

THE MILITARY BUDGET AND NATIONAL ECONOMIC PRIORITIES

HEARINGS
BEFORE THE
SUBCOMMITTEE ON ECONOMY IN GOVERNMENT
OF THE
JOINT ECONOMIC COMMITTEE
CONGRESS OF THE UNITED STATES
NINETY-FIRST CONGRESS
FIRST SESSION

JUNE 3, 4, 5, 6, 9, 10, 11, 12, 13, 17, 23, AND 24, 1969

Printed for the use of the Joint Economic Committee

PART 2
JUNE 10, 11, 12, 13, AND 17, 1969



U.S. GOVERNMENT PRINTING OFFICE
WASHINGTON : 1969

31-600

For sale by the Superintendent of Documents, U.S. Government Printing Office
Washington, D.C. 20402 - Price \$1.50

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THE MILITARY BUDGET AND NATIONAL ECONOMIC PRIORITIES

TUESDAY, JUNE 10, 1969

CONGRESS OF THE UNITED STATES,
SUBCOMMITTEE ON ECONOMY IN GOVERNMENT
OF THE JOINT ECONOMIC COMMITTEE,
Washington, D.C.

The Subcommittee on Economy in Government met, pursuant to adjournment, at 9:30 a.m., in room G-308 (the auditorium), New Senate Office Building, Hon. William Proxmire (chairman of the subcommittee) presiding.

Present: Senators Proxmire and Jordan; and Representative Moorhead.

Also present: John R. Stark, executive director; Richard F. Kaufman and Robert H. Haveman, economists; and Douglas C. Frechtling, minority economist.

Chairman PROXMIRE. The subcommittee will come to order.

The question of national priorities is a most basic question confronting this Nation and its elected representatives. While the Congress implicitly sets priorities as it goes about its business of passing legislation and appropriating moneys, now is an appropriate time to self-consciously appraise our most pressing needs and adjust the flow of national resources to meet them. This was recognized in the annual report of the Joint Economic Committee which urged the Congress to "undertake a formal and comprehensive study of national goals and priorities with a view to establishing guidelines for legislation and expenditure policy.

"Because the defense budget is substantially less visible than budgets for civilian programs," this report stated, "and because of our past experience with national security costs which have substantially exceeded initial estimates," this study "should focus on the allocation of Federal revenues between the military and civilian budgets."

Since 1951, the Subcommittee on Economy in Government has been investigating the problems of waste and inefficiency in the defense budget and in military procurement. Since that date, the subcommittee has done six staff studies, held 12 sets of hearings, and issued nine reports on this matter. These reports have been highly critical of practices in the Defense Department and have often pointed out the existence of institutional arrangements and procurement practices which have wasted billions of taxpayer dollars. These practices, I would note, have spanned both Republican and Democratic administrations and, as we were told in testimony yesterday, we seem to have learned few lessons over time in how to reduce the waste and extravagance in the military budget. In its investigation of the defense

budget, the subcommittee has regularly heard from the Secretary of Defense. For example, during his tenure in office Secretary McNamara appeared before this committee in 1963, 1964, 1965, and 1966. In these appearances, he discussed the existence of wasteful practices in the Pentagon and the efforts of his administration to eliminate them. I regret the inability of Secretary Laird to appear before this committee to explain to us his plans to increase the level of efficiency of that Department with a view to eliminating those military expenditures of low priority. His insight into these questions would be particularly valuable in the face of numerous studies which conclude that military spending could be reduced by up to \$10 billion immediately with no sacrifice in national security, and the judgments by prominent citizens that \$20 to \$30 billion of military expenditures represent waste and inefficiency.

The subcommittee is pleased and honored this morning to have as its first witness, Senator Barry Goldwater of Arizona. Senator Goldwater has long experience in appraising the Nation's national security needs. He is one of the foremost experts in the Congress on matters of military policy and national security. For a number of years, he has been a Reserve major general in the Air Force, and is widely recognized for his valuable contributions on the Senate Armed Services Committee.

I might say also, Senator Goldwater, that your letter to me of May 27 was excellent in many respects. You say, for example: "It is unfortunate that your committee could not hear honest testimony from someone like Soviet Premier Kosygin, because I feel his future plans have much more to do with our military spending priorities and our obvious aggregated needs on the social and economic front." I might say we are holding hearings beginning May 23, for 2 days, in which we are having the outstanding experts on Russia that we can get, who will speak on Russian intentions and economic capabilities, to try to put us in a position to make the very kind of an appraisal which you very properly called to our attention.

You also say, and I agree wholeheartedly with this statement, "the defense of 200 million Americans is nonnegotiable, as this is and must be our No. 1 priority in any arrangement your subcommittee must decide upon in the expenditures of public funds."

I couldn't agree more. And I know of no member of the committee who would disagree.

Finally, you suggest that a very profitable area that might now be explored would be the expenditure of the Department of Health, Education, and Welfare in their entirety, including those for schools, Job Corps, EOE, and so forth. And I especially value your opinion on this, Senator Goldwater, for two reasons. No. 1, you have served on the Labor and Welfare Committee for years with distinction, you understand these programs, and you don't just give an off-the-cuff view as a bystander, you are expert in this area. You have examined these programs in a position of authority for years.

But most of all, we welcome you because you are recognized I think, nationally, as one of the most honest, straightforward statesmen that we have in our country today. And we need this kind of honesty, and need it perhaps more than any other ingredient in getting at the problem that confronts us now.

Senator Goldwater, will you come forward and sit at the table here in the center chair?

We are very happy to have you, sir.

**STATEMENT OF HON. BARRY GOLDWATER, A U.S. SENATOR FROM
THE STATE OF ARIZONA**

Senator GOLDWATER. Thank you, Mr. Chairman, for those very generous remarks. We conservatives don't hear them very often.

I think it would be better if you allowed me to go through my whole statement, and then I will answer any questions. Because I do have some thoughts in here which, if they were interrupted might not turn out well.

Chairman PROXMIRE. We will be delighted to have you do that.

Senator GOLDWATER. Mr. Chairman and members of the subcommittee, I wish to thank you for inviting me here today to testify on this very important question of the military budget and national economic priorities. I believe, Mr. Chairman, that my career and my public statements over the years have qualified me to some extent to add my voice to any discussion which has to do with military expenditures in today's world.

Now, when I was first asked to testify at these hearings, I declined. My feeling was that the members of this subcommittee may already have made up their minds as to where the military budget should fit in an overall consideration of national spending priorities. In addition to that, I was concerned that the subcommittee's revelations on waste and inefficiency in defense procurement would become a controlling factor in any recommendations it might make on spending priorities.

This feeling, I must say, stemmed primarily from the news release which was attached to the chairman's letter to me in which it was announced that there are clear signs that the Federal Government is spending too much money on military programs. This was a direct quote from that press release which went on to say that the hearings of this subcommittee on the C-5A cargo plane illustrated that the Pentagon was unable to effectively control the cost of its weapons system.

Mr. Chairman, I have no quarrel with the whole idea of coming to grips with waste and inefficiency and the expenditure of too much money in defense procurement. However, I do not believe that this should be a ruling factor in any decision on spending priorities.

As I say, this was my feeling. I must say that it hasn't been entirely dispelled. However, since declining the committee's first invitation to appear and testify, I have had several conversations with Chairman Proxmire which clarified certain points in my mind. In addition to that, President Nixon has subsequently clarified the administration's viewpoints on some of these questions.

Consequently, I am here today in the hope that I may be of some assistance in these deliberations.

At the outset, let me make it very clear that I did not come here today to debate military strategy or to criticize or evaluate American policy in Vietnam or other areas of the world. Nor did I come here to suggest any panaceas for the situations that confront us.

For example, I am not about to come up with any easy-sounding solution such as the nationalization of defense industries doing more than 75 percent of their total business with the Government. I have no desire, believe me, to extend the bureaucratic arm of this Government, especially into the field of private enterprise. I ask you to consider how long it might take us to receive delivery on a new plane if Lockheed or North American Aviation or Boeing or any of the other defense contractors were being operated with that marvelous bureaucratic efficiency with which our Post Office is run.

