provided in the FY 1974 Supplemental:

-- $31 million to procure the Advanced Location Strike System (ALSS). The ALSS is an airborne/ground-based, all-weather system designed to locate air defense electronic emissions at extended ranges and to guide an air-to-ground weapon against the emitters. It uses time-of-arrival (TOA) techniques for emitter location and distance-measuring equipment (DME) for guidance of air-to-ground weapons.

-- $3 million to improve the capability of ALSS to locate and identify electronic emitters more rapidly, to control simultaneously a greater number of DME guided weapons, and to make it more mobile.

-- $75 million for new pods and modification of existing pods to improve the capability of our tactical aircraft to cope with the Soviet tactical air defense threat.

-- $5 million to procure additional chaff dispensers for our tactical aircraft. As the Israeli Air Force has demonstrated, chaff, if used properly and in sufficient quantities, is an effective means of aircraft self-protection even against high density

SAM defenses. Chaff provides false targets to the SAMs and masks the aircraft from the SAM radars.

-- $20 million to procure Radar Homing and Warning (RHAW) receivers for Air Force F/RF-4s, A-7s and F-111s. These receivers will provide real time warning of air defense electronic emissions directed at the aircraft, thereby enabling the pilot to initiate the proper countermeasures to degrade the air defenses.

-- $23 million to procure 800 additional SHRIKE (AGM-45A) missiles. The SHRIKE is the major air-launched, anti-radiation missile (ARM) in our current inventory. It can be carried by all Navy attack aircraft and most F-4 and F-105 Air Force aircraft.

-- $2 million to accelerate development of an infrared countermeasures system to protect Navy tactical aircraft from SA-7 type weapons.

-- $4 million to accelerate development of the High-speed Anti-Radiation Missile (HARM), a follow-on to the current ARM.

-- $18 million to accelerate the development of guided glide bombs, initiate development of a long-range stand-off defense-suppression missile, and make other improvements in defense-suppression weapons.

Among the defense-suppression efforts included in the FY 1975 Budget are the following:

-- $25 million to develop a Precision Emitter Location and Strike System (PELSS) based on Time of Arrival/Distance Measuring Equipment (TOA/DME) techniques. This system may be a modified ALSS or a new PELSS, depending on the cost effectiveness of possible improvements.

-- $9 million to continue development of the Modular Guided Glide Bomb (MGGB-II). The MGGB-II is currently being developed as an area stand-off weapon for use with ground and airborne locator and strike systems.

-- $18 million to continue development of HARM.

Passive Airbase Defense

Recent JCS and Air Force analyses have shown that hardened aircraft shelters that can completely protect aircraft from strafing, and also provide greatly improved survivability from other conventional munitions, constitute one of the most effective passive defensive measures we could take. The availability of such shelters for all of NATO's tactical aircraft could have a major influence on the outcome of a conventional war in Europe.

Shelters have been provided for all in-place and dual-based USAF aircraft in the NATO Central Region. At the urging of the U.S., the NATO Ministers approved in December 1973 the expansion of SACEUR's protection program to include 70 percent of U.S. rapid reaction earmarked aircraft scheduled for deployment to Europe. Even so, a sizeable number of the U.S. aircraft planned for later deployments to Europe would remain unsheltered.

To remedy this situation, we now propose to undertake a five-year program which would provide additional hangarettes needed to shelter the entire USAF force of fighter, attack and reconnaissance aircraft planned to be deployed to NATO. Also included in this program would be other passive defense measures, such as dispersal and camouflaging, and protected POL storage areas, maintenance shops and similar essential facilities. Some $65 million is included in the FY 1975 Budget for the first increment of this program. As a necessary complement to this program, we will also continue our efforts to encourage our NATO allies to fund adequate shelters for all of their tactical aircraft.

E. MOBILITY FORCES

I noted earlier that one of the most urgent improvements needed in our general purpose force posture is a major increase in our strategic airlift capability. An increase in our total mobilizable strategic airlift capacity is needed to enhance our ability to move large-scale reinforcements to Europe during the critical early weeks of a NATO-Warsaw Pact conflict. An increase in our active strategic airlift capacity is needed to enhance our ability to resupply an ally promptly in an emergency, without resort to a mobilization of the reserve forces. These enhanced capabilities, I am convinced, will greatly strengthen the deterrent to aggression against ourselves and our allies, in Europe and elsewhere; and they will also enable NATO to accept with greater confidence a NATO-Warsaw Pact mutual and balanced force reduction agreement which involves a partial withdrawal of both U.S. and Soviet forces from the central region of Europe.

In addition to the strategic airlift forces provided by the Military Airlift Command (MAC) and the Civil Reserve Air Fleet (CRAF), our mobility forces also include the strategic sealift forces provided by the Military Sealift Command (MSC) and the U.S. Flag Merchant Marine, as well as the tactical airlift forces assigned to the Tactical Air Command, the Unified Commands, and the Reserve Components. The strategic sealift and tactical airlift forces also require improvement, but the first priority at this time must be given to the strategic airlift forces.

1. Strategic Airlift

The military strategic airlift now consists of four squadrons of C-5As (79 aircraft) and 13 squadrons of C-141s (275 aircraft), together with an equal number of C-5A and C-141 Reserve Associate Units which do not have any aircraft of their own. These Associate Units are collocated during peacetime with the active force squadrons and assist in the operation and maintenance of the active force aircraft on a part-time basis. When mobilized, these units make possible a rapid increase in the rate of utilization of the active aircraft. In addition to these military assets, there are now 246 long-range commercial aircraft in the Civil Reserve Air Fleet, including 153 cargo-convertible and 93 passenger aircraft. These aircraft become available to the Defense Department upon activation of the CRAF.

The crucial importance of immediately available strategic airlift forces of substantial capacity was once again convincingly demonstrated during the recent Middle East conflict. We have every reason to believe that our ability to resupply the Israeli armed forces promptly and in sufficient quantity at the critical point in the conflict not only restored the military balance but also was one of the decisive factors in bringing about the cease-fire.

Throughout the period of the airlift, October 13-November 14, MAC C-141s and C-5s maintained a steady flow of supplies to Israel, including weapons, ammunition, spare parts, medical supplies and other material. More than 22,000 short tons of cargo were delivered during that period, with as many as six C-5A and 17 C-141 missions per day. The C-5A with a total of 145 missions accounted for almost 10,800 tons, and the C-141 with a total of 421 missions accounted for more than 11,600 tons. The C-5A averaged 74 tons of payload per mission, while the C-141 averaged 27 tons. Lajes Air Base in the Azores was the only intermediate point available for refueling and crew staging on these missions, which averaged 6,450 nm one way.

The C-5A, because of its ability to carry equipment too large or too heavy for other aircraft, was a key factor in the success of this airlift effort. The cargo moved by C-5A included M-60 and M-48 tanks, each weighing about 50 tons. Among the other large and heavy items airlifted by the C-5A were fuselages for A-4E aircraft, CH-53 helicopters, 175mm self-propelled guns weighing 29 tons each, and 155mm howitzers weighing 25 tons each. All of these items are air-transportable only in the C-5A.

A high degree of reliability was maintained during the airlift: the departure reliability rate for the C-5s was 96 percent and for the C-141s, 98 percent. At the same time, MAC also airlifted the UN peacekeeping force to Cairo; supported three JCS exercises, the SAC redeployment from the Pacific and 100 other special missions; and, in addition, maintained its regular cargo and passenger flights over its worldwide route structure.

Although the Middle East airlift was an impressive performance, it involved the movement of only about 22,000 short tons of cargo. In contrast, the deployment to Europe of the Army and Air Force units initially earmarked for a NATO contingency, together with their essential equipment and initial supplies, would involve the movement of more than a half a million short tons of cargo, albeit over a shorter distance -- an average of about 4,700 nm one way vs. 6,450 nm in the case of the Middle East airlift. Moreover, given the well founded probability that the Warsaw Pact forces are geared for a short, intense war in Europe, plus the possibility that some of the U.S. forces currently deployed in Europe may be withdrawn in the future, there is a great premium on being able to move those forces and their equipment much more rapidly than is now planned. Clearly, under those circumstances, the first few weeks of a war in Europe could well be the most critical.

Hence, a dependable U.S. capability to deliver large scale reinforcements to Europe quickly in an emergency could not only be decisive in preventing a NATO defeat, it could also be decisive in deterring the attack in the first place. Indeed, I can think of no more impressive a deterrent to a Warsaw Pact attack on NATO than a clearly demonstrable U.S. capability to put down in Europe a fully-equipped combat-ready division (including its supporting forces) every few days. That is why I am so firmly convinced that a major expansion of our strategic airlift capacity deserves a very high priority in the allocation of resources among our general purpose forces programs.

As matters now stand, it would take an average of about 19 days per division to move to Europe a force of several divisions

with their Initial Support Increments and all of their combat essential equipment if we were to move them by airlift only. However, there are several actions we can take now to increase substantially our strategic airlift capabilities within the next few years.

C-5A and C-141 Wartime Utilization Rates

The first of these actions involves an increase from 2.0 to 2.75 in the active forces crew ratios for the C-5As and the C-141s, plus a commensurate increase in maintenance personnel and in the war reserve stocks of C-5A and C-141 replenishment spares. These increases would permit a sustained wartime aircraft utilization rate of ten instead of eight hours per day, and an initial surge wartime utilization rate (for a period of 45 days) of 12 1/2 instead of ten hours per day. That would be equivalent to a 25 percent increase in the wartime capability of the MAC strategic airlift forces.

This action alone could reduce the average deployment time per division from about 19 days to somewhat less than 15 days. The additional cost would be $200 million per year ($160 million in FY 1975, the first year) for military personnel and operations and maintenance, plus a one-time cost of about $130 million for war reserve spares. As shown on the following table, about $109 million is included in the FY 1974 Supplemental and $21 million in the FY 1975 Budget for the procurement of additional replenishment spares for this purpose.

C-141 Modification

The second action involves the modification of the C-141s to increase their useable payload capacity. As you probably know, the C-141 for most missions is space-limited, rather than weight-limited. Hence, by increasing the size of the fuselage we can increase the payload capacity without any significant loss of effective range or cruise speed.

More specifically, the C-141 modification would involve lengthening the fuselage by 280 inches (part fore and part aft of the wing), modification of the wing fairing and aircraft controls to reduce drag, and the installation of in-flight refueling (receiving only) equipment. (The C-5As already have an aerial refueling capability.) These modifications will increase the payload volume of the C-141 by 30 percent; it will be able to carry 13 cargo pallets compared with the present 10. This improvement, which is equivalent to adding 90 C-141s to the airlift force, could further reduce the time required to deploy the planned force to an average of about 12 1/2 days per division.

Acquisition Costs of Major Mobility Forces Modernization and Improvement Programs [1]

(Dollars in Millions)

	FY 1973 Actual Funding	FY 1974 Planned Funding [2]	FY 1975 Proposed Funding
Strategic Airlift			
Procurement of Additional Replenishment Spares for C-5A and C-141 Aircraft	23	(109)	21
Modification of C-141 Aircraft to Increase Their Capacity	-	(40)	50
Acquisition of 3rd C-5A Fatigue Article	-	21 (6)	-
Planning and Initial Engineering of C-5A Wing Modification	-	-	16
Modification of Civilian Wide-Bodied Passenger Aircraft to a Convertible (Cargo-Passenger) Configuration	-	(19)	155
Tactical Airlift			
Procurement of Additional C-130 Aircraft	94	216 (33)	22
Prototype Development of Advanced Medium STOL Transport (AMST)	25	25	56

1/ Includes costs of RDT&E, procurement of the system and initial spares, and directly related military construction.

2/ Figures in parentheses are the amounts included in the FY 1974 Supplemental.

Moreover, all of the MAC strategic airlift aircraft will have an air-to-air refueling capability and thus will be less dependent on foreign bases. Selected air crews, however, will have to be provided regular training in refueling techniques, which has not been the case in the past.

The cost to modify the entire fleet of 275 C-141s is estimated at about $450 million. The impact of this modification on operating costs cannot yet be precisely estimated, but little or no increase is now believed to be involved. (The cost of adding 90 C-141s to the fleet would be about $1.4 billion for procurement and $135 million a year for operation.) We have included $40 million in the FY 1974 Supplemental to commence engineering and tool design. Another $50 million is included in the FY 1975 Budget to complete engineering, fabricate the tooling, and begin the modification of the first few aircraft.

C-5A Fatigue Tests

To reduce still further the number of days required to deploy the planned force we need even more airlift capability, especially the capability to carry large and heavy items of equipment. The C-5A was developed specifically for this role. Unfortunately, it is now out of production; furthermore, its wings are structurally deficient in relation to the original fatigue life goal. This deficiency has been alleviated in part by the incorporation of a new "load distribution" system in the wings, as recommended by the C-5A Independent Review Team. With this system, it is estimated that the service life of the aircraft may be as much as 18,000 to 20,000 hours, but as yet we have no empirical data to support that estimate.

To acquire that data in a more timely fashion, we now propose to accelerate the acquisition and test of the third fatigue article, which incorporates the new load distribution system. Accordingly, the $5.8 million needed for this purpose has been included in the FY 1974 Supplemental (rather than the FY 1975 Budget as previously planned) thereby increasing the funds available for obligation in FY 1974 to about $21 million.

C-5A Wing Modification

The Independent Review Team also recommended that a further and more extensive wing modification, which would extend the service life of the C-5A to at least 30,000 hours, be developed and installed. The Air Force estimates that this program would cost more than $600 million for the 79 C-5As now in the force.

Inasmuch as these aircraft are accumulating an average of only about 1,000 flying hours per year, I believe we should obtain the complete fatigue test results on the current load distribution system modification before we commit ourselves to another, more costly modification. Pending the receipt of these results, however, I believe it would be useful to examine more closely the work involved, the benefits to be derived, and the most probable cost of this new modification program. Accordingly, $15.5 million has been included in the FY 1975 Budget to initiate engineering and planning for this modification.

Wide-bodied Passenger Aircraft Modifications

In view of these problems, it would obviously be premature to consider the procurement of additional C-5As at this time. Moreover, we believe that a large amount of additional airlift capacity can be acquired at a far lesser cost through a Government-financed program for the modification of existing civilian wide-bodied passenger aircraft (Boeing 747s and McDonnell-Douglas DC-10s) to a convertible (cargo-passenger) configuration, and for the operation of these modified aircraft under the CRAF program.

Two cargo-configured 747s are now in commercial operation. These aircraft have a visor door in the nose and can accommodate all but "outsize" cargo (i.e., cargo that can be carried now only by the C-5A). By installing a large, side-loading cargo door aft of the wing trailing edge, however, the 747 could be configured to accommodate about one-third of the "outsize" cargo involved in moving the planned force. The remaining two-thirds of the "outsize" cargo would still have to be carried by the C-5As. Thus, the capacity of the existing C-5A force sets a practical limit on the expansion of our strategic airlift capability over the near term, that is until a new large cargo aircraft can be developed and produced, or the production of an appropriately modified C-5 can be resumed.

Assuming that we go forward with the two airlift proposals I discussed earlier (i.e., the increase in wartime utilization rates and the modification of the C-141s), the addition to the CRAF program of about 110 cargo-convertible 747s (or their equivalent in DC-10s, calculated at about two-thirds of a 747) would bring our airlift capability up to the full potential permitted by the existing C-5A capacity. This strategic airlift force -- the C-5As, C-141s, existing CRAF, plus about 110 convertible 747s -- could airlift the planned force (including the Initial Support Increments) to Europe at an average rate of about seven days per division.

There are now about 110 U.S. airline-owned 747s in service. Another 55 747s are operated by the airlines of our NATO allies. In addition, U.S. airlines also operate about 100 DC-10s, but only about 20 are the long-range version. (The wide-bodied Lockheed 1011 is too short range to be considered in this context.)

Our current plan is to negotiate agreements with the U.S. airlines to make their 747s available for modification and then to operate them as part of the Civil Reserve Air Fleet. In order to ensure that these aircraft will be available in an emergency to operate into hostile areas in the same manner as the military airlift aircraft, we may need new legislation similar to that covering merchant seamen. This new legislation would require U.S. certificated commercial airline crews, in event of a national emergency declared by the President, to operate wherever the necessities of war may dictate.

We may also be able to work out some sort of an agreement with our NATO allies that would bring their 747s into the program. I have already discussed this matter in a preliminary way with some of the NATO Defense Ministers, but it is too early to draw any conclusions as to the prospects for such agreements.

The modification of the 747 passenger aircraft to a cargo-convertible configuration would involve the installation of a nose visor cargo door and/or a large side-loading door, the strengthening of the upper cargo deck, and the installation of a cargo floor weight distribution system. The modification cost per aircraft would be about $5.6 million with the nose door only, and $6.6 million with both doors. Since these aircraft would be out of service during the period of modification, the airlines would have to be paid compensation for the loss of revenue, which we believe would amount to about $800,000 per aircraft. In addition, the convertible feature would increase the operating cost to some extent; this might amount to about $400,000 per aircraft over a ten-year period.

Finally, we may have to provide the airlines with some sort of an incentive payment for assuming the additional obligations and inconveniences involved in this program. Heretofore, we have relied upon the award of peacetime airlift contracts as the principal inducement for the air carriers to participate in the CRAF program. With the sharp decline in contracted airlift following the withdrawal of U.S. forces from Vietnam, there will not be enough Defense business to provide the necessary incentives for an expanded CRAF program.

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Taking all of these factors into account, the cost to the Government could amount to about $9-10 million per modified 747.

The long range DC-10s could be modified with a side-loading cargo door and a strengthened upper cargo deck for about $5 million per aircraft. Although these DC-10s can carry about two-thirds of the payload weight of a 747, they are height limited and therefore cannot carry many items of military equipment. Hence, they would be useful primarily as bulk carriers, as are the existing CRAF aircraft.