In the chairman's invitation for me to appear, he spoke of a dialog on the important questions involved in the military budget and national economic priorities. I sincerely hope that such a dialog will be possible, but I must in truth, say that so far from what I have read in the papers, these hearings have seemed to be more of a sounding board for those who want to criticize various facets of our Military Establishment or our foreign policy than it has a serious dialog or where the defense of this Nation should stand in any list of priorities.

For example, every time that Secretary Laird tries to explain the necessity of a system like the ABM, the hue and cry immediately is raised that he is attempting to frighten the American people.

Mr. Chairman, in stating the problems that face this Nation on a worldwide basis from a militant, aggressive Communist nation like Soviet Russia, I do not believe the Secretary is engaging in a deliberate effort to frighten the American people. If the truth is frightening, so help me, that's the way it's going to have to be. Because the American people have had enough of secrecy and distortion from the Pentagon, whether they be called justifiable lying in the name of national security, such as we used to hear from gentlemen like Assistant Defense Secretary Arthur Sylvester, or whether they are in the form of false information about low bids, efficiency performance, procurement practices, the American people have had enough from the Pentagon that sounds like cost-effectiveness and which was real waste and inefficiency.

I am convinced that the American people want the truth about their Government and about the challenges which face us as a nation. If the truth is frightening, if it gives us cause for concern, I am convinced that the American people will be able to cope. I don't want anyone in this administration, particularly in the Defense Department, glossing over the true situation that confronts the American taxpayers and their collective security.

We are faced with a challenge, and let me say that it is not Secretary Laird nor President Nixon who is arranging the formidable military buildup in the Soviet Union. Nor do we know the facts of this buildup from their information alone. Many independent sources, including the British Institute for Strategic Studies have also laid out the cold, hard facts of a Soviet armaments buildup.

The plain fact is the Soviet Union is building up all facets of its military capacity. Its nuclear capabilities are being extended. Its navy is being enlarged. All of its conventional arms are on the increase. The SS-9 missile is on an increased production schedule. They are spending a growing portion of their national income on military hardware.

These items are not related as a scare tactic; they are reported because they are facts. And I believe this Nation and this subcommittee

have got to face these facts and the overall fact of a worldwide challenge to the United States in deciding about the disposition of military expenditures.

I do *not* mean by this that there should be any condoning of or acquiescing in waste and inefficiency and extravagance in the Military Establishment. I believe that we must do everything in our power to eliminate waste and inefficiency and extravagance in the Pentagon and in all other Departments of this sprawling, hard-to-manage Federal system.

And I should like to emphasize that President Nixon shares this view. In fact, in his speech at the U.S. Air Force Academy, he urged the graduates to be "in the vanguard of the movement" to eliminate waste and inefficiency and demand clear answers on procurement policy.

Your own subcommittee, in its previous report, has outlined this problem in great and admirable detail. The Defense Department over the past 8 years has loaded the taxpayers of this country with billions of dollars that were unnecessarily spent. I want to congratulate this subcommittee on its work in bringing the full magnitude of this situation to public attention.

I do believe, however, that when this subcommittee and this Congress begin to investigate and report on billions of dollars of the taxpayer's money lost, they are, to some degree reporting on their own delinquency.

I think we have to remember that no one forces the Congress to approve these funds. These huge defense budgets over the past 8 years were subject to congressional inquiry. Nobody actually jammed them down our throats.

Now, Mr. Chairman, I have not been here for the last 4 years, but I have a pretty fair idea of what went on in the matter of defense expenditures prior to that time. And I want to say that it was no mystery to well informed and inquiring people that things were terribly wrong at the Pentagon and in its procurement procedures.

As a matter of fact, the TFX fighter-bomber case alone was sufficient to point us in that direction. I say again, there was no mystery. Many stores were written about the investigative efforts of Senators McClellan, Jackson, Curtis, and Mundt, directed at cutting away some of the confusion and some of the misinformation that was being used to cover up a very very bad piece of procurement by the Pentagon.

Now this was a big case. It involved billions of dollars. And it was a case where a multi-billion dollar contract was awarded to the highest bidder for a plane over the advice of practically every expert in the military services affected.

As I say, there was no mystery about all this. Books were written on the subject. I have read a book called "The Pentagon" written by Washington correspondent Clark Mollenhoff in 1967 and another volume by the same author called "The Despoilers of Democracy." Both of these books told a frightening story of waste and inefficiency, extravagance, and favoritism in the Department of Defense.

Now these were not generalities. Mr. Mollenhoff and reporters like him dealt with specific facts about the waste and inefficiency and squandering of the taxpayers' money in the Department of Defense.

But I don't recall any great hue and cry being raised at that time. I didn't recall any outpouring of criticism aimed at the so-called military-industrial complex. I don't recall any efforts to take a more customary look at every facet of the defense budget. I don't recall, either, any strenuous attempt by any group in Congress to establish a system of priorities for this Nation's critical needs.

Perhaps we failed in this respect because of the public relations ability of former Defense Secretary Robert McNamara.

As the Washington Post, in an article by Richard Harwood and Laurence Stern, observed on June 4:

McNamara became a liberal hero despite the Bay of Pigs, the Dominican Republic intervention and the war in Vietnam and despite the steadily rising costs of the military establishment (from \$47 billion in 1961 to more than \$80 billion today).

I believe we must remember that it was McNamara, and not Laird, who presided over the Defense Department when all the waste and inefficiency and cost overruns were being piled up. He is the man I suspect who should have been called as a witness in your prior hearings on waste and inefficiency in defense procurement. And I believe he ought to be heard in these current hearings. The Congress certainly ought to know what the man who decided the destinies of this huge undertaking for so long a period of time has to say about the mess that the incoming administration found when it took over the Pentagon.

So much for past history. Now I believe it is time for this committee to direct its attention to how best it can come to grips with the current problem.

Let me be very clear. I am interested in your deliberations and I am very desirous that some recommendations will come forth which will take into account not only the huge burden which our present defense needs place on the American taxpayers, but also will take into account the continued security of the American people and the continued welfare of the free world. I am as much concerned as you are over the high cost of defense. It worries me greatly, but at the same time I recognize that the kind of emphasis which currently is being placed on this problem could result in a dangerous lowering of our overall needed defense outlays.

I want you gentlemen to know that I firmly believe in a system of priorities for the spending of Federal money. I have long advocated this and believe it should be as important a part of the process of spending in Government as it is in the operation of a business or spending in our private lives. I believe such a system of priorities should not be confined to broad subjects such as welfare, housing, urban problems and military spending, and decisions as to which should come first, second, third or fourth. I believe it must be extended into every detail of these structures. I have, for example, asked the various services to project their needs ahead on the basis of a continuing war in Vietnam and, secondly, on the hope that this war will be ended shortly. In either case, the services will need to consider how many bases might be needed to maintain and train a force necessary for our defense requirements.

If we could get some kind of a projection, I think it would bring about a more orderly system for construction and maintenance of military bases and would also give the communities affected an idea of

what to expect. We need to ease the hardship that comes to the economy of communities when military establishments are closed down without advance warning.

In the case of the Navy, I have asked what a long-range program to put the Navy back into first-class shape might look like in light of the Soviet naval buildup.

I have asked similar questions of the other services. For I believe that only through long-range, detailed planning can we avoid periods of frantic effort to catch up with the activities of our potential enemies. The cost of such effort is prohibitive and that is what we are experiencing today.

I should think that this committee would certainly have a role to fill in overseeing this kind of long-range planning and priority. However, I really believe that to have it performed properly there should be a joint effort involving the Joint Economic Committee, the Appropriations Committees, and the Armed Services Committees. In fact, I think it might be advisable to establish an overall priority committee to work for an orderly system of Federal spending.

I believe there is no excuse for waste and inefficiency in any area of Government, whether it is in the procedures and practices which have grown up in the Pentagon over the past 8 years or in the expenditures for antipoverty projects such as the Job Corps, or in expenditures for highways, schools, and hospitals.

But the mere existence of waste and cost overruns and similar problems in military procurement must not be allowed to blind this country to the need for keeping its defenses strong. Nor should the inflated cost of military hardware become the overriding consideration in determining our level of defense expenditures.

Now on the question of inflated costs. It stands to reason that rising prices are not peculiar to defense projects alone. I say that this is an important factor which must be considered carefully.

We must recognize, for example, that testimony before the Armed Services Committee indicates that perhaps as much as \$500 million of the growing cost of the C5A cargo plane is attributable to inflation. But at the same time if the C5A is considered essential to the defense of this Nation, we must grit our teeth and accept the burden.

For if we permit rising costs to become the sole determining factor in deciding whether an essential program is to be developed, then we must automatically call into question such projects as the International Highway System, and programs for building new schools, new hospitals, and additional housing. In this connection, the Department of Transportation reports that in less than 8 years the cost of the Federal Interstate Highway System has increased by an estimated \$15 billion and no extra miles are involved.

A study in Montgomery County, Md., shows that an elementary school which cost \$347,772 in 1959 costs \$666,200 to build in 1969. A high school in that same county which cost \$2.3 million in 1959 is priced at \$3.4 million today. The same skyrocketing price structure runs throughout all government as well as private costs. This is the price we are now paying for a period of uncontrolled public spending. And here, too, the Congress must assume its share of the blame.

But we still come back to the basic premise which led President Nixon to say that he has no choice in his defense decisions but to come

down on the side of security. In other words, regardless of inflation and other factors, the security of 200 million Americans is nonnegotiable.

In all discussions of military expenditures in the context of the debate going on today, sooner or later it gets around to former President Eisenhower's warning against the possibility of unwarranted influence being acquired by the military-industrial complex.

Every time I hear this claim, I am reminded that the General had other important points to make in that farewell address. Because I believe they cannot be heard too often let me quote them again for you here :

We face a hostile ideology—global in scope, atheistic in character, ruthless in purpose, and insidious in method. Unhappily the danger it poses promises to be of indefinite duration. To meet it successfully, there is call for, not so much the emotional and transitory sacrifices of crisis, but rather those which enable us to carry forward steadily, surely, and without complaint the burdens of a prolonged and complex struggle with liberty the stake. Only thus shall we remain, despite every provocation, on our charted course toward permanent peace and human betterment. * * *

A vital element in keeping the peace is our military establishment. Our arms must be mighty, ready for instant action, so that no potential aggressor may be tempted to risk his own destruction.

Mr. Chairman, last Sunday, the *Washington Star* had an excellent editorial which asked the question: "How much defense spending is enough?"

This, I think, gets to the heart of the matter that engages us in the dialog that we find ourselves in here today. And in this connection, I want to point out that Chairman John Stennis of the Senate Armed Services Committee this year took a very important step toward obtaining an intelligent and expert answer to this question. He assigned every member of this full committee to a subcommittee which is looking into some aspect of the military budget.

For example, I serve on the Tactical Air Subcommittee which is charged with responsibility of determining the actual needs of tactical air in the Army, Navy, Marine Corps, and Air Force. When the budget comes to the floor, the members of our subcommittee will be in a position to discuss with their colleagues all questions that might be brought up when new equipment is sought or new purchases of old equipment are asked for.

Even though the able chairman of our full committee and the extremely able and competent former chairman, Senator Richard Russell, have been able to explain past budgets on the floor in a highly competent manner, this year they will be backed by in-depth study and long subcommittee hearings covering every point in the total budget.

When we consider that the military budget before Korea was \$13 billion and before the Vietnam buildup was \$50 billion and now has reached the level of \$80 billion, I think it is high time that the Armed Services Committee, the Appropriations Committee, and this subcommittee look into the costs more closely than ever before.

I also feel the same type of observation study is needed throughout the entire budget submitted by the President. We might expand the *Washington Star* editorial question of "How much defense spending is enough?" and make it read "How much spending is enough?"

Very frankly, Mr. Chairman, I believe we have reached that point in our history where money to cover Government spending is going to be extremely difficult to obtain. In my humble opinion, if the war in Vietnam came to a complete halt this afternoon, we would not be able to make extreme cuts in defense spending for approximately 5 to 7 years, as we will be forced to replenish the diminished stock of our military hardware.

Of course, if we could be relieved of our responsibility to the countries with whom we have made mutual security agreements, and if we could look forward to immediate talks with the Soviets on arms reduction, this statement might not be true. I sincerely hope, along with all of you and all of our colleagues and all of the American people, that in the very near future we can sit down with the Russians and discuss the whole problem of armament buildup.

This would be highly desirable, but I believe it would be disastrous for us to proceed in a way which would disarm the United States while its potential enemies in the world continue to build up their armed forces.

I thank you for the opportunity of visiting with you today, and if the members have any questions I will be very glad to answer them for you.

Chairman PROXMIRE. Thank you, Senator Goldwater, for an excellent statement. I think you have done a fine job of setting forth the undeniable fact, as you said in your letter, that the principal priority of this country must be the defense of the 200 million Americans, and whatever that cost we have to pay. And I certainly wouldn't dispute that, and I don't think any member of the committee would.

However, it is a matter of determining how much defense spending, as you say in your statement, is necessary. You have agreed that there has been a great deal of waste and extravagance. You have agreed that there have been substantial overruns. Would you also agree—well, you implied that one of the reasons for this extravagance has been that we up here on the Hill, as you say, for the last 8 years have not done the job we should have done in criticizing, evaluating the military budgets that have come before us.

Senator GOLDWATER. Yes, I agree with that wholeheartedly. And I was critical of it when I was here before. I felt that we almost took as gospel, if I might use that term, anything that came from the Pentagon, without really looking into it in depth. And this is the major reason that I think a joint committee to help the Armed Services Committee might be a good thing to suggest to the Senate, so that we can have more time to study this. Serving on the Armed Services Committee, looking into a budget that now stands at \$77,887 million, it is not an easy thing to do, even though our concern is just the tactical air part of it.

This has required days and weeks of hard study. We need help on it.

Chairman PROXMIRE. Don't you think that one of the difficulties has been that the budget has come forward—as you say, it is a big budget, it has been \$50 billion, \$60 billion, \$70 billion, and now it is \$80 billion, and it comes to the floor in one package. It is so awesomely big it is beyond imagination. We can pick up little parts of it, but to have a comprehensive debate on the whole thing is difficult. I think it is fine that Senator Stennis has done this, broken down the

budgets into different segments and assigned them to subcommittees. And I think it is going to improve the quality of the debate on the floor. But it seems to me that to have an effective debate—I don't know of anybody who has been more persistent in calling for debate in the Senate than have you and you criticized the fact that we don't really have the kind of forum that the Senate historically has been, we haven't had this in the recent past. But it seems to me that to have an effective debate requires an attitude on our part of criticism, and a willingness to challenge the defense spending much more vigorously than we have in the past.

I would like to ask you in this connection, first, you do recommend that there be formed a priority committee, as you say, composed of the Appropriations Committee, the Armed Services Committee, and the Joint Economic Committee, to consider priorities.

This is a very welcome recommendation from you. It has come from other people in other forms. They haven't been as specific as you have been.

Isn't it possible, however, that if you have a committee that has the Armed Services Committee and the Appropriations Committee, as well as this committee, you are likely to get pretty much the same view without as much of an adversary debate as you should? Wouldn't such a committee be dominated by the same viewpoints? Not that the viewpoints aren't right, they may be 100 percent right, but they won't be challenged as much as if they had an opportunity for those who would perhaps be more vigorous in their criticism.