In addition to the modification of the aircraft, we must also develop and procure the new Material Handling Equipment (MHE) needed to load and unload military equipment expeditiously. In contrast to the C-5A and C-141, whose main cargo decks are at about truck-bed height, the main cargo decks of the 747 and DC-10 are about 16 feet above ground level. The cost of acquiring the new MHE, however, would be relatively small in relation to the cost of modifying the aircraft.

To start this wide-bodied passenger aircraft modification program promptly, we have included $19 million in the FY 1974 Supplemental to initiate engineering and planning, and $155 million (including $5 million for MHE) in the FY 1975 Budget to complete engineering and tooling, and to modify the first 10-12 747s.

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Admittedly, there are many other problems, besides the availability of airlift, that must be solved if we are to develop a capability to move large forces to Europe promptly in an emergency. The forces to be moved must be maintained in a state of readiness commensurate with the expanded airlift capability. Appropriate actions must be taken to ensure the availability of adequate airport facilities to assemble and load the cargo at the point of departure and to unload and clear the cargo at the point of arrival. And, of course, there is the question of vulnerability at the point of arrival, which in turn is related to the question of strategic warning. Assuming we are able to detect a Warsaw Pact mobilization within a week after it begins, we may be able to close a large part of the force before the start of hostilities. In any event, a clear and convincing U.S. capability to move large forces quickly overseas in an emergency should provide a powerful deterrent against attack.

2. Sealift

The DOD-controlled sealift capability, which is already quite limited, will continue to decline. In the late 1970s the Military Sealift Command force is expected to consist of only two Roll On/Roll Off cargo ships and eight tankers, plus three cargo ships and ten tankers on controlled fleet charter.

Nine of the ten tankers are being acquired through a build and charter arrangement and do not involve any capital investment by the Defense Department. These tankers are relatively small, shallow draft ships used primarily to transport POL into smaller, less developed ports. All nine are scheduled to be available to the MSC-controlled fleet by the end of FY 1975.

Last year it was planned to acquire two Multi Mission Ships (MMS), also through a build and charter arrangement. A lack of response from the shipbuilding industry because of the limited number of ships contemplated, however, has caused this program to be reevaluated. Thus these ships will not be available to MSC in FY 1975 as originally scheduled. Instead, we have now scheduled one ship to be available in FY 1976 and the second one in FY 1977.

Notwithstanding our current emphasis on strategic airlift, we will still need a substantial sealift capability to sustain and augment the forces initially deployed by airlift. Even in a NATO-Warsaw Pact conflict some of the later deploying forces (e.g., Army reserve component divisions and their support increments) would have to move by sea, as would the bulk of the resupply for all of the U.S. forces already deployed. Sealift accounted for 96 percent of the tonnage moved to Vietnam during the course of that conflict, and even with the expanded airlift, it will no doubt account for a high percentage of the tonnage moved in any other sustained conflict in which we may become involved in the future.

Since the capability of the DoD-controlled sealift will probably be insufficient to support even a minor contingency in a timely fashion some years hence, heavy reliance will have to be placed on the U.S. Merchant Marine and, in the case of a NATO conflict, on the commercial fleets of our NATO allies as well. The National Defense Reserve Fleet, which stood us in good stead during the Vietnam war, now consists of 130 ships which are currently scheduled to be phased out in FY 1978.

The sealift problem is not so much a matter of total capacity as it is of early availability of suitable ships. Given sufficient time to assemble the ships, the U.S. Merchant Marine, augmented by up to 200-300 NATO flag ships, could provide more than enough sealift to meet even the most demanding NATO contingency. Consequently, the principal emphasis in this area has been placed on early availability, not only in a mobilization declared by the President, but also for lesser contingencies not involving mobilization.

With regard to the mobilization contingency, a major step forward was taken last year in conjunction with our NATO allies to increase the availability of NATO flag shipping in the event of a major U.S. deployment of forces to Europe. Under the agreement reached last September, the NATO Defense Shipping Executive Board (DSEB) which is designed to control in wartime the more than 3,000 deep draft, dry cargo vessels in the NATO shipping pool, would be activated promptly upon the declaration of a NATO mobilization. Some 300 suitable NATO flag ships (primarily break bulk and some roll-on/roll-off), which normally frequent U.S. East and Gulf Coast ports, would be "earmarked" in peacetime to facilitate their early acquisition in a contingency. These ships would be channelled to U.S. on-load ports in response to specific U.S. deployment requirements. We have assured our NATO allies, however, that European flag ships would not be requested if suitable U.S. flag ships were available.

With regard to contingencies involving the deployment of perhaps one or two divisions, the Defense Department has been striving for a number of years to develop a system which would provide sufficient commercial sealift without the declaration of a mobilization by the President. The MSC under the Sealift Readiness Program has obtained commitments from the commercial shipping lines to make at least 117 ships available for such a lesser contingency, with at least half to be available in the first 30 days.

One of the key difficulties inherent in this Sealift Readiness Program is that operators would risk the loss of their regular trade routes to other U.S. as well as foreign lines if they took their ships off those routes to carry Defense cargo for any substantial period of time. This problem emerged briefly during the Vietnam conflict. However, we were still able to draw on the Victory ships in the National Defense Reserve Fleet (NDRF), and there was still a large number of World War II-built ships in the Tramp fleet. Now, however, the Tramp fleet is just about gone, and the ships presently in the NDRF are scheduled to be retired in FY 1978.

It is apparent to us that before that time arrives we should examine again the need for a capability of the sort now represented by the NDRF. A revitalized NDRF would fit in well with the Sealift Readiness Program. We would have to rely on the berth line industry only during the initial stages of a non-mobilization contingency, until the NDRF ships could be broken out of the reserve and placed back in service. This arrangement would limit the deleterious effect on the competitive position of the berth line operators. We believe that the Defense Department, together with the Maritime Administration, should reexamine the feasibility of continuing some of the ships still in the NDRF beyond FY 1978, as well as the possibility of adding newer ships to the NDRF to replace or supplement the old Victory ships. Meanwhile, the National Academy of Sciences has undertaken a study to determine whether the berth line industry can respond to long or short term non-mobilization emergencies without loss of their competitive position, which eventually could result in a reduction of the U.S. flag fleet, thus eroding our sealift mobilization base.

Another problem involving the Defense Department's relation with the U.S. shipping industry concerns the manner in which we procure sealift in peacetime. Under the present so-called MAX-MIN procedure no shipper is permitted to carry more than 50 percent of DoD cargo on most MSC routes (75 percent on a few), and the low bidders must agree to reserve a minimum of 25 percent of their capacity for Defense cargo. This system preserves the competitive principle, while at the same time it places some restraints on competition in the interest of maintaining a broad mobilization base. A bid rank or "pecking order" is established among the bidding lines, and the cargo is then allocated to the low bidders among the carriers actually offering service on a given route.

Last August the Maritime Administration (MARAD), supported by the Federal Maritime Commission (FMC) and most of the berth line operators, proposed a cargo allocation system whereby all carriers offering service on a route would be assured of some cargo, with the amount allocated to any one carrier being a function of the "bid" spread. Their contention is that the MAX-MIN procedure causes large fluctuations in cargo allocations as the positions of the carriers in the bid rank change from one bidding cycle to the next. MARAD and FMC believe that these fluctuations create a "feast-or-famine" situation which is particularly harmful to those carriers in poor financial condition, and which could lead to erosion of the sealift mobilization base. While we fully appreciate the concern of the Maritime agencies and the industry, we do not believe the evidence thus far presented is sufficiently convincing to justify either the relaxation of competition or the acceptance of the additional costs that would necessarily be involved.

3. Tactical Airlift

The tactical airlift forces at the end of FY 1974 will consist of 17 C-130 squadrons (with about 325 aircraft) in the active force and 36 units (with about 370 aircraft, mostly C-130s) in the Air Force reserve components. We plan to maintain essentially the same force levels through the late 1970s, but with some further modernization of the reserve component units, which account for about 40 percent of our total tactical airlift capability. During the next few years all of the remaining C-124s and C-123s in the Air National Guard will be replaced with C-130s.

We are also taking action to reduce the overhead and command structure of the reserve components by consolidating certain units which are collocated at the same installation. Four AFR and two ANG units, which were previously programmed to have eight UE C-130 aircraft each, are now being combined to form two AFR and one ANG squadrons with 16 UE aircraft each, the same size as the active force squadrons. This change will enable us to achieve an annual saving of about $2.7 million with no loss in wartime capability.

C-130

The C-130 is probably the most versatile and reliable tactical airlift aircraft in the world and is now in use by many other nations. Procurement of the C-130 for U.S. forces had been expected to be completed with the FY 1974 buy, but once again our inventory of C-130s has been reduced, this time by the transfer of aircraft to Israel. Accordingly, $33 million has been included in the FY 1974 Supplemental for the procurement of six more C-130s for the Air Force. Another $22 million is included in the FY 1975 Budget for four additional C-130s to replace two C-130s and two C-7s which are expected to be transferred from the Air Force Reserve to South Vietnam as attrition replacements.

Although no further procurement of C-130s for U.S. forces is planned, the production line is expected to remain open during the next few years to meet the demands of other nations. Thus, we will have the option to procure additional C-130s later on if that proves to be necessary.

AMST

While the C-130 is a proven, effective aircraft, we continue to believe that tactical airlift modernization will eventually be needed, probably sometime in the 1980s. The objective of the Advanced Medium STOL Transport (AMST) prototype program is

to demonstrate new STOL technology and provide an option to replace not only the C-130, but also the current STOL aircraft, the C-7 and C-123.

I am aware that there has been considerable opposition in the Congress with regard to the AMST program and that the FY 1974 budget request for that program was cut from $67 million to $25 million. The two basic objections registered were: (1) that the AMST would need an advanced turbofan engine (the development of which had been terminated) to be effective; and, (2) that it will be too expensive relative to the proven C-130.

The Air Force maintains that a new engine is not needed, and points to the fact that both prototype contractors are using proven engines that will meet the established design and performance goals. As for costs, two of the principal objectives of the prototype program are to obtain visibility on costs and operational factors associated with short field performance, and to define engine and airframe characteristics which would substantially reduce maintenance support requirements.

The two contractors involved, Boeing and McDonnell-Douglas, are each building two prototypes and are using different powered lift concepts for achieving improved STOL performance. The total cost of the four aircraft prototypes, assuming a continuation of both contractors' programs, would be about $210 million, and there is no commitment to engineering development or production. Because of their different technical approaches to powered lift, the fabrication and testing schedules of the two contractors differ. Major assembly by McDonnell-Douglas began in late 1973; Boeing is scheduled to begin in mid-1974. First flight as well as completion of the one-year flight test program differ for the contractors by a similar period of about half a year.

The current design-to-cost goal for AMST is now being reexamined. But as a practical matter, we will not have a sound basis for estimating the production costs of the AMST, or for determining whether it will be an economically attractive alternative to the existing or a modified C-130, until the prototype phase of the program is completed.

On balance, I believe that we would be best advised to proceed with the AMST prototype program, and about $56 million has been included in the FY 1975 Budget for that purpose. The bulk of the funds would be devoted to the fabrication and assembly of the prototypes. In addition, the propulsion systems would be verified, and tests of structural components

begun. Because the impact of the $42 million reduction in the FY 1974 request has not as yet been fully assessed, and because each of the contractors is using a different technical approach, I cannot state at this time whether one of the contractors will be eliminated, or the work of both stretched out. I hope by the time the Air Force witnesses appear before this Committee the matter will have been resolved.

IV. MANPOWER FOR DEFENSE

The Department of Defense will complete during FY 1975 its transition to a peacetime force structure. The last of the draftees will have concluded their required service, and we will begin to see whether the volunteer force will receive the measure of support needed to maintain the Armed Forces in the size and quality required for the nation's security. It is clear that the volunteer force concept cannot prove a success unless the Armed Forces do have the full support of the people and the Congress.

For our part, we in the Department are doing our best to make the volunteer force succeed and at as low a cost as possible. With this in mind we have set ourselves the following manpower objectives for FY 1975:

-- to attract and retain a sufficient number of people of adequate ability to maintain the peacetime force structure and state of readiness needed to protect our national interests.

-- to use personnel more efficiently.

-- to continue improving the living and working conditions in the military services.

As has been mentioned previously in this report, U.S. forces are now much smaller than they have been in more than two decades. By the end of FY 1975, our military manpower strengths, as shown in the table on the following page, will have been reduced almost 40 percent from the 1968 Vietnam peak. Civilian manpower has been similarly reduced, although to a lesser extent -- largely due to increased civilianization of military positions.

This reduction in our active forces still leaves us with a formidable recruiting task -- one young man in three of those qualified and available must volunteer for military service if we are to meet our goals.

The smaller size of our active forces also means that the Reserves and National Guard are assuming greater importance in our total security posture. But if they are to play the role required of them in these new strategic and manpower circumstances, improvements in both organization and readiness will be required. I will say more about this later.

ACTIVE DUTY MILITARY PERSONNEL
(End of Fiscal Years in Thousands)

Fiscal Year	Total DoD	Army	Navy	Marine Corps	Air Force
1950 (pre Korea)	1,460	593	382	74	411
1952 (peak Korea)	3,636	1,596	824	232	983
1964 (pre Vietnam)	2,687	973	668	190	857
1968 (peak Vietnam)	3,548	1,570	765	307	905
1974	2,174	782	551	196	645
1975	2,152	785	540	196	630

Note: Totals may not add due to rounding.

DIRECT-HIRE CIVILIAN PERSONNEL -- MILITARY FUNCTIONS
(End of Fiscal Years in Thousands)

Fiscal Year	Total DoD	Army	Navy/ Marine Corps	Air Force	OSD-JCS and Other Defense Agencies
1950	715	266	293	154	2
1952	1,308	515	481	310	2
1964 1/	1,035	360 1/	332	305 1/	38
1968 1/	1,287	462 1/	419	332 1/	75
1974	1,029 2/	356	326	270	76
1975	1,027	359	324	270	75

1/ These totals include Army and Air National Guard technicians who were converted from State to Federal employees in FY 1969. The FY 1964 and 1968 totals have been adjusted to include approximately 38,000 and 39,000 technicians respectively. The FY 1968 total excludes 32,000 disadvantaged youth employees.

2/ Includes 19,000 positions in FY 1974 Supplemental.

Note: Totals may not add due to rounding.

A. THE VOLUNTEER FORCE

The last draft call was issued at the end of 1972. When induction authority officially expired on July 1, 1973, a total of 51,000 draftees remained in uniform. By the end of fiscal year 1975, the last conscripted soldier will have completed his required service, and the active forces for the first time in more than a quarter of a century will be manned solely by volunteers.

Making the volunteer force work is one of our highest objectives. While the challenge is considerable, our resolve is firm. A comparison of the numbers of true volunteers from previous years with projected future year requirements provides some indication of the magnitude of the task ahead.

	Estimated True Volunteers* (in 000s)			Enlisted Accession Requirements (Projections)* (in 000s)				
	FY 71	FY 72	FY 73	FY 74	FY 75	FY 76	FY 77	FY 78
Army	102	127	165	201	217	185	180	170
Navy	50	75	84	83	90	95	80	85
Marine Corps	42	49	54	59	53	55	55	55
Air Force	59	72	88	75	78	100	90	75
DoD**	253	323	390	419	438	430	405	385

* All sources - men, women, prior service, non-prior service.
** Totals may not add due to rounding.

At this point, I would like to review the major problems encountered to date in moving to the all-volunteer concept.

1. Active Forces

a. Strengths

Total military strength at the end of December 1973, was 98 percent of original Service planning objectives. The principal shortages were in the Army and the Navy, with the Army's shortage largely attributable to recruiting shortfalls and the Navy's to revised Service planning for FY 1974. (It should be noted that strength shortfalls of this magnitude and larger also occurred periodically during the era of the draft.) The strengths, by Service, are shown in the following table.

MILITARY STRENGTH (000s)
(December 31, 1973)

	Requirement 1/	Actual	Shortfall
Army	802	782	20
Navy	566	556	9
Marine Corps	194	189	4
Air Force	674	674	0
DoD	2,235	2,202	33

1/ FY 1974 President's Budget.
NOTE: Totals may not add due to rounding.

We estimate that the Navy and Air Force will, at the end of FY 1974, be close to their revised end strength authorizations. The Army, which is 2 1/2 percent short of its prescribed end strength, has in the last four months met 95 percent of its recruiting objectives. This is a favorable development, but it would be premature to regard it as a harbinger of success, especially in light of the requirement recently imposed by the Congress that at least 82 percent of all new enlistees be of average or above average mental ability and that at least 55 percent of all new enlistees be high school graduates.

b. Accessions

(1) Non-prior Service Enlistments

The category of military manpower that presents the most difficult recruiting challenge is, of course, that of non-prior service male enlisted personnel, which accounts for the bulk of the annual accessions to the military forces. The acquisition of other categories of personnel -- officers, women, prior service enlistees -- while not entirely free of problems, is a more manageable undertaking. The successful attainment of an all-volunteer force, therefore, rests heavily on our ability to acquire a sufficient number of qualified non-prior service male enlistees for both the active and the reserve forces.

Assuming an active duty strength of about 2.2 million men and a Selected reserve (i.e., drill pay) strength of about 1 million men over the next five years, we estimate that we will have to acquire about 460,000 non-prior service male enlistees each year -- about 360,000 for the active forces and 100,000 for the reserve forces. Recruiting that number of men each year will require the enlistment of about one out of every three militarily qualified

and available (non-college) males under the age of 23 years. This goal, on the face of it, may initially appear unattainable. But the actual performance in calendar year 1973, particularly with respect to the active forces, was not far off that mark. As shown in the table on the following page, the four Services together recruited approximately 327,000 non-prior service male enlisted personnel, about 91 percent of the total number required.