Senator GOLDWATER. I mentioned the three committees. As you actually get into priority spending you have to consider committees that have an effect on HEW. This has become our second biggest spender of money. And certainly if there are priorities in the minds of most people I think they would commence more with expenditures under HEW than they would under the military. I have not given this committee suggestion a great deal of thought. I do think it is something, though, that we should kick around and talk about. Because we are going to have to be very careful with money. We just don't have it running out of our ears like we did a few years ago.

We have inflation, and I hope we can begin to control it. Inflation is causing as much trouble with this military budget as any one thing.

So I do think that a committee not dominated by any one sector would be a wise thing. In fact, I see here the possibility of doing what Secretary Laird and Under Secretary Packard are now doing with military items, sending civilians out to look these things over and come back and tell us where we are wrong, where we are right, or what they think we need and what we don't need, what can we do about our contractual procedures, and the whole mishmash of procedures of obtaining equipment in the military.

I would be very happy to discuss this committee with you at any time. I think it would be well to take it up with the leadership of the Senate.

Chairman PROXMIRE. You have been consistently critical of excessive Government spending overall.

Senator GOLDWATER. Yes.

Chairman PROXMIRE. And I think that if there is any one broad, widespread consensus in the country today, it is that we have to hold

spending in check and hold taxes in check. There is a taxpayers' revolt based on excessive spending.

When you take a look at the overall Federal budget, the Budget Bureau broke it down into controllable and uncontrollable items, uncontrollable items being interest on the national debt and veterans' pensions and so forth. They found that the budget was about \$100 billion subject to control. Of this \$100 billion about \$80 billion was military expenditures. So if we are going to really do anything about providing a reduction in Federal spending, and any possible taxpayer relief, any more availability to the private sector, it seems to me it has to come here. In your view what prospect is there that we could cut the military budget, or can we, in your view, reduce the military budget, and if we can, how much consistent with military security?

Senator GOLDWATER. Let me preface the answer to that question by something that just came to me a short while ago that I discussed with you coming in the door. During the preliminary hearings that we had on the Defense budget it was the consensus of the committee that if we couldn't spend an adequate amount on the manned orbiting laboratory we would be better off forgetting about it. Just this morning Secretary Laird was announcing that the MOL will be dropped. This is a sizable piece. It is over \$2 billion. But if we are not going to appropriate enough money to really get in the act, then we are wasting money. I personally hate to see us get out of this, because I think the Russians are well ahead of us in it. But that is beside the point.

I was interested yesterday to hear my old friend Walter Reuther say he could knock \$20 billion out of the Defense budget. When you look at military personnel, that is \$24,377 million; the operation and maintenance of our bases at home and around the world, another \$21,792 million for a total of \$46,169 million. And then you realize that procurement is only—I hate to use the word “only”—\$23 billion. And then look down the balance of it. I don't know just where Mr. Reuther could take a \$20 billion cut. We have already had a cut of—it is not quite a billion dollars over the 1969 budget. There will be several items, for example, in tactical air that the committee is not going to buy. They are not extremely large. We are looking, for example, very skeptically at the A-7 program, for which they asked \$375 million this year. The airplane is a good airplane, but the Air Force is not sure that it needs it.

Chairman PROXMIRE. Why can't we cut personnel? How, the recommendation of the *Congressional Quarterly*, based on interviews primarily with Pentagon experts, the recommendation of that publication, which as you know is considered to be reasonably objective, was that we could save \$5½ billion—they said we could save \$10.8 billion altogether—but \$5½ billion by simply cutting personnel.

Robert Benson of the GAO makes a similar suggestion. More than half of his \$9 billion reduction would be in personnel.

I have talked to some other members of the Armed Services Committee who agree that we don't need 3½ million men in our Armed Forces to meet our commitments. Can't we reduce military personnel sharply?

Mr. Schultze said that for a 100,000-man reduction we save about a billion dollars.

Senator GOLDWATER. I certainly don't hold the number sacrosanct. I think we can certainly cut it.

Also I think we can make the military personnel more efficient. I think we have frankly too high a ratio of noncombat to combat people in the field. And I have a letter that just came in this morning from Secretary Laird partially in answer to the question that I related earlier about bases. And he states that when the demands of Southeast Asia diminish or, let's say, when it is no longer with us, that the size of the military will be what it was before Vietnam.

Chairman PROXMIRE. Is your view that this is likely, that when we receive a cease-fire in Vietnam, we withdraw from Vietnam, we can go back to the size of the budget before Vietnam? The testimony of Mr. Moot before this committee was that after Vietnam we would be spending about the same as now because of the rising cost of new weapons, and for other reasons.

Senator GOLDWATER. I think it will remain, as I said, in my testimony. I don't think we can look for any sizable cuts for 5 to 7 years. We have 5,000 aircraft to be replaced, fixed-wing and rotary-wing aircraft that we have lost.

Chairman PROXMIRE. Your view in general is that we cannot cut the military budget consistent with the defense of this country?

Senator GOLDWATER. Not the kind of cuts that we all would make.

Chairman PROXMIRE. Maybe \$1, \$2, \$3 billion?

Senator GOLDWATER. I think we might even shoot at \$5 billion. But I don't see it this year. I think we will be able to get the committee to reduce it some more, especially with MOL coming up. That is not directly charged to military, it is partly charged to space, but it is a sizable piece of money, that we won't need.

But we have a very important thing to determine here. What are we going to do about this—I think there are some 44 plus mutual security agreements we have with nations all over this world that say, in effect, we will do for them what we are doing for Vietnam. Now, I don't suggest that we can renege on these treaties. And I have to confess that I voted for them when I was here. I think all Senators did, in fact. But what will our future commitments be?

I think this is a study that the Foreign Relations Committee should be making. I think that they should have done it a long time ago so that the American people will not be shocked when we are called to fulfill the terms of a treaty that they know nothing about.

Chairman PROXMIRE. Your \$5 billion possible cut was not for this year, I take it?

Senator GOLDWATER. No.

Chairman PROXMIRE. But you think we can cut maybe half of that this year?

Senator GOLDWATER. I think we can make more cuts than we have made. And I think that as we go along with our hearings we are going to come up with these cuts. But the thing that plagues these manufacturers is the matter of inflation. It is really rough on them. Here is a company, for example, like Lockheed that has made actually an 8-year commitment. And while the concept of this contract, the total package procurement, I think has some definite advantages, it is one that you have to watch like a hawk.

I think an auditor should be sitting on that thing every evening. But they mark up \$500 million of their overrun to inflation. They have other problems that we are beginning to see creep up. And absenteeism they report to me used to run 1 percent. Now it is running as high as 10 percent. They lost 2,200 workdays on the construction of this C-5A through 70 days of work stoppage.

These are things that we can't judge sitting here, what is going to happen in the future.

They have \$330 million attributable to uncontrollable costs connected with the subcontractors. Again, they face inflation. And what are we going to do about this?

I think if we could keep the dollar where it is and not look forward to the deterioration that we are looking forward to, that we might talk about \$5 billion. But I don't think we are going to do it, frankly, the way things are going today.

Chairman PROXMIRE. My time is up. I will be back.

Senator JORDAN?

Senator JORDAN. Thank you, Mr. Chairman.

Senator, I want to join the chairman in bidding you welcome before this committee. Your statement has been very constructive. I regard your advice and counsel on these matters very highly, as you know. Through the years you have been a leader in matters relating to the defense posture of the United States. And you deserve the acclaim that has been given in that regard.

You made an interesting suggestion. And I wondered myself why former Secretary McNamara has not appeared before the committee. Would it be out of order, Mr. Chairman, for me to request that former Defense Secretary McNamara to be asked to appear?

Chairman PROXMIRE. Former Secretary McNamara was invited to appear, but declined to appear. He is president of the World Bank today. He did appear a number of times when he was Secretary of Defense. You and Senator Goldwater are absolutely right, he would be an excellent witness. But he declined to appear.