(2) Prior-service Reenlistments

One of the brightest spots in the All Volunteer Force program has been the success the services have achieved in reenlisting prior-service personnel. Not only does this reduce the requirement for non-prior service personnel, but it substantially lowers training costs.

In November 1973, the Services attained 110 percent of their objective for prior-service accessions. In December, the figure rose to 119 percent. Overall, in the first half of FY 1974, the Services have attained 104 percent of their objective. Special efforts are being made to ensure that we continue this high level of achievement. The upswing in recent months would indicate that these efforts are meeting with success.

c. Quality

The mental ability requirement specified by the Congress is not expected to pose a serious recruiting problem. As indicated in the following table, all of the Services except the Army have been able, thus far, to meet the 82 percent mental standard, and the Army is only slightly below that standard.

PERCENT OF NON-PRIOR SERVICE ENLISTED ACCESSIONS IN MENTAL CATEGORIES I, II AND III (Average and above)

	FY 64 *	FY 73 *	FY 74 (Jul-Dec)
Army	80	84	81
Navy	89	84	97
Marine Corps	91	84	93
Air Force	96	96	99
All DoD	85	87	89

* Includes draftees.

Non-Prior Service Male Enlistment (000s)

Calendar Year 1973

		Program Objective	Actual Accessions	Percent Achieved
Jan-Mar	Army	38.7	35.7	92.2
	Navy	14.0	14.3	102.1
	Marine Corps	11.8	11.4	96.6
	Air Force	20.0	20.0	100.0
	DoD	84.5	81.4	96.3
Apr-Jun	Army	33.5	25.6	76.4
	Navy	22.9	16.3	71.2
	Marine Corps	10.9	11.3	103.7
	Air Force	19.1	19.1	100.0
	DoD	86.4	72.3	83.7
Jul-Sept	Army	52.1	41.5	79.7
	Navy	24.5	23.7	96.7
	Marine Corps	16.0	13.7	85.6
	Air Force	18.5	18.7	101.1
	DoD	111.1	97.6	87.8
Oct-Dec	Army	40.6	37.8	93.1
	Navy	13.6	13.7	100.7
	Marine Corps	11.0	9.8	89.1
	Air Force	13.9	14.0	100.7
	DoD	79.1	75.3	95.2
CY Total	Army	164.9	140.6	85.3
	Navy	75.0	68.0	90.7
	Marine Corps	49.7	46.1	92.8
	Air Force	71.5	71.8	100.4
	DoD	361.1*	326.5	90.4

* Individual Service Strength Plans. Program Objectives exclude "add-ons" to compensate for previous shortfalls.

Indeed, the trend for the Department as a whole shows some improvement, particularly compared with FY 1964, the last pre-Vietnam draft year. Moreover, these new entries into military service compare very favorably with the 17-22 year age group of the non-college civilian population, of which only 64 percent are in mental categories I, II and III.

The 55 percent high school graduate standard, however, could cause recruiting difficulties for the Army and the Marine Corps. As shown in the following table, the Marine Corps has been below that level for some time; and the Army fell below it in the first six months of FY 1974. Consequently, it is possible that, at least in part because of this limitation, both the Army and the Marine Corps could fall short of their currently planned June 1974 end strengths.

PERCENT OF NON-PRIOR SERVICE
ACCESSIONS THAT ARE HIGH SCHOOL GRADUATES 1/

	FY 64	FY 73	FY 74 (Jul-Dec)
Army	67	60	54
Navy	58	71	73
Marine Corps	61	51	51
Air Force	84	87	96
All DoD	68	68	66

1/ Includes draftees.

The Department will, of course, abide by the mental qualification and high school graduation standards prescribed by the Congress. But it should be borne in mind that there are other quality attributes that, while less measurable, can be equally or more important from a military point of view. These attributes include motivation, physical condition, trainability and moral background. The young man who really wants to serve in the armed forces of the United States, and who has the physical capacity and mental aptitude to adapt readily to the stresses and strains of military life is a very valuable asset, particularly in the combat arms. It is not apparent that the nation can afford to deprive itself, arbitrarily, of the services of such men just because they do not have a high school diploma.

I believe it would be prudent, therefore, to give the Services some degree of discretion in making exceptions to the two general standards established by the Congress. Each potential recruit should be treated as an individual, taking into account all of

his qualifications for a particular military job, not just his general intelligence and level of formal education achieved.

In an attempt to further refine existing quality standards, the Services are moving away from the use of the Armed Forces Qualification Test (prescribed by the Department of Defense during the draft) as the principal measure of mental ability. Much greater use is now being made of specialized aptitude tests for determining initial eligibility for military service and for assignment to a particular occupational specialty. These tests assess a wide range of skill aptitudes and assist the Services in determining the military jobs for which an individual is best qualified. In this respect, they are proving to be a more reliable indicator of job performance than either high school graduation or mental category status. In point of fact, high school graduation appears to be a better indicator of prospective disciplinary problems than of ability to perform a job.

Moral standards are also a measure of potential disciplinary performance. In this area, we strictly limit the number of enlistment waivers granted for felony policy records and for drug usage. In the Army, for instance, the number of such waivers has been reduced from 5.6 percent of accessions in FY 1970 to 1.4 percent in FY 1973.

In the present voluntary environment, the Army can now use the first several months of service to screen out those who prove to be disciplinary or motivational problems. Although there may be an increased cost in terms of attrition rate, it is on balance a more cost-effective method of retaining the largest number of qualified men from the available pool.

In general, our experience to date has not supported initial apprehensions that ending the draft would result in a degradation in quality. Standards of enlisted in-Service performance have been maintained, and unit readiness has not only been sustained but is improving as personnel turnover is reduced.

d. Costs

Claims that the major cost of military personnel is largely attributable to the volunteer force effort are in error. The largest single factor in growing manpower costs has been pay increases designed to achieve and maintain comparability with civilian sector wages. It is important to recognize that the principle of maintaining comparability, established by law in 1967, predates the decision to pursue a volunteer force. There is no question that comparability would have been necessary in achieving a volunteer force, but

the principle itself is sound, with or without the draft, and stands on its own merits.

Estimates of the cost of the volunteer force vary depending on what programs the estimator chooses to include as being directly or indirectly attributable to the decision to end conscription. The range of estimates shown below results from various plausible assumptions about which budget programs should be attributed to the volunteer force effort.

Range of Annual AVF Costs
($ millions)

Fiscal Year	Case I (Base Costs)	Case II (Project Volunteer Programs)	Case III (Maximum Attributable Costs)
1974	$733.6	$3,032.6	$3,745.9
1975	743.4	2,977.9	3,677.4

-- Case I (Base Costs). The Case I estimate is, in our opinion, the most realistic estimate of Volunteer Force cost since it reflects additions to Service budgets after FY 1971 for programs considered absolutely essential to making the conversion. In both FY 1974 and FY 1975, more than one-third of the total cost represents expansion of active and reserve forces recruiting/advertising programs. Another third is comprised of legislated compensation programs such as the ground combat enlistment bonus* and R.O.T.C. scholarships. The remaining third accounts for such programs as education and travel entitlements and improvements in living conditions and services.

-- Case II (Project Volunteer Programs). This mid-range estimate covers, in addition to Case I costs, the budget costs associated with "Project Volunteer" programs. These are the pay and allowances increases granted in November 1971, to provide pay comparability with the civilian sector for junior officer and junior enlisted personnel. It is our view, as it was that of the Gates Commission, that these pay and allowance increases should have been provided as a matter of equity. It is for this reason that we do not feel these costs are properly chargeable to the all volunteer force as such.

* Includes the pending Armed Forces Enlisted Personnel Bonus Revision Act with a full year cost of $77.8 million.

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-- Case III (Maximum Attributable Costs). This estimate includes all programs, however remote, which can in any way be related to the AVF effort. These additional costs, amounting to over $600 million in both FY 1974 and FY 1975, are primarily for programs to improve the living and working conditions of Service men and women. About three-quarters of this amount represents Army costs for barracks construction programs and the civilianization of certain menial non-mission oriented tasks. While these programs may have aided the successful conversion to an AVF, they are actions which would or should have been taken in any event.

With the exception of Case I, a modest decline in cost is projected for FY 1975 as compared with FY 1974 owing to a smaller force size and downward adjustments in grade structure.

None of these cost alternatives take into consideration the concept of the "net cost" of the volunteer force. All of the estimates would be lower if savings from other agencies and activities were taken into account, such as the reduced Selective Service budget and diminished training and Permanent Change of Station (PCS) costs made possible by increases in lengths of enlistment.

Most important are the substantial cost savings resulting from reduced personnel turnover. In FY 1971, for example, two-year enlistments represented 76 percent of total enlistments in the Army's Combat Arms. Today only nine percent of that total are two-year enlistments. This represents an increased utilization per training dollar of 57 percent. During the high draft years (1967 to 1969) each military accession contributed an average of 3.3 productive man-years, including an allowance for reenlistment experience. Today each accession contributes an average of 4.1 productive man-years. After FY 1975, this figure is expected to increase to 4.5 productive man-years. We estimate that the annual reduction in costs that will flow from these changes will amount to between $400 million and $500 million in FY 1975 and between $500 and $600 million in FY 1976 and beyond.

There has been some conjecture concerning a possible need to return to a system of conscription. Before the nation entertains any thoughts along these lines, we need additional experience with the volunteer force. I would also caution that the cost savings associated with a return to the draft appear to be minimal -- on the order of $300-400 million annually (not considering the offsetting effects on costs of increased personnel turnover that would follow). This is assuming that present levels of pay would not be reduced were we to revert to the draft.

e. Problem Areas

(1) Army Recruitment

One of the most pressing problems we have been facing in the "all volunteer" atmosphere has been that of recruiting shortfalls in the Army, where many jobs are viewed as being less than attractive and where enlistment requirements are more than twice those of any other Service. The reasons for the shortfalls are several and varied. A general reason has been the post-Vietnam disenchantment with the military in general -- disenchantment characterized by indifference. Until this indifference changes into positive support, we will continually be challenged in meeting Army accession requirements. The other causes underlying the shortfalls relate to the application of quality standards and to numbers of recruiters.

With respect to quality standards, in February 1973, the Army limited male non-high school graduate recruitment to 30 percent of its monthly enlistment total in an effort to increase high school graduate enlistments. Prior to this, the male volunteer non-high school graduate enlistee intake had been running about 48 percent. The loss of large numbers of potentially good soldiers from the non-high school graduate pool prompted the Army to return in July 1973, to a program which maximized the intake of high school graduates without limiting non-high school graduates. During the time that the 30 percent restriction was in effect, the Army recruited 13,800 fewer non-high school graduates than it did during the same period the previous year. Since supply is highly sensitive to high school graduation status (for FY 1975 the difference between a 70 percent and 55 percent high school screen would mean approximately 37,000 accessions), this type of screen will have to be carefully set and controlled.

Another major cause for recruiting shortfalls was an understrength condition in the Army recruiter force. The table below shows that the recruiting force was short approximately 1,000 recruiters during the summer months, the height of the recruiting season. It is difficult to quantify the precise effect of the understrength condition, but there can be little doubt that it was substantial. The more important consideration at this point is the action being taken to correct the situation. The Army has moved to bring its number of "production (front-line)" recruiters up to full strength. All newly assigned recruiters will be operating in a fully-trained capacity by early spring 1974.

	Army Recruiting Personnel		
	Jan 73	Jul 73	Dec 73
Total Recruiter Personnel			
Authorized	6,658	6,636	6,510
On Station	6,341	5,221	6,825 1/
Percent	95%	79%	105%
Production Recruiters			
Authorized	4,725	4,725	4,725
On Station	4,446	3,752	5,341 1/
Percent	94%	79%	113%

1/ Temporary Overstrength authorized.

In November 1973, the Army also began assigning specially selected officers to take charge of recruiting areas (the geographic entities directly under the 64 recruiting main stations). These talented, high quality officers should prove an effective complement to the senior non-commissioned officers already assigned to these areas, particularly in communicating with educators, parents of prospective enlistees, and community leaders.

Unit of Choice Option

Guidance for unit-of-choice and station-of-choice recruiting, the Army's most successful recruiting option, has been revised to permit commanders to recruit against projected losses nine months into the future, assuming that every man in their unit or station will depart after 16 months. This has effectively tripled the number of vacancies for which commanders can recruit. By providing canvassers throughout the country -- as was done successfully in FY 1973 -- it should be possible to increase the number of accessions significantly.

	UNIT OF CHOICE CANVASSERS		
Average Number 1972	April 1973	July 1973	December 1973
625	485	509	1,034

Two-year Enlistment Option

Another step which the Army has taken to enhance recruitment is a recent modification of its two-year enlistment package. For enlistees in mental category III or higher, an option is now being

offered wherein a man or woman who enlists for two years can select assignment to European duty or to a school (within a limited set of courses), but not both. It is likely that a considerable number of additional accessions will be attracted by this option who would not otherwise enlist. However, we will be watching developments in this area very closely since there is a possibility that longer term enlistments may be adversely affected.

It should be recognized that there are practical limitations on the extent to which options of the type above can be offered:

(1) The Service must be in a position to maintain its credibility by honoring the obligations associated with such guarantees.

(2) The greater the number of option enlistees, the less flexibility there is for Army managers to assign personnel.

(3) Many highly skilled individuals take options which do not fully utilize their talents.

Combat Arms Bonus

The Army's four-year combat arms enlistment bonus remains an essential tool for meeting strength requirements of the combat arms in the all volunteer environment. It is estimated that shortfalls in the combat arms without the bonus would be on the order of 10,000 enlistments per year. This shortfall would result because the Army requires nearly half of all DoD accessions (it is presently first choice among only one-fourth of prospective enlistees), with the combat arms requirement representing 25 percent of all Army enlistments. If the same incentives were used for the combat arms as are used for the rest of the Army, only 15 percent of Army accessions would select combat arms versus the 25 percent required. The bonus goes a long way toward closing the gap, with any shortage made up by assigning selected numbers of enlistees from among those not committed under other options.

In May, 1973, the bonus policy was changed in an attempt to upgrade quality. Instead of offering a $1500 bonus to high school and non-high school enlistees alike, the $1500 bonus was discontinued and a $2,500 bonus offered only to high school graduates of mental category III or higher. The costs associated with the $2,500 amount are roughly equal to those incurred under the $1500 program, but it is estimated that the supply of high school graduates into the combat arms has increased by about 15 percent. Although the original intent of upgrading quality is being served, the total supply of all personnel into the combat arms has decreased by about ten percent.

We are evaluating this situation to ensure that we are addressing our needs in the right priority. Changes will be made as required.

We have remained well within the budgetary limitation of the $46.5 million for bonus payments approved by the Congress. Of the more than 400,000 persons enlisting in the military Services during FY 1973, only seven percent were enlisted for the bonus.

The effects of the four-year enlistment on turnover in the combat arms is shown in the table on the following page. During the first half of FY 1974, about 40 percent of non-prior service personnel entering the combat arms received the four-year bonus, and it is estimated that 50 percent of these would not have enlisted in the combat arms without the bonus.

The Marine Corps has less of a problem in meeting combat arms requirements since total accession requirements are less than a third of those of the Army. The bonus is not used for the Navy or Air Force.

Education and Training

A survey taken last year indicated that education and training opportunities continue to be prime incentives for enlistment. Approximately one-fourth of the enlistees surveyed indicated that they would not have enlisted without the GI Bill. About two-thirds said they were strongly influenced by opportunities for advanced education and training. Continuation of such benefits appears essential for the volunteer force effort.

Physical Standards

We are presently reviewing medical standards associated with entrance into the Armed Forces to determine if they are higher than necessary. Any adjustments in the standards will be undertaken only after the most careful analysis.

(2) Minority Accessions

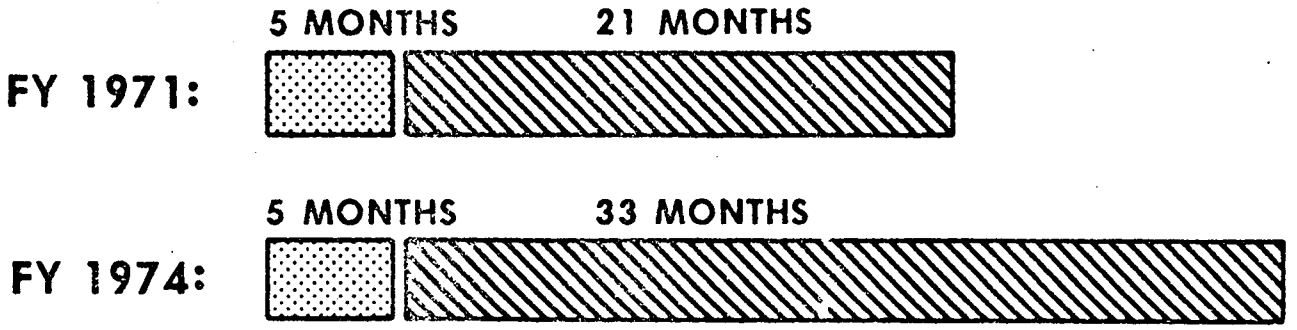
There has been considerable speculation that a volunteer force will primarily attract enlistees from disadvantaged socio-economic backgrounds. Whether or not there is a higher percentage of minorities in the Services than the population at large is not a concern to us. The Department of Defense is an equal opportunity employer and is concerned solely with how well an individual performs his job, a fact well illustrated by the 26 percent black composition of the 82nd Airborne, our most combat-ready division.

EFFECT OF REDUCED TURNOVER
ARMY COMBAT ARMS

AVERAGE INITIAL TERMS OF SERVICE

TRAINING TIME

TIME ON JOB



The Gates Commission devoted considerable research to the contention that a draft-free Army would eventually become predominantly black. The Commission estimated that the proportion of black personnel in a volunteer Army would approximate 18 percent as compared to the 12.8 percent prevailing at that time (1971). After one year under the volunteer mode (through December 1973), black personnel comprise about 20 percent of total Army enlisted strength, or about 15 percent of total DoD enlisted strength.

Black Personnel as Percent of Total Enlisted Strength

	Army	Navy	Marine Corps	Air Force	DoD
Fiscal Yr. 1971	14.3	5.4	11.4	12.3	11.4
Fiscal Yr. 1972	17.0	6.4	13.7	12.6	12.6
Fiscal Yr. 1973	18.6	7.7	16.9	13.4	14.1
First Half FY 74	19.9	8.1	17.7	13.8	14.9

The Department of Defense will continue to apply the same standards of trainability and adaptability to military discipline to black enlistees as we do to those of other races. Those who meet our standards will be accepted. Those who do not will be rejected.

(3) Critical Skills Shortages

Currently, approximately one-sixth of all physicians on active duty are serving voluntarily. Of the remainder, the majority are serving because of the recent "doctors draft", while the rest are fulfilling DoD training obligations. Since drafted physicians serve for only two years and first term retention rates are quite low, between one-third and one-fourth of the physician force turns over each year. The challenge of maintaining an adequate number of physicians while shifting from the draft to a volunteer system is a major one.

This fiscal year marks the beginning of some very real problems with respect to numbers of military physicians. Chief among the reasons for poor retention and attraction of health professionals to the military is the very substantial difference between their pay and that of their civilian counterparts. Proposed legislation now before the Congress provides for variable incentive pay ranging up to $15,000 per year and an increase of special pay for physicians with two years of service to $350 per month.

The Armed Forces Health Professions Scholarship Program is proving an effective tool for procuring professionals in the critically short-supply health professions. It provides annual

financial assistance for some 5,000 students pursuing graduate education in these critical areas in return for an active duty obligation of one year for each year, or fraction thereof, of program participation. A minimum obligation of two years is required by each of the military departments. Scholarships cover tuition and related costs and provide an annual income of approximately $5,300. A total of 4,777 students have participated since the program's inception in September 1972. Of these, 511 students who entered the program in their senior year have graduated. There are currently 2,787 medical students, 1,160 dental students, and 319 other health professional students in the program.

The number of health professionals needed in the Armed Forces is presently being reappraised in an inter-agency study on military health care. This joint effort by the Department of Defense, the Department of Health, Education and Welfare, and Office of Management and Budget will assess alternative means of resolving problems related to the potential shortage of military physicians created by the end of the draft. Specifically, it will:

-- Assess the ability of current military medical programs to meet the future health needs of the Armed Forces;

-- Evaluate the existing military medical care system and alternatives to it with respect to their costs, quality of care, requirements for health care professionals and ability to meet DoD health care objectives; and,

-- If appropriate, recommend modifications to the military health care system that will be consistent with DoD missions and objectives, be compatible with civilian health care needs, and minimize the overall costs of military medical care.

The problems of attraction and retention in the critical skills area are by no means limited to physicians. They extend to all skills which command a premium wage on the open market. Continued excessive turnover of expensively trained specialists lowers the effectiveness of our military units and imposes heavy repetitive training costs.

To cope with this problem, authority is needed to pay enlistment and reenlistment bonuses on a cost effective basis in selected short-supply occupations in return for a commitment to serve for a stipulated number of years. Such bonuses can be viewed as a prepaid wage differential based on the qualifications of the individual and the unique needs of the Services.

Legislation has been proposed which provides for expanding enlistment and reenlistment bonus authority. Under existing law, enlistment bonus authority is restricted to individuals enlisting for at least three years in specified combat elements of the Army and Marine Corps. A more flexible application of the enlistment bonus as has been requested would increase enlistment of critical skills personnel in the Army alone by between 10,000 and 12,000 per year -- and obtain more than one extra year of time on the job per enlistment. This would in turn reduce training costs, thereby offsetting the cost of the bonuses. It is estimated that by offering an enlistment bonus within the $3,000 limitation, the Services would meet their requirements in the following critical skills and avoid substantial costs for each bonus enlistee:

Skill	Training Cost	Training Savings per Bonus Accession 1/
Army Light Air Defense Electronic Repairman	$20,000	$12,100
Marine Corps Ground Radar Repairman	8,500	3,700
Hawk Fire Control Repairman	45,000	27,700
Weapons System Radar Repairman	19,300	16,900

1/ Does not include subtraction of bonus payment.

When shortages in a particular skill develop, alternative management actions will be pursued prior to employing the bonus. Whenever a bonus is applied, it will be done in the most cost effective manner possible.

Current law provides for a Regular Reenlistment Bonus which is paid to all reenlistees without regard to specialty. As a result, 25 percent of these payments are made in skill areas where sufficient retention can be achieved without a bonus. This translated to more than $43 million in both FY 1972 and FY 1973 in unnecessary payments.

Current law also provides for a Variable Reenlistment Bonus which is paid only to reenlistments in critical skills and only for the first reenlistment. This fails to address retention problems for certain critical skill shortages at the second reenlistment point.

The Selective Reenlistment Bonus we have proposed would provide the flexibility of applying the incentive after 21 months of a member's initial ten years of service. The amount paid would depend on the severity of the retention problem in a particular skill. Members who reenlist in a skill where no shortage exists would no longer receive a bonus. While additional costs of about $4 million would be incurred in each of the first two full conversion years (FY 1975 and FY 1976), annual savings would be up to $77 million by the fifth full year of operation. Enactment of this proposed bonus would enable us to spend our retention funds more effectively and to reduce substantially our future costs.

(4) Women in the Services

Today there are more than 60,000 women serving in military uniform. This is consistent with our longer-term goal of having approximately 130,000 women in uniform by FY 1978. The following table depicts future year targets for each Service.

DOD PLANNED END STRENGTH FOR WOMEN, FY '75-78
(In Thousands)

	FY 1975	FY 1976	FY 1977	FY 1978
Army				
Enlisted	34.4	40.4	43.8	47.3
Officer	4.6	4.8	5.0	5.4
Total	39.0	45.2	48.8	52.1
Navy				
Enlisted	17.2	20.2	20.4	20.5
Officer	3.9	4.1	4.3	4.3
Total	21.1	24.3	24.7	24.8
Marine Corps				
Enlisted	2.3	2.5	2.7	2.7
Officer	0.4	0.4	0.4	0.4
Total	2.7	2.9	3.1	3.1
Air Force				
Enlisted	25.4	31.2	37.3	43.5
Officer	5.3	5.6	6.0	6.6
Total	30.7	36.8	43.3	50.1
DoD				
Enlisted	79.3	94.3	104.2	114.0
Officer	14.2	14.9	15.7	16.7
Total	93.5	109.2	119.9	130.7

NOTE: Totals may not add due to rounding.

In FY 1973, 20,800 women enlisted in the four Services. The FY 1974 goal calls for enlisting more than 30,000 women -- an increase of almost 50 percent. We are confident this goal will be met. All career fields are now open to women except for certain combat and direct combat-support positions denied them by law or regulation.

The average term of service for female enlisted personnel has increased from 2.44 years as of June 30, 1972, to 2.70 years as of June 30, 1973. This lower turnover will act to reduce both turbulence and training costs.

(5) Civilianization

As we move toward an All-Volunteer Force, we have been reexamining our "mix" of military/civilian personnel to determine the extent to which increased civilianization can reduce the requirement for military personnel and, collaterally, personnel costs. The policies governing the use of military and civilian personnel have remained substantially unchanged for more than 20 years. Simply stated, they provide for the use of civilian personnel in jobs which do not require military incumbents. The more obvious constraints on how far we can proceed in this direction are the effect on combat capability and on the military rotation base.

Our present intentions are to push civilianization as far as we possibly can within the limitations of the above constraints. We are presently engaged in civilianizing some 31,000 military positions, to be completed by June 30, 1974. An additional 6,600 military positions, representing the "support tail" for the 31,000 are also being eliminated. The military spaces for these jobs were deleted in last year's budget. In FY 1975, more than 8,500 military jobs will be civilianized along with an associated 1,250 position "support tail".

2. Reserve Forces

Under the Total Force policy, the Selected Reserve of the National Guard and Reserve provides approximately 30 percent of the manpower immediately available for national security in any future emergency. The economies of the Guard and Reserve in relation to the cost of like active force units are real economies only to the extent that the Guard and Reserve can produce levels of readiness commensurate with Total Force needs and can respond within a timeframe which makes their contribution meaningful.

In the Air National Guard, the Air Force Reserve and in selected units of other components, training and mobilization planning have progressed to the point where responsive readiness

is being attained. In others, further efforts have to be made to improve training and shorten response time. While significant improvements in readiness potential have been achieved through providing additional and newer equipment, much remains to be done to ensure adequate pre-mobilization readiness.

The economies of the Guard and Reserve also depend to a large extent on the relationship of the force structure of these components to the actual needs of the active forces for emergency augmentation. In this regard, some restructuring of Guard and Reserve units has been effected. The Army has converted all Guard and Reserve units to standard active Army tables of organization and equipment. The Navy has restructured its aviation program to provide equipped and deployable force units rather than flight training programs for replacement personnel. The Air Force has eliminated certain medical and postal units for which there was no immediate need and has converted a portion of its units to the associate concept which provides for full mobilization utilization of selected active Air Force transport aircraft. These examples represent a positive first step in the direction of what the Total Force must provide. We intend to accelerate the effort to relate every unit and every individual in the Selected Reserve to a specific priority mobilization mission. The Military Manpower Requirements Report for FY 1975 will provide details relating Guard and Reserve manning levels to present force structure.

While the initial emphasis of the Total Force policy was to increase the readiness and capability of forces in being, priority is now being given to a review of mission assignments, force structure, and training concepts. With this review in progress, efforts to improve manning, equipping, and training will continue to go forward. These efforts will be particularly directed toward improving the readiness of those units which have demonstrated their ability to meet manning objectives and to meld newly available equipment with manpower resources into an effective mobilization force.

a. Manning the Guard and Reserve

With the exception of the Air National Guard, reserve components have not been able to recoup fully the sudden losses in Selected Reserve strength which occurred with the temporary expiration of induction authority during the summer of 1971 (the present trend in Army National Guard recruitment, however, is quite favorable). The following chart shows Selected Reserve manning as of December 31, 1973, and compares it to the combined officer and enlisted strengths that existed when the general losses began.

Selected Reserve Strengths

	ARNG	USAR	USNR	USMCR	ANG	USAFR
December 31, 1973						
Officer	34,648	37,721	18,299	2,753	11,658	10,435
Enlisted	357,813*	189,517*	100,814	30,371	80,813	35,776
Aggregate	392,461*	227,238*	119,113	33,124	92,471	46,211
June 30, 1971						
Aggregate	402,175	263,299	130,041	47,006	85,689	50,180
Net Change						
	- 9,714	-36,061	-10,928	-13,882	+6,782	-3,969

* December figures do not include 6,282 non-prior service enlistees awaiting training in ARNG nor 1,249 in the USAR.

While officer strength has remained high, non-prior service enlisted accessions in all DOD reserve components for the first six months of FY 1974 were 17,802 against a program objective of 53,224 for the same period. Improvements in recruiting, however, have begun to reverse the downward trend, producing net gains in strength since the beginning of FY 1974 in three of the six Guard and Reserve components. Volunteer enlistments in the first two quarters of FY 1974, have been almost twice those of the same quarters of FY 1973.

Prior service accessions have generally been better than expected (73,170 compared to the December 31, 1973, objective of 51,679) and significant improvement has taken place in the retention of first term members of both the Guard and Reserve. For example, the Army National Guard, which had a first term re-enlistment rate of 13 percent in FY 1972, increased that rate to 21 percent for the first quarter of FY 1974 and Naval Reserve rates which were 15 percent in FY 1972, increased to 40 percent during the same quarter.

Today's personnel shortages in the Guard and Reserve stem from two basic causes. The first cause was the expiration of induction authority. The second was the associated absence of recruiting personnel and expertise -- understandable when one considers that commanders and administrators had been accustomed to processing draft-motivated enlistment applications on a waiting-list basis, rather than actively seeking new members. A major effort has

been made to improve Guard and Reserve recruiting capability. Total Guard and Reserve budgets for recruiting and recruiting advertising have been increased from $18.9 million in FY 1972 to $71.6 million in FY 1974, with much of the increase being applied to the assignment and training of recruiters.

While increased effort and recruiting capability have been the most apparent contributors to the slowing of loss rates, other Total Force initiatives are also having an effect. The basic concept of a Total Force has in itself provided a new sense of purpose. Guardsmen and Reservists now see growing evidence that they will be called and have a role to play in future emergencies. Equipment modernization is seen to symbolize genuine interest in Guard and Reserve readiness. Supply priorities have been revised to reflect missions and deployment schedules and no longer differentiate between active force and Reserve component elements. These improvements in equipping coupled with improved facilities and increased involvement with the Active Forces in joint training exercises are enhancing motivation which should augur well for retention of current personnel. Under new "round out" concepts, Army Guard and Reserve units of various sizes are added to active Army units at the next higher command level to increase the capability of the active units. Where such assignments have been made, the close integration of the Army Guard or Reserve unit into its parent organization has resulted in better readiness and increased enthusiasm among unit members.

Since these initiatives and improvements in training do more to increase retention of those currently in the program than they do to attract new members, ways must be found to increase accessions of non-prior service enlisted personnel. With an eye toward retaining to the maximum extent possible present cost differentials between Reserve and Active forces (annual pay for Guardsmen and Reservists runs about one-sixth of that received by their active force counterparts), improvements have been sought which are most likely to yield maximum results at minimum cost: relaxation of limitations on purchases in military exchanges for members of the Selected Reserve, extension of full time coverage under Servicemen's Group Life Insurance, provision of equitable benefits for Guardsmen and Reservists who are injured or killed while on active duty for less than 30 days or while traveling to and from training, and permission for retired active force enlisted personnel to participate in the Selected Reserve without loss of their retired pay.

In addition to those legislative proposals which have already been submitted, additional actions which might assist

in improving Reserve recruitment are being considered. Two of these measures concern retirement. The first involves a revision in the Reserve retirement system (compatible with the new system proposed for the active forces) which would provide additional retirement options to the Reserve member and improve the protection available for his family should he die before reaching age 60. The second measure would raise the current limit on inactive duty training credit for retirement purposes so that those individuals who are required to perform extra training to improve unit readiness would be able to include this training in the computation of their retired pay. A great deal of effort is going into developing these proposals in such a manner that they remain in the low cost category of incentives.

Another proposal under consideration which has substantial support within the Guard and Reserve community would entail limited tuition assistance during membership in the Selected Reserve. We are also investigating the degree to which application of improved training methods and advanced training technology can reduce the time required for initial active duty training. Reducing the time of required absence from civilian life to a period more compatible with normal civilian vacation schedules could be a great help in attracting high school graduates who have the summer free before they begin college or whose civilian jobs are programmed to start in the fall of the year. If it is determined that the time can be reduced without impairing training, we will propose a revision to the appropriate law.

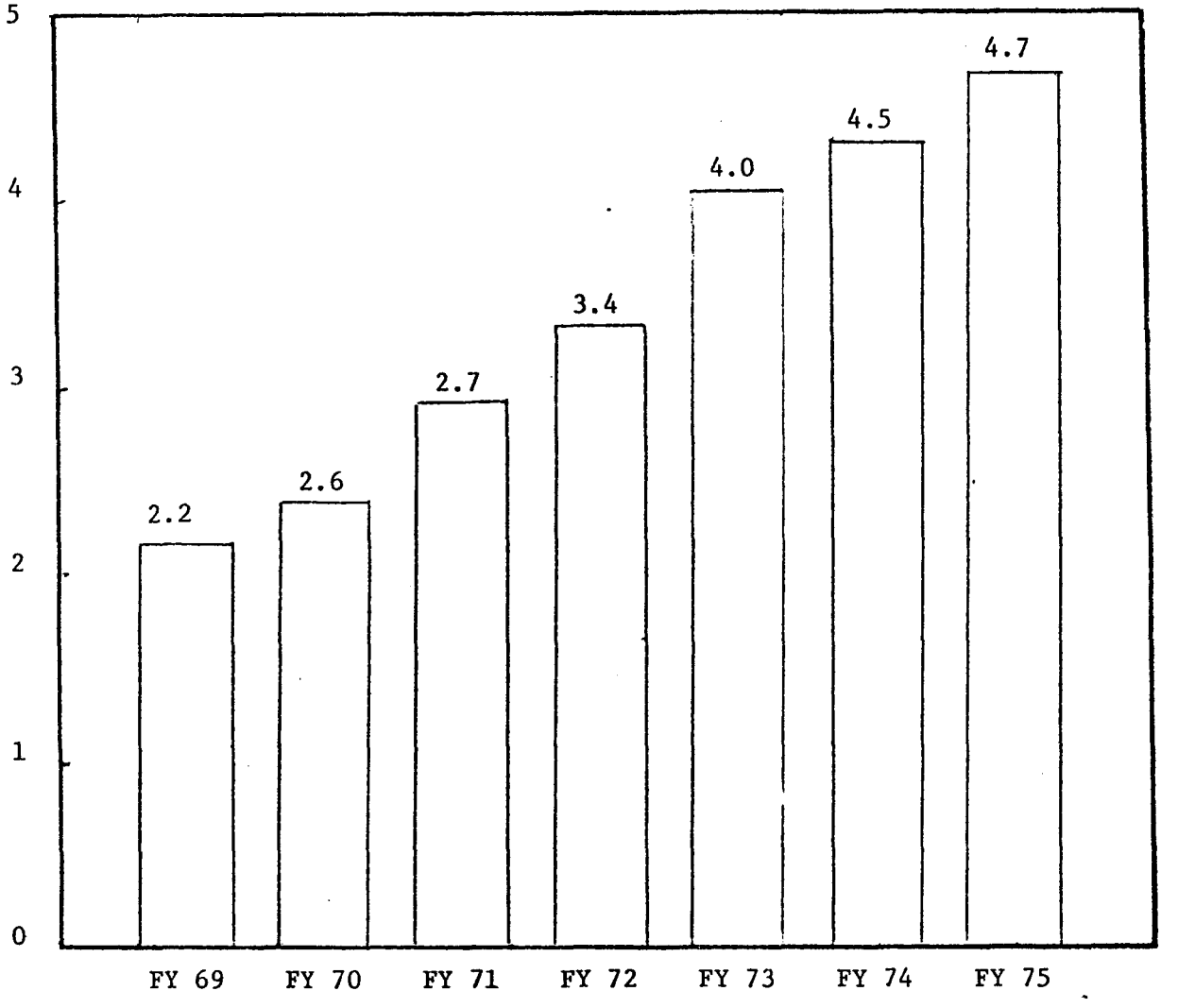
Costs

Funds budgeted for support of the Guard and Reserve have risen steadily over the past several years to their present level of $4.5 billion. They will increase to $4.7 billion for FY 1975. Personnel costs presently constitute approximately 41 percent of the total with the balance made up for the most part by items designed to improve operational readiness -- higher levels of operational training, better training sites, more maintenance facilities, and improved capability for maintaining modern equipment.

b. The Future of the Guard and Reserve in the Total Force

As mentioned previously a major and comprehensive study has been initiated to examine all aspects of the Guard and Reserve role in the Total Force picture and to recommend actions which will ensure future Total Force effectiveness. This study is placing a major emphasis on availability, force mix, limitations, and the potential of the Selected Reserve for use in future

RESERVE COMPONENT BUDGET
(Dollars in Billions)



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emergencies. It will also respond to the Congressional Amendment to the Armed Services Procurement and Authorization Act which calls for assessing the Air National Guard and Air Force Reserve readiness and management effectiveness and the potential for merger of the two organizations.