Senator JORDAN. There is scarcely a witness who has appeared before this committee who in one way or another has not involved either directly or by inference former Secretary McNamara in the discussions and the presentation of his arguments. And I should think that the former Secretary should be tendered another invitation. And I hope that he will come before the committee and explain to us some of the things that transpired during his administration.

Chairman PROXMIRE. We certainly will invite him. We will write him today. And we will follow up a second time.

Senator GOLDWATER. I think that will be very wise. And I don't say that because of disagreements he and I have had in my positions and his positions. Because these things happen. Now, on the cost overrun on the C-5A, for example, he knew all about this. We didn't know anything about it until early this year. He was told about the possibility of this overrun as long as a year and a half ago. And yet nothing was done about it. And all of a sudden we woke up with what I consider to be a very valuable piece of equipment, not only to the military, but to the Nation, at a tremendous overrun. And we are shocked. So I think it would be wise to bring him and his people to explain how come.

And I also think the press of this Nation ought to be explaining why they didn't do a better job of finding out what was going on in the Pentagon. Those who had the nerve and the gumption to do it found out, but they were too few.

Senator JORDAN. Senator, you have spent some part of your statement in discussing the capability of the Soviets. This has been a matter of great concern to me for some time, the fact that the Soviets, with only one-half of our gross national product, are matching us in dollar-for-dollar spending in the defense effort. We are all aware, I believe, of their capability. The difficulty comes in interpreting their intentions.

Have you any evidence of a softening of the Soviet attitude, of a willingness to on their part to talk about deescalation of this great threat that hangs over the world today?

Senator GOLDWATER. I have no evidence of it. And I know of no one in the Government that has. I know of no agreement by the Soviet Union to sit down with us and discuss arms limitation. I am very much in favor of that. But I may be speaking in an area I know nothing of, because we are not privy to everything that goes on at the executive level. But certainly nothing in their actions would indicate that.

Now, historically the Russians have been on again, off again on a navy, going back to the days of the czars. They have attempted to become a sea power. But you must keep in mind that Russia historically has only been interested in Russia, Russia has never been an aggressive nation, as we think of, going outside the border to fight, only when you bother Mother Russia do the Russians get excited. And that is one of the reasons she never went forward with her large navy idea. Now we find her building submarines, not flattops. This is interesting. Why doesn't she build carriers?

I think she is convinced that the carrier is a very vulnerable weapon today that can be destroyed with current, present-day weapons, from short distances. So she is building atomic submarines. And she is building a fleet that now demands the respect of the world. And she is sailing into the Indian Ocean, which used to be the backyard of England, and now is nobody's backyard. And in my humble opinion we ought to get down there and take over what England has left, because that is a very valuable part of the world.

I see her intentions of controlling the straits, the Suez Canal, the Strait of Gibraltar, Majorca, and Malacca. And once she controls those straits we have had it as far as international sea trade goes.

She is building up her air strength, has been doing it constantly. And she is developing sea infantry—I forget the exact name of it, but it is comparable to our marines.

So there is nothing in her present programs which indicates that she is softening.

Senator JORDAN. Yesterday, I believe, Mr. Reuther said he placed some significance on the fact that there were no armaments in the May Day parade this year in Russia. I asked him if he didn't think that perhaps the rape of Czechoslovakia more than offset that significant thing. And he said that was a terrible mistake. But it seems to me—and you agree, I believe—that the movement of the Russians into Czechoslovakia, unprovoked as it was, is the best indication that we have of their intent.

Senator GOLDWATER. I don't think there is any question of that.

And I will add that the invasion of Czechoslovakia will become a classroom example of invasionary tactics. It is probably the finest example of such an operation that we have in modern times—not that I approve of it. But it is an indication of the fact that she is ready. And she used some weapons in that invasion that I am not permitted to talk about here, but we have nothing like them.

Senator JORDAN. Various witnesses, Senator, have discussed with us the priorities for the reallocation of our resources, how much of it should be spent for military budgets and how much for domestic budgets, and so on. But I have always contended that in setting priorities, survival was the highest priority that we could set on expenditures of Federal funds. Mr. Reuther agreed with me on that. Survival of the species comes first. So I think the disagreement arises among well-meaning people as to, how do we achieve survival in this dangerous age.

Would you agree?

Senator GOLDWATER. I agree wholeheartedly with it. That is why I think that this committee is making such a valuable contribution, especially if you can get more witnesses of my persuasion that recognize that we should be able to make cuts, but that we can't make astronomical cuts at this time, but we can make savings. I think this is a different thing from cuts.

We can observe the operations of these contracts more closely. And I know the companies want to do this. So if we can just keep this going, this dialog, and keep it away from the rather flamboyant suggestions that the Government take over the running of our defense industry when they have made the most miserable flop out of armament plants in the history of the country, or that we cut \$20 billion out of it without stopping to reason where, I think we can come up with some real answers.

Senator JORDAN. Senator, we haven't had a single witness before this committee who recommended outright unilateral disarmament. We haven't had a single witness who wanted less than a strong America. But the differences arise in how we achieve a strong America and meet the requirements of other commitments that we have.

I think I read in the paper yesterday that you flew the C-5A. How did you like it?

Senator GOLDWATER. It is like trying to fly a football field. I was very, very impressed with it. Of course, I couldn't take it off or land it yet because it hasn't been turned over to the Air Force, but I am waiting for that day. It handles remarkably well for an 800,000-pound aircraft.

The banks are standard 30 degree banks, which I never dreamed they would try. It is very easy to fly. And I look on this airplane as the great opening to the future of air in this country.

Its value will not be confined to the military. This airplane can carry freight at 2.9 cents per ton mile. Now, you are getting very competitive when you can do that. And I think this is just the beginning of bigger and bigger airplanes.

The bigger airplane to me is part of the answer to air safety. Where we have hundreds of airplanes leaving Washington National Airport every day, if we could cut that in half with larger planes we would clean up the skies and take care of the people just as well.

I was very impressed with the airplane. It has had its bugs. We went into this very extensively. The Lockheed Co. has tried very hard to keep exactly up with the specifications required by the Air Force. And to do this they have made over 100 major modifications, one to the ring out when they found that it was developing too much turbulence, so that it affects even the lift section and the horizontal stabilizers. They couldn't tell me how much it cost, but they thought it was in the nature of \$100 million to make that modification, which comes out of their pocket. The Air Force has only required one modification, a very minor one. It still has some bugs. It is hard to pressurize that much space, but they are going to work it out.

Again, we have got a terrific overrun on it, but I think it is one of those things that we are going to have to grin and bear.

Senator JORDAN. Just one more question.

You mentioned, I believe, that the Soviets were not building flattop carriers, for the reason that they were so vulnerable to attack. Would you recommend that we move away from the carrier concept and build more submarines?

Senator GOLDWATER. I am not ready to make that recommendation now, in view of the conflict that we are engaged in, where we have no trouble with air superiority. But if we are ever to become engaged in a war with a country that had the capability of questioning our air superiority, I would seriously question the advisability of carrier use. In this war they are invaluable. And where you have no argument about air superiority, it is a hard weapon to beat. It is very mobile, it is a very fast acting weapon. And I have to say as a former Air Force officer, you can't beat Navy pilots. They have got the experience and the know-how. And they are great.

But I think the Navy itself is taking a long look at what—if we have these weapons, they have these weapons. If you can stand off 50 and 60 miles and launch weapons that will destroy a carrier or any other craft, you have to consider those things. And the only reason that we believe the Russians are not building carriers is that they question their vulnerability in any future conflicts.

Senator JORDAN. Thank you, Senator.

Chairman PROXMIRE. Congressman Moorhead?

Representative MOORHEAD. Thank you, Mr. Chairman.

I would like to carry on that discussion about the aircraft carriers. When former Budget Director Schultze was before this committee he was asked by Senator Symington where he would look first to make cuts in the military budget—he said he would look first to our attack and ASW carrier task forces. One of the reasons was because of the question of the vulnerability of these carriers which you have raised, Senator.