In view of the broad scope and sweeping nature of this study, the Guard and Reserve structure which subsequently emerges may be considerably different in many respects from the present structure. The end product should be a Total Force comprising the active Armed Forces and those units of the Selected Reserve which are essential to meeting initial military contingency requirements and which can be further augmented through mobilization of additional Reserve elements.

B. MANPOWER UTILIZATION

In this time of high personnel costs it is more imperative than ever that we utilize our people in the most effective manner possible. Toward this end, we are taking a hard look at how we might enhance our overall combat capability. We are also realigning domestic and overseas base support structures to keep them consistent with projected force levels and requirements.

By the same token, we seek the beneficial effects of inter-Service competition while avoiding the non-beneficial. The notion that each of the Services should be independent of the others so that it doesn't have to rely, as it were, on external sources of support is outdated. We can no longer afford it. We have to now think in terms of Total Force structure as opposed to separate interests. Consolidation of certain aspects of the Service training efforts represents a step in this direction.

1. Headquarters Reductions

During our military involvement in Southeast Asia, substantial augmentation of a number of headquarters establishments was necessary to cope with attendant problems of command and control, logistics, and administration of forces totaling more than four million military and civilian personnel. Over the past four years, we have been phasing down these headquarters functions. Between FY 1971 and FY 1973, headquarters manpower was cut 16 percent, more than 20,000 military and civilian jobs.

Although substantial reductions have been made, I am persuaded that further economies are possible. We are presently studying ways to make further cuts in our headquarters establishments without adversely impacting combat force effectiveness.

I am pleased to report that a good start has been made. The President's FY 1975 budget calls for a reduction of almost 9,000 headquarters jobs by June 30, 1975, from the FY 1974 estimates included in last year's Presidential budget. In addition, some 7,000 headquarters positions and functions are being transferred to field activities to improve efficiency and standardize headquarters functions. I expect to achieve further substantial reductions after the present review is completed and to use these savings to improve combat capability.

2. Base Closures

The base realignment announcement of April 1973, is affecting Defense installations and activities in 32 States, the District of Columbia, and Puerto Rico, and is resulting in the elimination or reassignment of approximately 42,800 positions (26,200 civilian and 16,600 military). Attendant with this realignment,28 communities have thus far asked for Federal assistance. Through the end of December 1973, the President's Economic Adjustment Committee has seen to it that these communities have received $2.4 million in technical assistance funding, $6.7 million in manpower retraining funds, and $1.5 million in other Federal program resources related to the conversion effort. More important, the President's Committee has helped each of these communities formulate a recovery strategy. This kind of assistance -- designed to help communities help themselves -- will continue until each has overcome the economic impact of realignment actions.

At this time, exceedingly few civilian personnel have had to be laid off without a job opportunity. A good example is the case of the Hunters Point Naval Shipyard in San Francisco where virtually all of the approximately 4,000 workers who have been displaced to date have been provided suitable alternatives.

Additional realignments of military installations both at home and abroad are presently under consideration. As a part of this program, we have recently ordered changes affecting 59 overseas activities/installations which in turn will affect approximately 4,000 personnel and result in an annual savings of about $35 million.

3. Training

While individual training is a fundamental prerequisite to combat readiness, it is also expensive, making very high demands on scarce resources. In monetary terms, individual training costs in excess of $6 billion each year. In manpower terms, about one-sixth of all military personnel -- students

and trainees, instructors and support personnel -- are engaged in the training mission and therefore unavailable for duty in operational units. The following table shows the general trend over the past decade.

TRAINING PERSONNEL

	FY 1964	FY 1968	FY 1971	FY 1972	FY 1973	FY 1974(Est)	FY 1975(Est)
Individual Training Personnel (military end-strength, thousands)	403	700	507	405	354	364	341
Training Personnel (as percentage of total strength)	15.0	19.8	19.9	17.5	15.6	16.6	15.8

A high proportion of individual training, notably recruit training and initial specialized skill training, is a function of the number of new entrants into the Services. This, in turn, is sensitive to such factors as term of enlistment and loss rates. As the table shows, training personnel consumed almost 20 percent of total military strength in FY 1968, when two-year inductees formed a high percentage of new entrants. Although the present trend is down, we are trying to further reduce the resources devoted to individual training by all means consistent with maintaining a skilled and combat-ready force. One approach we are pursuing is that of tailoring the training to the real rather than theoretical demands of a specialty. As an example of the kind of savings obtainable from this approach, we have achieved an annual savings of more than $2 million in the training of electronic and cryptographic equipment repairmen alone.

We are also emphasizing joint training, consolidating as many single-Service courses as practical into joint courses. An inter-Service Training Review Board has been formed which in its first months of operation identified 37 training courses which were subsequently consolidated into 18 joint courses. This resulted in an annual recurring savings of $480,000. Other courses with large enrollments are currently under review for possible consolidation.

Another approach we are pursuing is that of applying advanced technology to the training mission itself. For instance, we have undertaken a major program to expand the use of simulators in flight training. The long-term objective of this program is to substantially reduce flying hours consumed in flight training which in turn will generate savings in both aircraft maintenance and fuel consumption.

There are other ways of conserving training resources without loss of effectiveness which we are pursuing -- lateral entry (enlisting skilled personnel at pay grades commensurate with their training and experience); better use of trained personnel; use of on-the-job training in appropriate skills; and better management of training support and overhead, to mention only a few.

C. MANPOWER REQUIREMENTS

Manpower requirements result from the force levels described earlier in this report. The force levels themselves are derived from the national strategy designed to cope with a specified level of threat. Recommended military manpower strengths for FY 1975 are shown in the table on the following page. These recommended strengths will be explored in considerable depth in the forthcoming FY 1975 DoD Manpower Requirements Report to the Congress.

We strive for precise determinations of requirements in all areas of manning for all situations. The Services develop their respective manpower requirements through the use of planning factors, industrial engineering techniques, computer simulation and the like. We have high confidence in the requirements calculations, particularly with respect to strategic and general purpose forces. Some areas, of course, are more difficult to quantify than others since their requirements may be relatively independent of total force size. For example, such matters as how many intelligence officers should be assigned any given unit are more a function of the threat to be assessed than they are the size of the unit involved. The same sort of consideration holds true for research and development manpower where requirements relate primarily to technology and to the weapons developments of potential adversaries.

This uncertainty in programming the optimum level of requirements in some support functions stems from the difficulty in relating support levels directly to force effectiveness. Through various studies presently in progress, we are attempting to better define, and analytically quantify where possible, the relationships between support resource inputs and force effectiveness outputs.

Another relatively imprecise aspect of determining manpower requirements is that of forecasting future needs. Our stated requirements at any given time are those we believe to be essential in light of our assessment of security needs and of the need to allocate available resources between competing demands such as research and development and weapons procurement. As we get closer to plan execution, we refine our estimates to conform more closely

MILITARY MANPOWER REQUIREMENTS
(Active Duty End Strengths in Thousands)

	FY 73 (Actual)	FY 74 (Estimated)	FY 75
Strategic Forces	124	123	115
General Purpose Forces	909	901	929
Land Forces	512	513	537
Tactical Air Forces	165	169	169
Naval Forces	190	178	176
Mobility Forces	43	41	47
Auxiliary Forces	162	156	139
Intelligence & Security	63	56	48
Communications	47	49	40
Research & Development	35	33	34
Support to Other Nations	4	5	5
Geophysical Activities	14	13	13
Mission Support Forces	342	309	311
Reserve Component Support	14	15	14
Base Operating Support	239	208	212
Crew & Unit Training	36	35	35
Command	52	51	49
Central Support Forces	389	358	346
Base Operating Support	47	42	42
Medical Support	92	83	82
Personnel Support	32	31	31
Individual Training	151	140	131
Command	44	38	37
Logistics	21	21	20
Federal Agency Support	3	4	4
Individuals	326	327	312
Transients	106	90	88
Patients & Prisoners	12	10	10
Trainees & Students	197	215	201
Cadets	10	12	12
Total DoD	2,252	2,174	2,152

NOTE: Totals may not add due to rounding.

to the realities of what is a continually changing situation. This is, of course, the same process used by any major industrial firm.

Other complicating factors also have to be taken into consideration. In a no-draft environment, for instance, the seasonality of volunteer accessions and the retention rates of those already in the forces will affect actual strengths at any point in time. Another example of such factors is the impact of inflation on funds for military personnel appropriations as the year progresses. If Permanent Change of Station move costs or food prices increase more than expected, the military personnel program may have to be adjusted in other areas to stay within the total funds available. This adjustment in the personnel program may take the form of forced losses (early-outs) or reduced accessions, either of which may affect on-board strength at the end of the year.

The point to be made, in short, is that there are fundamental uncertainties involved in manpower planning. In spite of the increase in such uncertainties that emanates from an "all volunteer" environment, we are sizing our military forces on the assumption that we will meet whatever recruiting goals are needed. In fact, we have programmed an increase in Army strength for FY 1975 -- a move which I think demonstrates our confidence in being able to meet or stay close to requirements.

D. PERSONNEL POLICIES

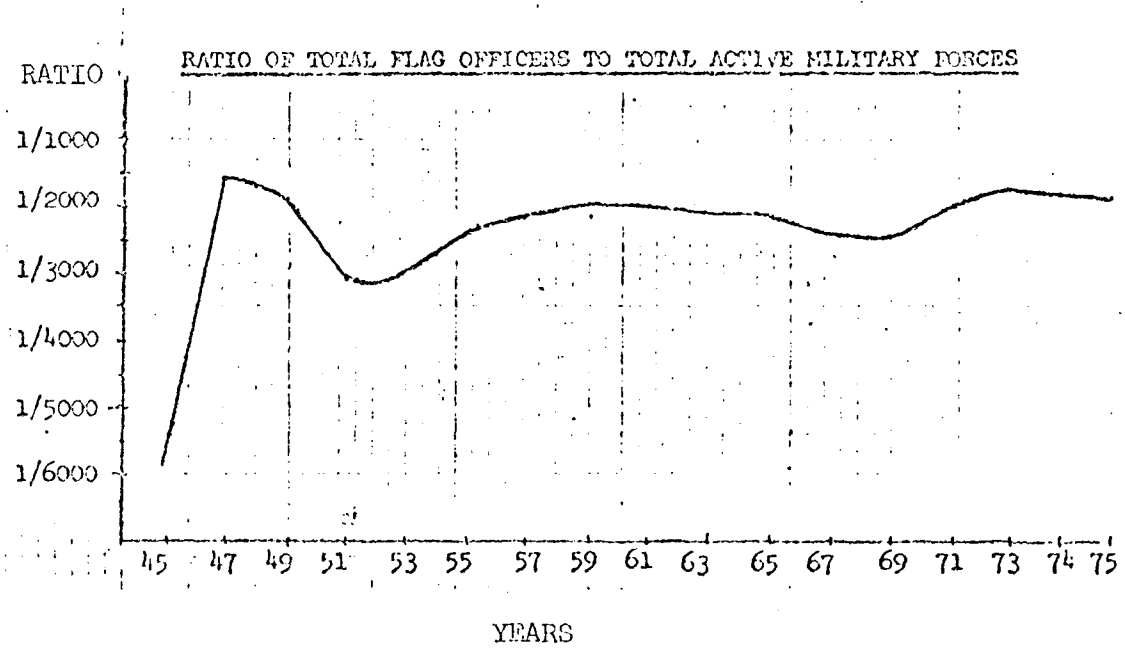
While it is important that we seek to improve utilization of manpower, it is equally important that we do so in the most equitable manner possible. In this regard, nothing impacts so much on morale as the policies we employ in managing our personnel. The potential impact of every action we take in this area must be carefully weighed in advance to ensure the fairest possible treatment for everyone.

We are attempting to apply this standard in those initiatives presently underway: realignment of the military and civilian grade structures, modernization of the military retirement system, and restructuring of the military compensation system.

1. Grade Structure

We are examining very closely the present grade structure to ensure that it is no richer than that required to meet the combined needs of readiness and personnel management.

The status of flag and general officers has recently been the subject of a great deal of scrutiny by individual members and working committees of the Congress. Invariably it is noted that the number of flag/general officers on active duty today is proportionately higher with a 2-million strength military establishment than it was with a 12-million strong establishment in 1945.



The change that has taken place over the past three decades has largely evolved from significant functional and organizational changes. The Defense Reorganization Act of 1958; the establishment of the Department of Defense, a separate Air Force, and the Joint and combined staffs and commands; the Defense research and development effort; and the sophistication of weapons and support systems have all contributed to additional flag officer requirements within the Defense establishment. Although these requirements would suggest the need for more rather than fewer senior officers, the Department of Defense has remained within its authorizations established either by statute or as

limited administratively by the Senate Armed Services Committee. In addition, as we complete the post Vietnam adjustments in our force posture, our Fiscal 1975 program calls for reducing the active duty strength of our top military managers from 1,352 to 1,231, the lowest flag officer level since 1954.

With respect to the remainder of the officer corps, the Services are confronted with the difficult task of scaling down a relatively large career force which has been maintained since 1951; a task made all the more difficult by the substantial expansion required for the Vietnam war. Time and a period of stability are necessary to achieve a balance of age, experience, and rank in the smaller forces programmed for the future if we are to avoid unnecessarily harsh and debilitating actions against our career people.

Table 1 on the following page demonstrates the dynamic changes that have occurred in the military personnel structure over the past decade. By the end of FY 1975, the officer force will have been reduced by 124,000, nearly one-third since the Vietnam peak. Table 2 shows a representative sampling of the commissioned officer grade distribution over the same period of time as compared to the programmed levels for FY 1975. The comparison shows that since the peak Vietnam strength was reached in 1969, the Services have been controlling and managing their structures downward.

During FY 1975 one out of every two military positions eliminated will be an officer. While large numbers of junior officers (many of whom were brought to active duty during the war years) have been released, the release of senior officers has presented some problems - for two basic reasons. First, reductions in force do not generally produce proportionate reductions in senior officers, primarily because there are fixed organizational and management functions which are not eliminated or significantly reduced when forces are reduced. A second and perhaps equally significant reason is that of tenure afforded by law. A regular officer may not be involuntarily retired before his mandatory length-of-service retirement date except under punitive conditions or by reason of physical disability or unsatisfactory performance of duty. Thus, existing procedures provide for the separation of certain officers, but they do not permit the early involuntary retirement of officers who are excess to the needs of the Services in times of force reductions.

To address this problem, we have proposed legislation that would authorize the Service Secretaries to involuntarily retire certain regular officers serving in the grades of Lieutenant Colonel/Commander and Colonel/Captain. It is a necessary piece

TABLE 1

DEPARTMENT OF DEFENSE
TOTAL OFFICER AND ENLISTED STRENGTHS (000's)

	FY 64	FY 69	FY 73	FY 74	FY 75
Officers 1/	337	419	321	305	295
Enlisted	2,349	3,041	1,932	1,870	1,858
TOTAL	2,686	3,460	2,253	2,175	2,153

1/ Includes Warrant Officers.

TABLE 2

DEPARTMENT OF DEFENSE
COMMISSIONED OFFICER GRADE DISTRIBUTION

Commissioned Officers	FY 64	FY 69	FY 73	FY 74	FY 75	Change Since 1969 #	Change Since 1969 %
Generals/Admirals	1,294	1,336	1,291	1,248	1,231	- 105	- 7.9%
Colonels/Captains	15,323	18,277	16,231	15,911	15,734	- 2,543	-13.9%
Lt Colonels/Commandrs.	36,347	43,999	36,454	34,839	33,646	-10,353	-23.5%
Majors/Lt Commanders	55,081	73,645	59,801	56,887	55,427	-18,218	-24.7%
Captains/Lieutenants and Below	213,085	251,147	186,481	176,470	170,634	-80,513	-32.1%
TOTAL	321,130	388,404	300,258	285,355	276,672	-111,732	-28.8%

of legislation if we are to respond to demands that grade structure balance be maintained during periods of force reductions.

This proposal represents an advance portion of an even more extensive legislative package recently forwarded to the Congress, the purpose of which is to implement the recommendations of the Report on Officer Grade Limitations submitted to the Congress in May 1973. The new grade limitations recommended in this report for Colonel/Captain through Major/Lieutenant Commander are designed to enable us to meet our officer requirements on a long term basis while providing adequate career opportunity for attracting and retaining young officers. This proposed legislation would provide new tools essential to more effective management of the officer force, provide adequate career opportunity, and unify what have heretofore been disparate rules among the Services. In this connection, it should be noted that the Air Force is currently provided comparability in career progression with other Services through temporary grade authority which expires September 30, 1974. If the proposed legislation discussed above is not enacted during the 93rd Congress, it will be necessary for us to take separate action to extend the temporary grade authority for the Air Force.

On the enlisted side, there are nine different pay grades, the top five of which (E-5 through E-9) include "sergeants" varying in title from "buck" sergeant to sergeant major. Many are NCOs, but many others are skilled technicians and specialists who operate and maintain complex equipment. At the end of FY 1974, we expect to have about 251,000 NCOs and technicians in these five pay grades in the Army. The bottom four enlisted grades include recruits, privates, privates first-class, and specialists/corporals. Recruits and privates will total about 252,000 at the end of this fiscal year and specialists/corporals about 176,000. Thus 37 percent of the enlisted force occupy the top five grades with the remaining 63 percent in the lower four grades. In other words, there are about 1.7 times as many in the bottom group as in the top.

As can be seen in the table on the following page, the numbers of enlisted personnel in the top five grades for all Services have been continuously decreasing since FY 1969, when over one million held the highest ranks. Some 20 percent of this group consisted of personnel in their first four years of service who were advanced to the higher grades to meet Defense needs. By reducing the number in the top five grades and establishing minimum time-in-service criteria for promotion, fewer personnel are now attaining the grades of E-5 and up during their first four years

DOD CAREER FORCE VS TOP 5 GRADES
1965 - 1974

of service. This results in a better correlation of experience with grade levels and a more equitable relationship between experience and compensation. Since less than four percent of the enlisted force had more than 20 years' service at the end of FY 1973, the present decline in the number of careerists can only be accelerated through forced attrition. Forcing large numbers of personnel out of the service short of retirement without severance pay would severely deplete the experience level of the force (until such time as it could be systematically restructured), adversely affect retention, and require higher procurement of inexperienced volunteers. In summary, it is our intention that the downward trend in numbers of careerists and those in the top five grades will continue at a manageable rate -- in keeping with the principles of sound personnel management.

2. Retirement

In March 1971, the President appointed an Interagency Committee to review the military retirement and survivor benefit system and to recommend changes as deemed necessary. In January 1972, a DoD Retirement Study Group was formed to review the recommendations of the Interagency Committee. The Study Group's recommendations, which provide the basis of our proposal presently before Congress for changing the non-disability retirement system, treat retirement as one of a number of interrelated elements of the compensation system (basic pay, survivor benefits, bonuses, special pay, and the like).

The compensation system itself has changed over recent years as active duty pay and allowances have increased substantially. In the past, a highly liberal retirement system could be justified in terms of off-setting the low pay received by an individual while on active duty. Since direct compensation has increased so dramatically, it has been appropriate to reappraise the retirement system.

The DoD Retirement Study Group noted several defects in the present retirement system: no retirement benefits are vested in the individual before serving 20 years; retirement annuities are based on terminal pay; appropriate separation payments are not available; the annuity formula does not provide a sufficient retention incentive beyond 20 years of service; and the system itself is generally ineffective as a personnel management tool.

With respect to cost, $2.4 billion were allocated to retirement in FY 1969; in FY 1973, the cost rose to $4.4 billion; and in FY 1974, with no change to the retirement system, $5.2 billion would be required. The projected growth in retirees and retired pay costs is going to place this element of compensation in increasing

competition with other requirements for scarce DoD resources. The Uniformed Services Retirement Modernization Act (HR 12505) addresses this aspect and attempts to rectify other shortcomings of the present system. A comparison of the long-term cost implications of the present and proposed systems is shown in the table on the following page.

When all parts of compensation are considered, individuals who retire under the new retirement system will receive substantially more overall compensation throughout their service career and retirement than members who retired before these changes occurred. Notwithstanding these larger considerations, however, the proposed retirement system will still be a liberal, progressive system when compared to most plans presently offered in the non-military sector.

A review of the standards and criteria for disability retirement showed that the laws governing such retirement were sound, but that the standards used in determining physical "unfitness" for military service were unrealistic. Accordingly, on January 29, 1973, new guidelines were issued which require that a finding of physical "unfitness" for purposes of disability retirement be a factual finding that a member is unfit to perform the duties of his office, rank, grade or rating.

The number of disability versus non-disability retirements during the period March through September 1973, has decreased considerably when compared to the same period in 1972 (see second table).

3. Compensation

All compensation changes are addressed to two problems: (1) manpower shortages resulting from a zero-draft environment, and (2) inefficiencies in the military compensation structure which result in excessive personnel costs. Most compensation changes address both of these problems, but with varying degrees of emphasis.

a. Flight Pay. The existing system of flight pay was developed in 1948, and later adjusted in 1955. While this system has in the past assured sufficient volunteers for aviation it has been generally ineffective in retaining a sufficient portion of trained aviators beyond their initial obligation. A principal reason for this has been the way in which flight pay incentives are structured. The highest rates are awarded to senior officers of over 18 years of service, while junior officers at their retention decision point and most flying-intensive years are

Retirement Cost Projections, Present and Proposed Systems
($ Billions)

	Present System			Proposed System (Retirement Modernization Act-RMA)			
	Retired Pay of Past Retirees (Persons retired before FY 75)	Retired Pay of Future Retirees (Persons retired in FY 75 and later)	Total Retired Pay	Retired Pay of Past Retirees (Persons retired before FY 75)	Retired Pay of Future Retirees (Persons retired in FY 75 and later)	Total Retired Pay	Cumulative 1/ Difference for All Intervening Years
FY 1976	$ 5.4	.7	6.1	$ 5.4	.8	6.2	+.1
FY 1980	5.3	2.6	7.9	5.3	2.5	7.8	0.0
FY 1990	4.8	8.1	12.9	4.8	7.6	12.4	-2.9
FY 2000	3.4	15.6	19.0	3.4	14.6	18.0	-12.1

ASSUMPTIONS:

1. RMA is implemented effective 1 July 1974.
2. Force size is fixed at 2.14 million.
3. Base Pay increases 5%/YR and CPI increases 1.5%/YR.
4. All involuntary separatees choose lump sum equity pay rather than deferred annuity.
5. Readjustment Pay is not included in RMA total. It would reduce total cumulative year 2000 from $12.1 billion to $10.5 billion.

1/ Difference includes all years starting with FY 75, not just those years shown.

MILITARY RETIREMENTS

Comparing First Seven Full Months Under New Guidelines
With Same Period One Year Earlier (Mar-Sep)

Grade	*	1972	1973
07 - 010	1	169	183
	2	77	14
	3	45.6	7.7
06	1	2,676	2,288
	2	525	151
	3	19.6	6.6
04 - 05	1	5,377	4,981
	2	566	263
	3	10.5	5.3
01 - 03	1	743	462
	2	359	187
	3	48.3	40.5
WO	1	813	1,110
	2	105	67
	3	12.9	6.0
Total Officers	1	9,778	9,024
	2	1,632	682
	3	16.7	7.6
E7 - E9	1	19,385	22,578
	2	2,107	901
	3	10.9	4.0
E4 - E6	1	18,494	16,013
	2	3,728	1,841
	3	20.2	11.5
E1 - E3	1	1,418	1,285
	2	1,020	939
	3	71.9	73.1
Total EM	1	39,297	39,876
	2	6,855	3,681
	3	17.4	9.2
All Personnel	1	49,075	48,900
	2	8,487	4,363
	3	17.3	8.9

*1 Total Retirements
2 Disability Retirements
3 Percentage Retiring with Disability

offered relatively modest incentive rates. The inadequate retention resulting from this system has resulted in substantial training costs.

Legislation presently before the Congress (H.R. 8593) provides for restructuring the flight pay system. If enacted, it would increase the incentive for younger aviators at their retention decision point. The current FY 1974 officer flight pay budget is $213 million. The estimated cost of the proposed system is $211.8 million. Since it costs us approximately $300,000 to train a new pilot (exclusive of certain fixed costs), it is anticipated that considerable additional savings will also accrue from improved retention.

b. Military Pay Adjustment System. The current military pay adjustment system is linked to that of Federal classified employees. However, the uniformed services operate under a pay and allowances system rather than a salary system, and current law requires that all upward pay adjustments be placed into basic pay with nothing going into allowances. This practice coupled with periodic non-comparability related increases in allowances serves to distort the entire comparability process and greatly increases the cost of military compensation items dependent on basic pay for their computation -- most notably retirement pay.

To correct this imbalance, we have proposed legislation (H.R. 10370) that would provide for the allocation of a portion of future comparability pay increases into quarters and subsistence allowances. Such a system would increase allowances to more meaningful levels, reduce the size of basic pay increases, lower the costs of retirement and other basic pay related compensation items, and make the military compensation system for active duty personnel more nearly comparable to that of Federal classified employees (the intent of current law). It is estimated that savings of more than one billion dollars would accrue by the fifth year of operation when contrasting the effect of the new system with what would otherwise occur under existing comparability law.

4. Civilian Employment

The greatest problems confronting us in this area are the simultaneous and contradictory demands from the Congress to effect further reductions in civilian employment while simultaneously civilianizing additional military positions.

a. Grade Levels. As with other Federal agencies, the Department of Defense has over the long-term experienced a persistent rise in the average grade of civilian positions. In August 1971, a program was implemented to reverse the trend with encouraging results:

533-559 O - 74 - 15

GENERAL SCHEDULE
Average Grade

	DoD	Decrease from 1971	Federal Average	Increase from 1971
1971	7.81	XXX	7.92	XXX
1972	7.73	-.08	7.96	+.04
1973	7.66	-.15	7.95	+.03

While anticipated civilian work force reductions in the Department of Defense will tend to raise the average grade, more liberal retirement benefits will tend to offset this effect. However, true civilian personnel cost reductions will only be achieved through management practices that keep positions and organizational structures in line with actual work requirements. Through our ongoing program of position review and evaluation we will continue to pursue our goal of improving manpower utilization.

b. Selective Retirement. While we are concerned about making improvements in grade structure, we are equally concerned about the aging status of our civilian work force. The present system permits employees the option of remaining employed for as many as 15 years after attaining full retirement eligibility, while management has no option whereby it can replace senior, retirement-eligible individuals with younger, potentially more versatile employees.

The problem has been compounded in recent years by the sharp downward trend in our civilian employment as we have moved to a peacetime posture. Reduction-in-force procedures tend to increase the average age of the work force and inhibit the development and retention of recently recruited younger employees. U.S. Civil Service Commission statistics show that 16.3 percent of the total civilian work force in June 1972, were over 55 years of age, compared with 15.7 percent in June 1970. It is significant, too, that approximately 16 percent of the Federal civilian employees in 1970 who were over age 55 had more than 30 years of service, while nearly 21 percent of the 1972 work force over age 55 had more than 30 years of service.

In an effort to increase retirements during periods of manpower turbulence, legislation was obtained (PL 93-39) in June 1973, which during periods of major reductions in force permits employees with 25 years of service (regardless of age) and with 20 years of service at age 50 to optionally retire. Although PL 93-39 has provided some relief, the problem could be further eased if we were granted some measure of authority to initiate retirement

on a selective basis. We would propose such retirement for those Civil Service employees who meet the requirements for optional retirement eligibility and whose retirement would permit the retention of younger members of the work force who would otherwise be separated by reductions in force.

As presently constituted, the Civil Service retirement system provides management with little or no role in deciding which employees are to retire and at what time. The only true options are vested in the employee who can retire anytime he wants after age 55 if he has completed 30 years of service -- but who doesn't have to retire until he reaches age 70 or becomes disabled.

A reasonable middle ground would be to authorize the selective retirement of employees at the GS-13 level and above who are at least 55 years of age and have at least 30 years of service. Their agency should have the authority to compensate them accordingly through a supplemental benefit. This proposal would give management a cost-effective option approaching that long given employees. It would also leave protected those employees who have insufficient service to receive full annuities.

c. Minority Employment. Our performance in civilian minority employment has been better in the blue collar sector than it has for white collar workers. Minority representation in Wage Grade employment has remained above 25 percent despite sharp cutbacks in the blue collar work force between 1969 and 1973. While the total number of Wage Supervisors also fell during this timeframe, the number of minorities holding such positions has increased from 3,663 to 4,268 -- a 22.5 percent rate of increase.

Improvement in white collar (GS) Defense employment has not kept pace with our progress in blue collar minority employees and supervisors -- or with the rest of Federal GS employment. In 1967, minority employment at the GS 9-11 levels was 6.5 percent, close to the 7.0 percent of non-Defense agencies. By 1973, it had only risen to 8.2 percent while the non-Defense agencies had reached 11.0 percent. The same held true at the GS 12-15 levels: 3.1 percent in 1967 vs. 3.5 percent for the rest of the Federal Government; increasing to 4.4 percent by 1973, when the rest of government had reached 6.2 percent. We are seeking to improve our record in this area through more diligent executive search for minority candidates whenever vacancies occur.

Of those Defense contractors reviewed during the first three quarters of calendar year 1973, total employment had fallen 136,000 since 1969, while minority employment had increased by nearly 57,000. We have reason to believe that this trend will continue.

E. SPECIAL PROBLEMS

1. Race Relations

Race relations in the Services remain a problem as racial incidents continue to occur. The fact that disciplinary measures are often perceived by minorities to be impacting on them in an inequitable manner serves to further exacerbate their frustrations and dissatisfactions. These perceptions contribute to polarization which in turn leads to confrontations.

The principal program designed to offset these problems is the race relations education program, the nucleus for which is the Defense Race Relations Institute (DRRI) at Patrick Air Force Base, Florida. Upon completion of training at DRRI, graduates of the Institute (approximately 1,200 each year) are expected to conduct race relations training within their respective Services. A Racial Perceptions Inventory Study is currently being developed on a contract basis which will enable commanders to assess the effectiveness of this training.

We require race relations training each year for all military personnel. In addition, all General and Flag rank officers receive special race relations orientation and equal opportunity management courses.

Most of our equal opportunity thrusts have been directed toward the black-white problem. Historically, the concerns of other minorities have been overshadowed by their small statistical representation. As gains for black Americans have become visible, though, these minorities have begun to seek improvement in their own lot and to rightfully demand their constitutional share of the benefits of our society. The specific problems of all minorities in the Services are now being addressed through the curriculum at the Defense Race Relations Institute.

While substantial gains have been made in enlisted minority accessions, a continuing need exists for more minority officers of all types. Increased emphasis has been placed on this aspect of recruitment, but progress to date has been slow and is expected to continue in this vein -- particularly in view of the highly competitive alternatives available in the private sector.

Our present directive pertaining to off-base housing is the strongest and most effective document promulgated on this subject to date. It now protects women, permits the use of verifiers in cases of suspected discrimination, requires commanders to impose 180-day sanctions against violators, provides greater relief for complainants and extends application overseas.

2. Drug Abuse Control

The Department of Defense still has many serious problems concerning drugs and alcohol in the Armed Forces and will continue to have them to a certain extent as long as the abuse of these substances remains endemic to our society. However, the use of heroin, which was the most alarming problem in 1971, has abated considerably, and problems with other types of drugs also appear manageable at this time. Service programs for identification, treatment/rehabilitation and prevention through education continue to be refined and new, innovative techniques developed.

Identification of the drug abuser remains the key to reducing and controlling the drug problem. The major objectives of the present identification program are: (1) to identify drug abusers at an early point, before serious physical or psychological harm has occurred; (2) to provide a degree of deterrence for some individuals who might otherwise be inclined to experiment with illegal drugs; and (3) to provide improved data on the prevalence of drug abuse by area.

Our exemption policy which enables self-referral to treatment programs on a non-punitive basis is our most effective means of identification. Under this policy, more than 73,000 Service members involved with drug abuse have volunteered to receive treatment and rehabilitation. Not only does this approach exempt the Service member from disciplinary measures, but it also enables him to leave the Service under honorable conditions if in-Service rehabilitation doesn't prove feasible.

The DoD urinalysis screening program is another effective method of identifying drug abusers. Rigorous sensitivity standards identify the casual or experimental user as well as those who are more seriously involved. Eleven regional drug testing laboratories are presently in operation, which have to date handled more than 4,000,000 tests.

All Services have developed treatment/rehabilitation programs which have proven effective in returning the majority of drug abusers to duty. The disposition of recently identified military drug abusers as of the end of FY 1973 is as follows:

June 1971 - June 1973

Rehabilitated and Returned to Duty	44,692	52.0%
Still Undergoing Rehabilitation	8,609	10.0%
Separated after Rehabilitation	27,606	32.1%
Transferred to Veterans Administration Hospital for Additional Treatment	5,107	5.9%
TOTALS	86,014	100.0%

From a peak of 8,818 discharges reached in calendar year 1971, administrative discharges for drug abuse continue to decline. For the first six months of CY 1973, only 1,820 discharges were given. This can be attributed to a decline in the incidence rate of drug abuse, full implementation of the exemption program, and the success of rehabilitation programs in returning servicemen to duty.