I realize that your testimony is that as of today, while we still have a conflict in Southeast Asia you wouldn't cut back on our carrier program. But one of the problems we are facing as we phase out of Vietnam is the military claiming that they have a backlog of need. We certainly can save a lot of money by reducing the number of carriers in our active force, and possibly having some put in monthballs for eventualities. Don't you think that as we phase out of Vietnam, that we should consider reducing our force of carriers?

Senator GOLDWATER. Well, the easy answer would be yes. But I think a lot would depend on the question that I raised earlier: What are

our actual responsibilities around this world, and how fully do we mean to meet them? Now, if we are going to renege on these commitments, or if we are going to try to change them in a way that will not so definitely tie us down, then the answer would be in agreement with yours. But if we are certain that we are going to have to meet some commitments in areas in which air superiority would not be questioned, the only country that could present us with that problem today would be the Soviet.

Red China can't do it yet. So that is the first question I think we have to get to.

Then I think that the services themselves are carrying on this type of research. In other words, what is war going to be like 10 years from now? It is not going to be like the wars we have fought.

But I do think we have to get an answer. For example, this is my reasoning. In the North Atlantic Treaty with 15 nations we use this language:

"Each of them will assist the country attacked by taking forward individually and in concert with the other party such action as it deems necessary, including the use of arms."

Now, we get over to other treaties like the Philippine Bilateral Treaty, it says:

"To meet the common dangers in accordance with its constitutional processes."

This gives us a little way to back out the door. But when we are so specific as we are with the North Atlantic Treaty with 15 nations, the Rio Treaty with 21 nations, this, I think, is the first question.

But to get to the direct answer to your question, yes. I think that we have to view all weapons. I don't agree, for example—I will put it negatively—I disagree with the idea that we should have more missiles at the present time. I am not talking about ICBM's, I am talking about the small missiles. I think we are over heavy in these, and we are being asked for more. And I don't think the Armed Services Committee is going to go along with it. So it is a constant study where we can have it.

Representative MOORHEAD. I think first, all of us agree with you, Senator, on the need for eliminating waste and inefficiency. There is no dispute on that. But the next level would be keeping 100 or 200 percent up with our commitments, can we do this and still reduce our expenditures in this area or that area.

You mentioned short range missiles. I raise the question of aircraft carriers. And others could pick different fields. But I think that Congress should keep pushing at the military to be sure that, given the commitments we have, that they can't do it with fewer of this or less of that, and so forth.

Senator GOLDWATER. I would agree that this is an approach that should be taken, not annually, but every day. What are our weapons requirements going to be 10 years from now? What are we going to be using? I think we are going to be using some small tactical nuclear type weapons, either we will be using it or the Red Chinese will certainly develop the field. I am sure the Russians have. We have to some extent.

What are we looking at in the long range picture? Now, we are this year going to ask for newer air superiority fighters for the Air Force,

the F-15. And when you look at the cost of this thing, a single place fighter, we hope we can keep it under \$10 million—and I remember the P-51 in World War II got down to \$35,000—it scares the daylight out of you. And when you consider the cost of one missile to hang on the F-14, the new fighter plane of the Navy—\$80,000 for one weapon. And they are going to hang 6 of them, a million dollars worth of weapons, on one aircraft.

This is one thing that we face in our committee that really frightens us. I think when you really get to the guts of this thing you are going to be really shocked, what we are asked to look at and do something about.

Representative MOORHEAD. Just taking the F-14, which as I understand is designed to be the Navy's new carrier-based plane, when you think if reducing the cost of operating a carrier with its attendant escort vessels, and then with the tankers and supply ships which also have to be in escort, and then you add to that the cost of a new airplane for 15 attack carriers, if we could get along with 10 carriers, let's say, you have reduced not only the cost of the carriers and the ships, but also the cost of the new airplanes, because you would have to procure fewer of them.

And this I would hope your committee would look at very hard.

Senator GOLDWATER. This is constantly on our minds. And I think the first answer we have to have is, what does the Foreign Relations Committee think our commitments are likely to be 5, 10, or 15 years from now?

And getting back to the C-5A, for example, in your line of reasoning—and I would agree with your line of reasoning—the C-5A will knock out about 33 percent of our present carrier aircraft. They just won't be needed. They will be phased out, aircraft like the 214, and 118, the 121, the 130. And we will wind up with a good fleet of F-C5's and C-141's, and be able to handle more tonnage than we can handle today with a great fleet of transport airplanes. Now, the airplane may cost more, but in the long run it is going to accomplish just what you want to accomplish and I want to accomplish by needing fewer of them.

Representative MOORHEAD. As you may know, Senator, I have been a critic of the C-5A program, not the quality of the airplane—apparently it is matching and meeting expectations—and maybe not even the total cost, but the fact that it was sold to the Congress at one cost level, which apparently the Air Force knew was lower than they had originally figured it, and then when in 1966 when it became evident at the field level that it was going to cost much more than that, there was concealment practiced—I believe it was concealment, not just from the Congress but also from the Secretary of Defense. And there is some place in that chain of command between the field level and the Secretary of Defense, that the system broke down, and we were being misled. And I think this is a dangerous thing in any procurement, whether it is civilian or military. And I think this is the thing we should try to stop in the future.

Senator GOLDWATER. As early as late 1967 this overrun was known by the Secretary of Defense. And I don't think that it was made known to the Congress until January of this year.

Chairman PROXMIRE. If the Senator would yield on that point, as

I recall in April of 1968 the House Appropriations Committee was told that there was no overrun by the Defense Department. And the overrun was first revealed by this committee on November 13, 1968, by Mr. Fitzgerald, who will be a witness here, who disclosed that it would be a \$2 billion overrun.

Senator GOLDWATER. I remember when that came about. But this was known, this was reported by the Air Force personnel at Lockheed Marietta as early as late 1967. Now, what happened to these figures when they got into the Defense Secretary's hands I don't know. But I know they were not made public until they were made public before this committee, not that we could have prevented it—I don't think we could have prevented such a big cost overrun—but we certainly could have done something about it. And I repeat that two-thirds of the overrun is inflation and modification taken mostly on Lockheed's part to keep it up to the demands of the Air Force. And the December 1967 overrun was noted in the Air Force report in March of 1968. And the Department of Defense also had that notification at that time. So I don't like to see the Air Force get blamed for this failure to report.

This is why I think it would be wise to ask Secretary McNamara to come here to explain.

Representative MOORHEAD. There is in existence, Senator, a memorandum dated November 24, 1967, from Robert Anthony, Assistant Secretary of Defense (Comptroller) to the Secretary of Defense Robert McNamara. This memorandum warned McNamara that he had received incorrect information from the Air Force Chief of Staff, about the sharply rising costs of the C5A. I don't know when the Secretary of Defense got the true picture, but presumably it was after this memorandum of November 1967.

Senator GOLDWATER. Certainly that should be looked into if that is the case. But the reports that I have been told about since this came up were the actual reports of just what was happening to this program. And as I say, under this type of contract—which I think has some good merit to it—you have to audit this thing, I would say, every evening at the close of business.

And you brought up an interesting point, too, that I don't know whether Senator Proxmire is aware of. The Defense Department has its own auditing system. And the GAO just sort of audits their audits. And I didn't know about this until a couple of months ago. And GAO has been on top of this C5A thing, in fact it has just completed a comprehensive investigation. And I think it might be wise to call them over here to look at it. I question the advisability of any department of our Government having their own auditors.

Chairman PROXMIRE. GAO will be here Friday; Mr. Staats is testifying.

Senator GOLDWATER. Ask him about that.

Chairman PROXMIRE. We will.

Senator GOLDWATER. It has come up in the last 8 years. Before that they were audited by GAO, and I think they still are. But I think GAO probably only audits the department audits.

Representative MOORHEAD. You mentioned the establishment of a joint committee of the Congress. Wouldn't it be advisable, Senator, to have on that committee, just to acquaint more Members of Congress

with the problems, those Members who are not on the Armed Services Committee and not on the Defense Appropriations Subcommittee.

Senator GOLDWATER. I don't think you were here when I brought that up. I think the committee should be expanded much more than my casual going over to include members of all the spending committees. And I don't know if you were here, but I mentioned that Secretary Packard is now using this technique in connection with weapons systems, sending academic types and business types to these plants to really study what is going on and then report back. The C5A is now, I think, in the process of being looked at this way. And it will be interesting to see what they come back with.

Representative MOORHEAD. Thank you, Senator. I was referring to your written statement that I read. I appreciate very much your comment.

Thank you, Mr. Chairman.

(Senator Goldwater subsequently supplied the following information:)

U.S. SENATE,
Washington, D.C., June 16, 1969.

HON. WILLIAM PROXMIRE,
U.S. Senate,
Washington, D.C.

DEAR BILL: Thank you for the opportunity you afforded me to appear before your Subcommittee on Tuesday, June the 10th.

In reviewing the transcript of my testimony (pp. 588-589) there was a question by Congressman Moorhead concerning a memorandum from the Defense Department Comptroller in November, 1967, to the Secretary of Defense commenting upon an earlier memorandum from the Air Force to the Secretary of Defense on C5A cost growth. The issue raised could not be addressed by me in detail at the time of my appearance. However, I have now examined into the matter and I desire to amplify my testimony on Congressman Moorhead's question by having the following statement included with the record as part of my response.

"On November 15, 1967, the Chief of Staff United States Air Force, General John P. McConnell, submitted an Official Use Only memorandum to the Secretary of Defense, Robert S. McNamara, briefly outlining the then status of the C-5. This memo was requested by Secretary McNamara and contained C-5 cost estimates known to the Air Force at that time.

"Subsequently, on November 24, 1967, a staff paper prepared within the Office of the Secretary of Defense and submitted as a classified memo by Secretary Anthony to Mr. McNamara alleged that the November 15th memo contained two incorrect impressions about C-5 costs. This claim was based on a comparison which showed a larger overrun and a different estimate of cost to complete than stated by General McConnell. This comparison was made without review by any responsible official in the Air Force.

"The Air Force has checked its financial data on C-5 cost estimates as of November, 1967, and has reaffirmed General McConnell's data. Moreover, the Air Force has investigated the differences between these data and those used to make the OSD comparison. This review indicated that the higher DOD estimate to complete stemmed from including additional C-5 items not addressed by General McConnell. Specifically, whereas the Air Force estimate addressed only development and aircraft production estimates for Lockheed and General Electric the OSD comparison added estimated spares costs.

"General McConnell's memorandum, in addressing ultimate costs, was addressing specifically the contract provisions for Lockheed and General Electric. Each of the estimates are outlined below:

[In millions of dollars]

| | McConnell memorandum | Anthony memorandum | |
|-----------------------------------|----------------------|------------------------|---------------------------|
| | | March 1965 (estimated) | November 1967 (estimated) |
| Lockheed..... | 2,256 | 2,591 | 2,256 |
| General Electric..... | 648 | 489 | 648 |
| Subtotal..... | 2,904 | 3,080 | 2,904 |
| Air Force adds..... | | 22 | 284 |
| Initial spares and equipment..... | | 293 | 515 |
| Subtotal..... | | 3,395 | 3,703 |
| Abnormal escalation..... | | | 132 |
| Total..... | 2,904 | 3,395 | 3,835 |

"From the above tabulation it is apparent that General McConnell was correct in stating that estimates at that time for Lockheed and General Electric were lower than the March, 1965 estimates for like work, i.e., 2804 versus 3080. It is misleading to compare 2904 with 3395 or 3835, without explaining that the latter totals include items not included or considered in the McConnell memo.

"The overrun estimates in General McConnell's memorandum and the estimates shown in Secretary Anthony's memo were as follows:

OVERRUN ESTIMATES

[In millions of dollars]

| | General McConnell memorandum | Secretary Anthony memorandum |
|-----------------------|------------------------------|------------------------------|
| Lockheed overrun..... | 240 | 351 |
| GE overrun..... | 54 | 69 |
| Total..... | 294 | 420 |

"The explanation for the differences between the two estimates is accounted for by the fact that the overrun in General McConnell's memorandum did not include abnormal economic escalation as the contract specifically provides that target prices will be adjusted for abnormal escalation allowance. The differences were:

[In millions of dollars]

| | General McConnell memorandum | Abnormal escalation | Total | Anthony memorandum | Unreconciled difference |
|---------------|------------------------------|---------------------|-------|--------------------|-------------------------|
| Lockheed..... | 240 | 112 | 352 | 351 | +1 |
| GE..... | 54 | 20 | 74 | 69 | +5 |
| Total..... | 294 | 132 | 426 | 420 | +6 |

"Abnormal escalation estimates are not 'cost overruns.' General McConnell's memorandum properly identified the overrun estimates.

"On both counts, the allegation that General McConnell's memorandum was misleading is incorrect."

Sincerely,

BARRY GOLDWATER.

Chairman PROXMIRE. Senator Goldwater, while I agree with your statement that the Government shouldn't take over these defense plants, we have had a bad experience with the Government in the arms business where they have operated, it has been about as inefficient as it

can be. Still I must say that this is a peculiar situation that the defense contractors have now. You are a former businessman, and you know a great deal about competition, profits, losses, incentives, and so forth. But I wonder if a company is really a part of the competitive system when, No. 1, it does about 90 percent of its business, as some of these contractors do, with the Federal Government. Often their contracts are noncompetitive, and in many cases sole supply contracts with no bidding at all. And the company is building its product—a plane, a tank, a helicopter—in a Government-owned plant. Its machinery is owned by the Government, or much of it is, and given to the contractor at very much less than cost for use in Government contracts. Its working capital is provided by the Government through 90-percent-progress payments.

Its underestimated cost decisions are made up through change order or escalation clauses. Mr. Charles, of the Air Force, testified that he couldn't recall in all his vast experience a single, major contractor who had ever lost money on any defense contract. So that when you put all this together, I wonder if this is really free enterprise or competition.

Do you have any philosophical views of how we can handle this in view of the fact that it certainly is not effective competition? And at the same time I agree that we shouldn't have the Federal Government take it over.

Senator GOLDWATER. I put in the record last Thursday the procurement procedures of the Air Force. And in this month's issue of the *Armed Forces Magazine* there is an excellent article criticizing the overall procurement procedures. And I must say it is a mishmash. There is every kind of contract you have ever heard of or dreamed of that you can work out. I don't, for example, believe in noncompetitive bidding. I think all procurement should be done on a bid basis. I can see, though, where there might be some cases where it would be impossible.

I can also see where we are not going to develop—and this may sound strange coming from an advocate of free enterprise like me—but the cost of research and development has gotten so great now that I don't think there are many corporations that are able to undertake the development, say, of C5A, or, say, the moon program, or any of the new programs, the SST.

The company has to think of its stockholders. And they probably say, no, I don't want any part of it.

Now, as to using Government equipment and Government buildings, I think they should pay for those things. I don't think they should get these scot-free. Let that be a part of the cost of the bid.

Chairman PROXMIRE. You see, they do. But the way this works out, it is a dream from the standpoint of making money on your capital investment, because their capital investment is so low, because they work in a Government plant, they work with Government working capital, they work with Government equipment, as a result, if they are allowed a 7- to 9-percent profit on sales, it can be an astronomical profit on invested capital, which is what of course they are interested in. And so far we haven't been able to get the profit study moving on any level, the GAO or any other agency to give us a study on what defense contractors' profits are.

Senator GOLDWATER. Well, in the case of the C5A I hate to keep beating back to that—Lockheed says that they are going to lose \$13 or \$14 million on it. The Air Force says it might be \$284 million on that. I don't understand why there should be such a spread in there. But General Electric will lose \$208 million on the first batch of the engines for the C5A. If they make the second batch, another 200 plus, they will break even.