3. Alcohol Abuse

The Department of Defense alcohol abuse prevention program has been implemented worldwide for all Services. Educational material has been made available for all personnel, and courses of instruction in alcohol abuse prevention are to be included in all school curriculums, from basic training through the Service Academies.

Emphasis on guidance and counseling for the individual who experiences difficulty with alcoholism is reflected in the increased admissions rates at treatment facilities.

	CY 1972	Jan-June CY 1973
Army	5,255	5,344
Navy	1,059	1,134
Air Force	408	341

Reporting procedures for rehabilitees are being refined to provide follow-up for determining the success rate of treatment.

V. MANAGEMENT

In this final chapter of the Defense Report, I would like to describe briefly the principal management improvements that Deputy Secretary of Defense William P. Clements, Jr., and I are pursuing. Our emphasis is on improvements in four areas:

-- Planning and management guidance given to the Military Departments and Defense Agencies,

-- Management of the weapons acquisition process,

-- Achievement of efficiencies and economies in the support structure,

-- and, in this difficult time of energy shortage, ensuring that we have good energy management and conservation practices.

A. PLANNING AND MANAGEMENT GUIDANCE

Deputy Secretary Clements and I decided to continue the practice of our immediate predecessors and give the Services budget guidance rather than detailed force guidance.

Budget guidance, in our view, together with my general defense planning guidance and the military planning guidance of the Joint Chiefs of Staff encourages the Services to analyze more fully the tradeoffs between alternative uses of resources. Naturally, this guidance takes into account the needs of the Department as a whole. It aims at ensuring that the Services are working in the right strategic direction in shaping their program recommendations and that the Service programs are complementary, not duplicative. This policy is one of our major efforts to strike the right balance between the beneficial effects of decentralization and inter-Service competition and the adverse effects of inter-Service redundancy and excessive rivalry.

We have continued the Planning, Programming and Budgeting System (PPBS) essentially unchanged in preparing the FY 1975 program and budget. This has proved a satisfactory arrangement for preparing, reviewing and determining the force structure and major equipment programs we require. We are examining the PPBS system, however, to see how it can be strengthened and, particularly, whether or not it is possible to achieve better coverage of the support area within the PPBS. I will give you a more complete analysis on this in my next Defense Report.

We also have begun a management by objectives (MBO) program in order to focus top management attention on a key list of specific management objectives we expect to accomplish, primarily in the support area. The MBO program is being used to supplement the PPBS and to provide a "results" oriented approach to DoD management.

Both Deputy Secretary Clements and I realize, of course, that good management is not so much a matter of management systems, whatever they are called, as it is of the demonstrable results achieved. It is our intention to stress results.

We also are trying to improve the communication and interchange with the Congress on management issues and data. For example, among the most important elements of our reporting system are the Congressional Data Sheets and the Selected Acquisition Reports (SARs). In December, 1973, I initiated a review of the SAR system and directed that the results be discussed with interested Congressional committees prior to any substantial change in the system. Our goal in the review is to streamline the SAR so that it can be fully responsive to DOD management needs as well as providing Congress with the timely information it needs and desires.

The review is well underway. The review committee is considering 22 separate issues -- including recommendations from the Congress, the Comptroller General, and the Department -- for improvement and refinement of the SAR.

I am concerned that we achieve the right balance between Congressional oversight of the Department of Defense and the flexibility necessary within the Department to manage our programs efficiently. Secretary Laird spoke to this issue from his extensive background in both the Congress and the Department of Defense in his final report to the Congress in January 1973. It is too soon for me to have adequate insights or specific recommendations for achieving this balance, but it is an area in need of scrutiny and discussion between us. I will have more to say about this later. I am sure the Congress will be as interested in this question as are we in the Department.

B. FORCE AGING AND MODERNIZATION

We have said that we want to keep force structure in order to maintain perceived balances. To do so, we also want to keep pace with potential adversaries in modernization. At the same time, there is a need to maintain a certain average age of systems in the force. However, the rising costs of our newer weapons systems, the relatively modest increases in real value of Defense budgets, and some previous postponements or other delays in modernization (notably those that arose during the war in Southeast Asia) have led to a significant aging problem in the force. The aging problem is seen in the

increasing approach to the end of service life of particular force elements (i.e. bloc obsolescence), retirements without replacement, greater maintenance backlogs and funding requirements, and extensions of expected service life. Aging leads to significant pressures on force structure, for systems either wear out and are withdrawn from the force without replacement, or they are replaced on a less than one-for-one basis by significantly more costly systems.

Various solutions to this problem have been discussed, such as "high/low" mixes of systems, increased procurement funding, reduction of force structure where possible, and better management during the development and procurement cycle so as to reduce the unit costs of systems.

We have conducted studies of this problem in the past year. One significant effort has been to have the Services draft "extended planning annexes" which look at modernization in the force beyond the present planning period, that is FY 1980 and beyond. This was one of the recommendations of the DoD Cost Reduction Study. These extended planning annexes have been used by the Services to estimate the impact on forces in the 1980's of a constrained level of budget in constant dollars. The major variables for trade-offs in these studies were force, age and size as well as the unit costs, leaving aside consideration of performance against the future threat. Thus we have made the assumption that the presently planned force structure is generally appropriate for the foreseeable future. The studies also assumed that maintenance requirements of new equipment will be the same as those for current equipment (probably optimistic), and assumed in some cases (such as Navy fighters) that new systems will cost less than those currently being procured. These studies have also left aside the possibility of radical changes to the U.S. Defense budget or the demands of any conflicts that might occur. The studies concentrated on major acquisitions, which constitute about 65 percent of total procurement. Thus the Army reviewed in detail about $2 billion of their annual assumed procurement budget, the Navy about $7 billion, and the Air Force between $3 and $4 billion, depending on the year. The remaining procurement funds would support other procurement (munitions, spares, modifications, etc.).

The conclusions reached in these studies were that our General Purpose Forces tended to age throughout the next 15 years. Major exceptions were tanks and airlift aircraft. These exceptions were also the only cases in which the average age of the systems was maintained at half the expected service life. All other major categories of systems tended to age at a significant rate. The most pressing problem is the tactical Air Forces where the Services now project

much longer system life than history would suggest is realistic. This assumption requires further study before acceptance. But whatever the assumption, the age of tactical aircraft is increasing at nearly half a year per year, resulting in an average force age of over 10 years by 1985, in comparison to the current age of less than six years.

AVERAGE AGE OF AIRCRAFT
(Years)

	1975	1980	1985	1989
Navy Fighters	5.1	7.3	8.8	7.9
Navy Attack	5.6	7.9	12.2	11.7
Air Force Fighter/ Attack	N/A	7.0	9.0	11.0

Other systems show the following aging trends:

AVERAGE AGE OF SYSTEMS
(Years)

	1980	1984	Normal Life
Army Helicopters	11.2	12.2	12-15
Army Tanks	10.8	9.8	20-30
Navy General Purpose Ships	11.4	12.9	25-30
Air Force Airlift Aircraft	17.0	15.0	20-25

These average ages compare to projected lifetimes shown below. Life projections are based primarily on engineering service life estimates and do not reflect technical or tactical reasons for changing models. In general, while the experience column below reflects the combination of all reasons, the air frame service life should be expected to exceed the actual service life. Using historical experience with the life of systems as the basis for projecting the life of newer systems would tend to increase the magnitude of the aging problem, since more new aircraft would have to be procured in order to keep the force at an acceptable age. More rapid turnover of the inventory would be the result.

EXPERIENCE VS. PROJECTED LIFETIME
(Fighter/attack aircraft - years)

Experience		Projection	
F-8	10.0	F-4B/N	17.5
F-100	18.0	F-14	19.6
F-105	16.0	A-7	20.2
F-104	10.0	A-6	18.4
A-1	20.0		

We have attempted to make some estimates of the resources needed in the 1980-85 period to stabilize the aging process for all major classes of weapons, and suspect that as much as a $1 to $2 billion increase in major procurement funding may be needed in that period to stop the aging process if no force level changes are made. Rolling back the age of equipment would take more and would depend on how long we wait.

In the budget review of the past several months, we have initiated and accelerated a number of procurement programs for existing proven systems in order to arrest aging while maintaining force structure. We have also funded system reworks and modifications which should contribute to extending the service life. We will now make sure that our estimates are correct. We will also set long-term force level goals and realistic long-term funding expectations. Certainly more stability in planning Defense resources than we have had heretofore would be of assistance. Whether the international situation, conflicts, or domestic considerations will permit this remains to be seen. We are also attempting to reduce the age of weapon systems by the following measures:

-- Improved independent cost analysis in the Services and OSD. The cost analysis improvement group (CAIG) was established in January of last year. It is described in greater detail later in this section.

-- Design to Cost. Production unit costs have been established by defining unit cost thresholds in the development concept paper (DCP) approved by the Deputy Secretary. The cost threshold obligates the program manager to attempt to develop a weapons system that can be acquired within the cost threshold.

-- "Fly Before Buy". Operational test and evaluation (OT&E) before production has received major emphasis with the establishment of a Deputy Director of Defense for Research and Engineering for T&E. DOD Directives now require an initial operational testing phase prior

to the production decision. This should reduce the need for costly modification and retrofit programs after production initiation and should increase the probability of avoiding major failures in production systems.

-- Prototype Programs. A few prototype development programs have been initiated which may provide low cost procurement options without requiring in advance a commitment to procurement.

-- Low Cost Systems Development. Systems such as the A-10, patrol frigate, and Sea Control Ship were conceived as low unit cost weapons systems.

In conclusion, the program we have presented this year should enable us to keep the greater part of the present force structure while making significant progress in replacement and modernization. However, we have some indications of significant aging problems which will come upon us in the future, particularly in the 1980-85 time period. This may require some significant changes in procurement programs in the coming years.

C. THE WEAPONS ACQUISITION PROCESS

In December 1972 a study was completed in the Department and subsequently reviewed in detail by Deputy Secretary Clements recommending improvements in our weapons acquisition procedures. During the last year a number of decisions have been taken to implement the major recommendations. The principal changes are noted in the following report sections on long-range planning and review and weapons systems cost reduction.

1. Long Range Planning and Review

We are preparing three experimental Mission Concept Papers (MCPs) on strategic offense, continental air defense, and theater air defense. These papers are planning documents designed to provide an understanding of the broad functional and fiscal context into which proposed new systems should fit during their development, acquisition and operational life. The MCPs include assessments of the threat, resources currently projected as available for the specific mission area, potential military needs, and major deficiencies in projected operational capabilities. They will have the following uses in the procurement of new weapons systems:

-- Early identification of new technology required.
-- Aid in setting unit cost targets and evaluation of affordability.

-- Planning for efficient use of the industrial base.

-- Estimating resource allocation and availability.

-- Scheduling weapon system development and replacement, including force implications of new developments.

2. Weapons System Cost Reduction

To decrease the cost associated with the greater performance demanded of replacement weapons systems, we are making a sharp distinction between systems that are needed and those that are "nice to have". As obvious as this sounds, its implementation requires that we have clearly established force objectives and requirements. We are doing this in Development Concept Papers (DCPs) and within the Defense Systems Acquisition Review Council (DSARC). We are structuring our forces with the "Hi-Low" force mix concept. For a particular mission, we would have a small number of high-performance, sophisticated weapons capable of coping with the maximum enemy threat and a larger number of less sophisticated and less expensive but capable weapons for countering the lower capability enemy threats.

We are changing our weapons acquisition objectives from an emphasis on improving the state-of-the-art in performance to an emphasis on quality equipment having an acceptable performance for an affordable cost. When a requirement for a particular weapon system is objectively substantiated, we ask how this need can be satisfied as economically as possible. Controlling of sophistication must be accomplished very early in the weapons system life cycle process. We cannot afford unnecessary items in any system, and we must adhere to the requirement that any post-contract design changes be tied to decisions on dollar availability.

Having decided on design essentials, the designer must focus clearly on unit production costs, as well as on the cost of operating the system, before the design goes into production. In order to do this, we have tasked "Request for Proposal (RFP)/Contracts Requirement Review Boards" set up in all Services to examine RFPs and contracts to ensure:

-- Minimum use of exclusive military material specifications in favor of more general commercial standards and practices where practicable.

-- Promotion via RFPs of full use of "off-the-shelf" and/or standardized components developed for either military or commercial use.

-- Maximum flexibility allowance in contractor design to encourage tradeoffs in performance, schedule or other specifications for savings in acquisition or life cycle costs.

We have developed a design-to-a-cost concept within the Department that makes cost, along with performance and schedule, of primary management concern throughout the acquisition process. The Services have submitted unit flyaway cost goals for major systems still in development. These will be the basis for determining design-to-a-cost goals. By the end of the fiscal year, our plan is to have extended these procedures to all major weapon systems where it is possible to use them.

With design-to-a-cost, the Services and their project managers will have the authority to make the performance and schedule adjustments necessary to achieve cost goals. For future programs, a design-to-a-cost estimate will be established at the earliest possible date, but not later than entry into the full scale development phase of the acquisition process.

A Cost Analysis Improvement Group (CAIG) was established within OSD to assess the reasonableness of cost estimates and the criteria used in their development. At the same time, each Service has developed a staff component capable of preparing independent parametric cost estimates. These Service components, working with the OSD CAIG, prepare an independent cost analysis each time a weapons system is reviewed by the DSARC.

The CAIG is still too new for us to assess fully the effect it will have, if any, on reducing cost growth. Some results, however,

already are evident. The development of a separate cost estimate, free from the optimism and pressures of the program advocacy channels and using different techniques, has provided an independent and objective check on the reasonableness of the project manager's estimate. Perhaps the most important benefit, however, has been that conflicting cost views become visible at the top level, thus allowing free and open discussion of the cost issues involved in defense systems procurement at the highest policy levels before important decisions are made.

We are emphasizing the use of new technology for reducing costs and improving reliability as well as for increasing the performance and range of capability for our weapons systems. New technology is useful, however, only when it becomes a proven scientific or engineering capability ready for application. DoD has a record of too often adopting new technology that is insufficiently proven and then having problems in system development which cause unanticipated increases in cost. This situation must be corrected. Spending more on experimental prototype demonstrations of new technology and demanding demonstration before its adoption ("Fly-Before-Buy") can yield highly leveraged, multifold savings in the later costs of engineering development and production. New technology can be used directly to save money by:

-- Simplifying design, decreasing materiel and manufacturing costs and increasing shelf or service life.

-- Improving safety and ease of handling of weapons, equipment and material thus decreasing the logistic and maintenance support required.

-- Providing knowledge and the apparatus necessary to automate manufacturing and logistic operations in order to gain manpower savings.

New technology can be applied indirectly to save money through increases in effectiveness of weapons systems or through design of modular components useful in more than one weapons system.

Within a relatively fixed total DoD budget, any savings from technology applications will hopefully be realized in the form of military potential retained in the face of an increasingly competitive environment. Such savings could help to keep us from "pricing ourselves out of the market". Savings in the form of retained capability are not easily measured and, consequently, are hard to prove. They are nevertheless real and important. New technology will yield savings only if we take a hard line in limiting the application to meeting truly essential requirements in efficient ways. This we intend to do.

3. Project Managers

The success of a major weapons system acquisition program is determined not only by our ability to acquire equipment which meets the stated technical performance objective within planned schedules and costs, but also by how effectively the system operates in combat and by its ability to be supported and maintained in the field. The project manager's responsibility encompasses all these aspects of weapon system development and acquisition. Experience, good judgment, and a long tour in the assignment are essential if the project manager is to meet these responsibilities successfully. Recognizing this, the Services are continuing to place greater emphasis and importance on selection of project managers, on giving them the authority and accountability required to run their programs and then on keeping them in the job for a longer period of time. Examples of Service efforts are noted below:

-- The Navy bases the selection of Navy major project managers on selection board procedures similar to those used for the selection of command officers of major combatant ships, since the project manager position is the equivalent of a major combatant ship command in terms of career enhancement. The other Services have placed equivalent emphasis upon attaining high caliber individuals for project managers assignments.

-- The Army has increased the average tenure of project managers. The tenure of officers reassigned during the period January 1 through June 30, 1973, was 3.3 years as compared to 1.3 years during the same period in 1969. Similar or greater increases in tenure time have been shown by the other Services.

-- The Services are seeking ways to streamline the reporting requirements of the project managers to higher authority. Under the Air Force "Blue Line" reporting system, for example, the project manager is allowed direct communication with the commander of the Air Force Systems Command, the Air Force Chief of Staff and the Secretary of the Air Force. He uses "after-the-fact" reporting to intermediate commanders.

In order to ensure that the Services continue to place a high priority on acquiring and keeping able people as project managers and that the project managers are given the authority, responsibility and accountability required to successfully accomplish their tasks, we have formulated a project manager objective as part of the Management by Objective program. It consists of:

-- Increased emphasis on education and experience in selection of project managers.

-- Greater promotional opportunities for project managers.

-- Equating major project managers with major commands in terms of career enhancement.

-- Rotation of project managers to coincide with program milestones rather than an arbitrary date. This allows longer tenure for project managers.

-- Clearly defined charters from higher authority to the project manager delineating his range of authority and responsibility.

-- Accountability to higher authority by the project manager for the successful and timely completion of project milestones.

D. SUPPORT STRUCTURE

I am placing intense management effort on the realignment of our support structure. The Services, Defense Agencies and the Office of the Secretary of Defense are critically examining the requirements and needs of the operating forces for support. It is my intention to allow the Services to reallocate to the combat force those resources saved by decreasing and consolidating the support establishment. This conversion of support resources to combat resources provides an incentive and the means by which the military Services can help to maintain the level of combat forces necessary for our national security. We are seeking "swords from fat".

1. Base Realignments

The DoD base realignment program has as its objective the significant reduction of operating costs by reviewing the use of military installations at home and around the world and by reducing or realigning those bases which must be kept. Reduction of operating costs is being approached in a two-phased program.

In the first phase, and within a short timeframe, we expect to reduce or realign a variety of bases both here and abroad as the result of internal military department management improvements. The Service Secretaries have advised me that when these actions are completed they will have drawn down the military base structure to a level consistent with current force structure support.

In this connection, I would like to point out that over the past decade there have been almost 3,400 separate actions taken to close, reduce or realign military installations on a worldwide basis. These actions have resulted in the reduction of approximately 700,000 military and civilian personnel.

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It is obvious, however, that the Defense Department must press ahead toward the achievement of additional savings in the overhead and support areas associated with military bases. If we do achieve, in fact, a military base structure consistent with the requirements for support of current forces then we must move on to the next plateau. This involves a concerted effort to maximize the cross or joint Service utilization of bases and facilities. This is not seen as cross or joint Service use in the rather conventional sense of similar but separate Service facilities at a single installations Rather it is seen as the sharing of certain logistical functions that give evidence of commonality. Such functions as aircraft and vehicle maintenance and repair fit this context, for example. There are several others.

Additionally, we are reviewing the organization of the military departments with respect to the numbers and kinds of headquarters and headquarters facilities. Given the significant reduction in size of the Armed Forces over the past several years, opportunities now exist to consolidate or eliminate some of these headquarters activities.

2. Standardization of Management Systems

Many of the basic characteristics of management systems within the Department are common to more than one DoD component. Significant advantages can be realized if these management systems are standardized with respect to system design and related automatic data processing equipment and procedures. Among the advantages are more effective use of limited personnel resources with hard-to-find talents, reduced training requirements, ease of audit and management review. Although standardization of management systems has been a consideration in system design in the past, we feel that increased emphasis from top management in the Department will bring further improvements. Our particular targets are those different systems operated by different defense components to perform essentially identical functions. Differences which are essential to satisfy inescapable variations in component missions will be accommodated, but unnecessary differences, which exist only because of long term usage, will not be tolerated.

As part of our management by objectives program we have established a task force under the direction of the Assistant Secretary of Defense (Comptroller) to standardize defense management systems where standardization will reduce systems development or maintenance costs, or operating costs, without sacrifice of support essential to management.

3. Support Cost Accounting by Weapons System

Support costs in general are not accounted for along weapon system or support system lines. It is not possible with the present DoD management and accounting system to find out, without a specific large-scale study, how much we spend to support specific weapons systems. Nor is it possible to assess easily the impact on readiness of alternative budget allocations which relate to these costs. Present mangement guides and controls are inadequate to give confidence that reductions do not impact readiness.

The Department of Defense management and accounting system is designed primarily to identify costs organizationally and functionally. In the interest of more efficient management of the resources used in operations and maintenance of weapons systems, we believe it is necessary that we have cost-effective management and accounting of support costs by weapons support system. The break-out of operation and maintenance cost by weapon or support system is necessary to meet our major goal of optimum readiness within budget constraints. While there have been previous efforts to establish equipment maintenance cost accounting by weapon support system, these have been limited in scope, and implementation is only partially complete.

As another one of our management by objectives actions, we have established a task group to consider management focus, data needs, data systems and cost, system uniformity and phasing of implementation to develop a system to identify maintenance and other operations costs by weapons or support system.

4. Logistic Support Aspects of Weapons Acquisition

The improvement of reliability, maintainability and life cycle support of new weapons is receiving increased emphasis within DoD. Logistic support is a major design parameter with the objective of reducing the number of equipment failures, cutting repair costs, and decreasing distribution and inventory costs of components through greater standardization. To assure that design objectives are reached and that required logistic planning has been accomplished, a plan for logistic support has been made an integral part of weapons system development plans. Demonstration that logistic design parameters have been achieved is a major objective of developmental and operational testing and evaluation. System program managers have been charged with the responsibility for assuring that support resource requirements are integrated with operational requirements to accomplish successful deployment of new systems.

5. Logistic Systems Management

Many of the logistics systems within the Department were, for the most part, developed individually by each of the DoD components in support of their separate logistics operations. The lack of centralized planning and control of these systems has been noted by Congressional committees, the GAO, and OSD study groups such as the President's Blue Ribbon Defense Panel (on which Deputy Secretary Clements served) and the Joint Logistics Review Board.

Specific criticisms have been directed toward the need for OSD to strengthen its overall direction and control of these systems; to reduce their proliferation; to increase their functional and technical compatibility, interface, standardization and integration across the DoD components; and to better manage the rapid increases in development costs associated with highly integrated systems using third generation computers and advanced telecommunications.

To alleviate these criticisms we have taken several specific management actions in the last few years in cooperation with the DoD components. Among these were the establishment in 1970 of a DoD Logistics Systems Policy Committee (LSPC) whose principal goal was to develop coordinated long range logistics objectives and assign implementing actions. Among the recommendations of the LSPC was integration into single Defense agencies of separate Service organizations for management of subsistence stocks and for property disposal management.

On October 1, 1973, implementation of the plan for worldwide integrated management of subsistence stocks began. This plan consists of two phases: Phase I brings all wholesale stocks into an integrated management system and Phase II extends that system to all retail stocks. The Defense Supply Agency will be authorized overall policy and direction in the area of inventory management of wholesale subsistence stocks. Despite this fundamental change, requisitioning procedures for ships and units remain the same and thus little disruption or confusion will be caused at the user level. The integrated nature of this system will allow us to be more fully aware of what we need, what we have, where it is, and how to move the DoD subsistence stocks most efficiently. There are a number of small problems remaining in the implementation, but we are confident that this new management system will prove to be both economical and responsive in peace or wartime.

A plan to integrate the DoD property disposal program on a worldwide basis became a reality on July 1, 1973, when the Headquarters of the Defense Property Disposal Service (DPDS) became fully operational. DSA will exercise overall responsibility for the program to include centralized policy direction, inspection, and audit functions.

Program management and staff supervision are to be exercised by the DPDS. Major features of this integrated management effort are worldwide inventory management, worldwide management information and a centralized accounting system.

6. Reduction of Items in Inventory and Elimination of Duplicate Inventory Management

The support of U.S. Armed Forces is expensive in terms of materiel costs and management effort. The use of improved technology in communications, automation, transportation and distribution will offset some of the funding problems. Innovative management can provide economical support without disrupting essential missions. Our military supply system must include only the minimum number of items required for effective Service operations. Not only must older, seldom-used items be phased out of the system, but the vast range of sizes, types and varieties of the same basic item must be reduced. Efforts to control proliferation of items in the inventory are necessary for an economical support system.

A program for eliminating duplicate management of consumable items in the Department of Defense is now in effect. The responsibility of each military Service to procure and manage the items it needs and uses has resulted in the past in competition between the Services for procurement of available materiel. With the advent of an integrated materiel management of consumable items program, a single manager is designated to assume total wholesale logistic support responsibility for all users of a single item. He is no longer an Army, Navy or Air Force manager exclusively. He has become a DoD manager obligated to provide impartial support to all military Service customers. The effort marks a major milestone in attaining a logistics objective of one item/one manager.

While management responsibilities have been determined for all consumable items, there still remains the task of transferring responsibilities and inventories from one or several managers to another. A special joint task group is monitoring the completion of the logistics support responsibility realignments.

7. Productivity Program

In August 1973 Deputy Secretary Clements established a DoD productivity program under the leadership of the Assistant Secretary of Defense (Installations and Logistics). The objectives of the program are to:

-- Promote productivity improvements at all levels of responsibility throughout the Department.

-- Foster the development and use of productivity measurements.

-- Establish a working environment giving full consideration to meaningful and mature worker/manager relationships in which both can fully participate and realize mutual benefits.

The program includes coordination of productivity improvement efforts within the Department and development of a management information system which will provide useful productivity data for DoD management purposes.

Management efforts in the productivity program are geared toward workload stabilization, procedures simplification, organization realignments, application of human engineering and productivity improvements through capital investments. All of these efforts are necessary to offset the increased cost of personnel.

Enhancing productivity through capital investments is a relatively new emphasis within the Department which can make significant contributions toward improved productivity in future years, and the Army Materiel Command (AMC) initiated a test program on this in FY 1973. The Ammunition Procurement and Supply Agency (APSA) was given authority by AMC to administer a capital investment program at government-owned contractor-operated plants without requesting prior approval for each project from higher command. Of 24 projects approved, 15 had paid back their costs by the end of December 1973. The total cost of the 24 approved projects was approximately $480,000. The savings will be $1.7 million annually if current production rates continue. With the success of this test program, AMC has budgeted $1.9 million for the program in FY 1974.

Within the entire Department the potential applications of the APSA test are significant. The Air Force has initiated a program whereby the Air Force Logistics Command has been given approval authority for depot maintenance facilities projects and the Navy is reviewing the possibility of applying a similar program.

E. ENERGY MANAGEMENT AND CONSERVATION

DoD energy consumption represents a $2.5 billion item in our FY 1974 budget, mostly to be spent for procurement of petroleum fuels. Recognizing that this area represented a prime opportunity for economy and better control of fuel distribution, we placed bulk petroleum fuels under integrated management control as of July 1, 1973. This was implemented through the transfer of personnel and petroleum stocks, excluding "on-base" stocks, to the Defense Fuel Supply Center (DFSC) of the Defense Supply Agency.

The timeliness of this move was evident as the system was put to its first real test almost immediately with the advent of the oil embargo. As significant shortages of bulk fuels began to occur, we were able to distribute the diminishing resources more effectively. This was particularly important when the immediate effect of the oil embargo was the cutting off of our overseas forces from local sources of fuel, necessitating replenishment of depleted stocks directly from the United States. A current inventory and location of bulk fuels in support of the Mediterranean forces was quickly available, and an assessment of product availability and measures necessary to provide continuing support to both the Navy and Air Force was developed rapidly.

In September, 1973, the Defense Energy Task Group was established to conduct a comprehensive study to define DoD energy-related problems and to recommend measures for strengthening the management of DoD energy resources. As a result of that study, a Director for Energy, reporting directly to the Assistant Secretary of Defense (Installations and Logistics), has been established with overall program manager authority for this vital resource.

The study established that the Department consumes 2.4 percent of all the energy used in the United States and 3.5 percent of the national petroleum usage. Within the Federal Government, DoD is the largest consumer, accounting for 85 percent of Government energy use. In FY 1973 DoD procured nearly half of all its petroleum from foreign sources, primarily for overseas use.

To meet the current problem, the military Services have taken strict actions to conserve fuel through reduced consumption, while trying to avoid an unacceptable impact on readiness. Among actions taken are:

-- A major reduction in aircraft flying hours.

-- A reduction in the speed of Navy ships during transits and operations and a major overall reduction in Navy ship operations.

-- An increased emphasis on reducing energy requirements through R&D programs.

-- An aggressive energy savings program throughout DoD to decrease heating, lighting, and vehicle fuel use.

I am proud of the conservation performance of the armed forces which has resulted in Defense leadership of all federal agencies in energy conservation. Our currently programmed level of petroleum

consumption in Fiscal Year 1974 is at the lowest level in 16 years. It is almost 42 percent below the peak consumption years of the Southeast Asia war and approximately 15 percent below the FY 1973 consumption rate.

While we shall continue to share the same hardships and sacrifices being borne by other sectors of the nation in our housekeeping and administrative support elements, we must have sufficient fuel for our combat forces to remain operationally ready. To assure this, we shall seek priority allocation under the Emergency Petroleum Act of 1973 whenever operational readiness requires.

Beyond conservation, there is at least one other action that can be taken to help meet the immediate fuel needs of the nation and thus of national defense. That is temporary activation of the Naval Petroleum Reserve No. 1 at Elk Hills, California. Within 60 days of Congressional approval, Elk Hills could be contributing up to 100,000 barrels a day or more to the nation's crude oil supply. And, within a relatively short time thereafter production could be brought up to 160,000 barrels a day. This would offset well over half the maximum potential impact imposed on the domestic economy by denial of foreign-source petroleum to U.S. Forces. To this end, I am hopeful the Congress will support the request of the Administration to achieve production from Elk Hills for one year.

In summary, our contributions to energy conservation will be:

-- Using only those energy resources needed to maintain operational readiness.

-- Avoiding wasteful practices and improving energy resource management.

-- Obtaining priority supply under appropriate authority for only the minimum essential needs for national defense.

-- Directing energy-related R&D in helping develop alternate energy sources and in improving energy-consumption efficiency.

TABLE 1
Department of Defense
FINANCIAL SUMMARY
(In Millions of Dollars)

	FY 1964	FY 1968	FY 1973	FY 1974[a/]	FY 1975[b/]
Summary by Functional Classification					
Military Personnel	12,983	19,939	23,639	24,452	25,898
Retired Military Personnel	1,211	2,093	4,392	5,164	6,014
Operation and Maintenance	11,693	20,908	22,148	24,156	26,596
Procurement	15,036	22,550	18,574	18,653	19,867
Research, Development, Test, & Evaluation	7,053	7,264	8,020	8,333	9,389
Military Construction	977	1,555	1,464	1,821	2,150
Family Housing & Homeowners Asst. Prog.	602	614	1,009	1,148	1,273
Civil Defense	111	86	82	82	86
Special Foreign Currency Program	-0-	-0-	3	3	3
Naval Petroleum Reserve	-0-	-0-	-0-	-0-	24
Military Assistance Program	989	588	1,120	3,295	1,279
Total - Direct Program (TOA)	50,655	75,597	80,452	87,105	92,579
Summary by Program					
Strategic Forces	8,505	7,236	7,253	6,883	7,628
General Purpose Forces	16,406	30,375	25,810	27,899	29,183
Intelligence and Communications	4,378	5,551	5,683	5,949	6,464
Airlift and Sealift	1,044	1,756	860	973	1,053
Guard and Reserve Forces	1,768	2,196	3,897	4,385	4,796
Research and Development	4,813	4,277	6,463	7,003	8,409
Central Supply and Maintenance	4,639	8,422	8,643	8,873	9,330
Training, Medical, Other Gen. Pers. Activ.	6,959	12,183	16,361	18,193	20,078
Administration and Assoc. Activities	1,077	1,237	1,719	1,849	2,164
Support of Other Nations	1,066	2,364	3,762	5,098	3,474
Total - Direct Program (TOA)	50,655	75,597	80,452	87,105	92,579
Summary by Component					
Department of the Army	12,275	24,972	21,656	22,096	23,618
Department of the Navy	14,458	20,765	25,425	27,575	29,568
Department of the Air Force	19,958	24,917	24,707	25,523	28,029
Defense Agencies/OSD	1,007	1,519	2,008	2,165	2,649
Defense-wide	1,857	2,750	5,454	6,399	7,350
Civil Defense	111	86	82	82	86
Military Assistance Program	989	588	1,120	3,295	1,279
Total - Direct Program (TOA)	50,655	75,597	80,452	87,105	92,579
Financing Adjustments	14	1,143	-49	-178	320
Budget Authority (NOA)	50,669	76,740	80,404	86,928	92,899
Outlays	50,786	78,027	73,828	79,500	85,800

a/ Amounts for proposed legislation for the volunteer force, military retired pay, and flight pay are distributed ($99M).

b/ Amounts for military and civilian pay increases, and military retired pay reform, volunteer force and other proposed legislation are distributed ($2242M).

NOTE: Details may not add to totals due to rounding.

TABLE 2

SUMMARY OF SELECTED ACTIVE MILITARY FORCES

	Actual June 30, 1964	Actual June 30, 1973	Estimated June 30, 1974	Estimated June 30, 1975
Strategic Forces:				
Intercontinental Ballistic Missiles:				
MINUTEMAN	600	1,000	1,000	1,000
TITAN II	108	54	54	54
POLARIS-POSEIDON Missiles	336	656	656	656
Strategic Bomber Squadrons	78	30	28	27
Manned Fighter Interceptor Squadrons	40	7	7	6
Army Air Defense Firing Batteries	107	21	21	0
General Purpose Forces:				
Land Forces:				
Army Divisions	16 1/3	13	13	13 1/3
Marine Corps Divisions	3	3	3	3
Tactical Air Forces:				
Air Force Wings	21	22	22	22
Navy Attack Wings	15	14	14	14
Marine Corps Wings	3	3	3	3
Naval Forces:				
Attack & Antisubmarine Carriers	24	16	14	15
Nuclear Attack Submarines	19	60	61	67
Other Warships	368	242	186	191
Amphibious Assault Ships	133	66	65	65
Airlift and Sealift Forces:				
Strategic Airlift Squadrons:				
C-5A	0	4	4	4
C-141	0	13	13	13
Troopships, Cargo Ships, and Tankers	101	53	32	32

Table 3

Active Duty Military Personnel,
Civilian Personnel and Reserve Component Strength
(end of fiscal years in thousands)

	1964	1968	1973	1974	1975
Direct-Hire Civilian					
Army 1/	360	462	333	356	359
Navy	332	419	322	326	324
Air Force 1/	305	331	271	271	270
Defense Agencies	38	75	72	76	75
Total 1/	1,035	1,287	998	1,029	1,028
Active Duty Military					
Army	972	1,570	801	782	785
Navy	667	765	564	551	541
Marine Corps	190	307	196	196	196
Air Force	856	905	691	645	630
Total	2,685	3,547	2,252	2,174	2,152
Reserve Components (in paid status)					
Army National Guard	382	389	386	383	372
Army Reserve	346	312	284	280	252
Naval Reserve	132	131	129	120	111
Marine Corps Reserve	48	48	38	37	36
Air National Guard	73	75	90	92	90
Air Force Reserve	67	46	45	56	54

1/ These totals include Army and Air National Guard Technicians, who were converted from State to Federal employees in FY 1969. The FY 1964 and 1968 totals have been adjusted to include approximately 38,000 and 39,000 technicians respectively.

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