Again, we are talking now about companies or corporations which have a broad spread of ownership. Lockheed's stock has gone tumbling down lately. I wouldn't worry about it. But they only do 30 percent of their business with the Government. Some of the smaller contractors, yes, some of them do 100 percent. But I think that they should pay for the use of Government equipment. And I think that bidding should be competitive.

Chairman PROXMIRE. The staff has a different figure on that, they say Lockheed does over 90 percent of its business with the Federal Government.

Senator GOLDWATER. Not Lockheed Aircraft. Now, Lockheed goes all over the countryside, there is Lockheed Electronics, they are in the space business, and they are—I couldn't name all of them. I asked that question of the President, and he told me 30 percent. And I am sure he was thinking of the aircraft.

Chairman PROXMIRE. Senator Goldwater, getting to something you and I clashed on on the floor—and I am not sure we disagreed but I would like to know what your attitude is on it—that is the disclosure which you put in the record that over 200 retired generals, admirals, Navy captains, and Army colonels are working for defense contractors, three times as many as were working for them in 1959. In addition, I protested, and you protested too, the identification of a former top procurement official, Mr. Morris, with the Litton Company.

It later was found that Mr. Morris has insulated himself from any procurement decision of any kind, and I put that in the record.

But both of us are concerned with this problem. Do you have any views on what we can do to protect the taxpayer against the "old school tie" situation that can develop when you don't have a real arm's length dealing, and so much depends upon a critical, objective viewpoint on the part of the Pentagon procurement official under these circumstances.

Senator GOLDWATER. Of course, I feel that this is a greatly overrated problem. This constitutes, I think, one tenth of 1 percent of the type of executives we are talking about. I know a good many of these people, retired generals and colonels from all branches of the services. And believe it or not, I have never been approached by one of them on a matter that involved procurement. Every one of their companies are in this budget someplace. Frankly, if I were in the defense business and wanted the weapons know-how I don't know where else I would go but to a retired general or colonel or admiral?

I am just as concerned, if there is a concern, about the civilian who has been a Senator, or a Congressman, or the head of a Bureau, leaving that employment and finding himself a member of a law firm in Washington doing business in that particular field. And if you want "X" questions resolved, you had better see this law firm. I think it goes both ways. I am trying to compile a list of former civilians who

are now engaged at the same level as your colonels and generals and admirals. I will admit on the face of it, it looks bad. But I can't blame a man who gets out of the military and is too young to retire taking a job—I did a little study on this, and while I don't say that the lowered moral in the Pentagon was the direct cause of it, dividing the period from World War II until the present time up, there were three times as many retirements in the ranks we are talking about during the last 8 years than we had in any of the other two 8-year periods.

You keep a man in the military if you keep his morale high. And when he was snipped at for 8 years as he was in the Pentagon under McNamara I don't blame him for getting out and taking a job.

Chairman PROXMIRE. I don't blame them. But I would hope that most of them would take jobs elsewhere than in an area where their contacts or influence or associations can be substantial. After all, if a general or admiral has been in charge of promotions in the procurement branch—and many of them have of course—or recommending promotions—and he goes to Lockheed or Boeing or to one of the other big contractors, Litton, then he is able to deal with the same people that he has promoted. Obviously this is an unhealthy and unfortunate situation.

Let me ask you about something else, because I think this is one of the most important areas where you can make a useful contribution.

You discussed the possibility of cutting maybe \$2 or \$3 billion this year and maybe \$5 billion eventually from the military budget. How much do you think we can cut from the nonmilitary budget? After all, this subcommittee is interested in the overall priorities. And you said in your letter that you thought maybe we could make some cuts in HEW and elsewhere?

Senator GOLDWATER. I go back to my former days here when Senator Byrd used to bring in his annual suggestion, and it ranged from \$7 to \$10 billion. And I think by the same kind of cost cutting that we use in business, and that you understand so well, we can get into almost any field.

Now, here comes your priorities again. How important is it that we finish the national highway system in 5 years? I am just taking this as an example. Maybe we can extend this a few years.

I know of some improvements I would like to see made in the national park service. The Grand Canyon is going to be there a long, long time, so we can wait.

We have a need for the construction of Government buildings. Do we have to do it tomorrow?

Now, I mention in my testimony that I have asked the military services for a year-by-year program whereby we can look ahead and see that Fort Huachuca in Arizona will be a modern base by the year 1980. It will never be that way if we get all excited and spend tons of money on it this year and not spend any more for 20 years.

It is like the highway program, getting back to that—not that I would like to see it stopped. But we spend billions of dollars on a project one year and then forget about it.

Chairman PROXMIRE. What about HEW?

Senator GOLDWATER. I think HEW—any Bureau of this Government—can stand cuts without hurting anything that they are doing of a constructive nature.

Chairman PROXMIRE. You see, what concerns me is that the total net cut in HEW that President Nixon has made over the Johnson budget was \$1.228 billion compared to a defense cut of about \$1.1 billion.

In other words, the HEW was cut more.

Furthermore, I am concerned because of what is happening in my State and around the country. One of the major cities in Wisconsin suffered a 10-percent cut in their education budget. This killed plans to hire 43 new teachers. And it is a town of about 50,000, and that is a lot of teachers. It spiked the purchase of any new text books.

And there are similar situations in Youngstown and Detroit and St. Louis.

We had expert testimony from the former head of the American Economic Association that for each dollar of defense expenditure increase we are likely to get a somewhat corresponding cut in funds available for education. This was based on a study by an expert at Yale University.

This concerns me not simply from the human standpoint, from the standpoint of a better life, better educated people, but from the standpoint of military strength. After all, this Nation is stronger if our people are better educated. We are turning down people in the Armed Forces because they aren't educated enough and aren't healthy enough. And we don't have the kind of skilled technicians in industry that can produce the kind of weapons we need.

From that standpoint how can you advocate that we appropriate less for education when education is so important to our military defense?

Senator GOLDWATER. This is where the importance of what you are trying to do comes, priority. When I suggest cutting HEW it is like cutting mother love, free beer, and wide roads, you just shouldn't do it. But I don't think that it is so sacrosanct that we can't say, let's look at it. The Department of the Interior practically runs the State I live in. The Indians are very, very close to me. But let's take a look. Let's really take a look at it and not be governed by emotions.

I know that people will say, well, Goldwater is opposed to education. Not at all. I happen to be raising money for a private college in Arizona. And we are building that college for less than \$11 a square foot. Now, the Federal Government came along with some of their money, and they built an auditorium for \$22 a square foot. And that is cheap. Now, if it costs twice as much for the Federal Government to build a project, there is where we take a look at it.

It is just like business. I used to have a look at my business practically every day to say, where can I cut, so I can make a little more money and pay a little better wage and have a little better profit. And it just meant study, study, study. You can't do this by emotion.

I don't agree, for example, that every dollar that we spend on education gets a dollar in return. I don't agree that every dollar that we spend in the slums, in urban renewals, gets a dollar in return. But I do think we ought to keep studying, looking and studying, not just the military, but the whole ball of wax.

And this is why I think that you have started is so good, because in my memory it has never been done before.

We have heard a lot about priorities. And I think we ought to know where they are. I would put HEW way up on the list. But as long

as we are in a war, and as long as we have a question about what we have to do 5, 10, or 15 years from now. I don't see how you can remove a high priority from the military. But neither would I quit shooting at it.

Chairman PROXMIRE. Senator Jordan?

Senator JORDAN. Just one question.

Senator, yesterday a very able witness testified that in his opinion there was a very cozy arrangement between the contractors and the procurement officers for the Defense Department frequently, that they looked at the original cost estimates through rose-colored glasses.

And he refused to accept my word of collusion, but he said it comes very close to that—very close to being collusion—between the procurement officers and the defense contractors. Now, in your wide experience on the military affairs committee have you personally seen evidence of that type of collusion?

Senator GOLDWATER. No, I haven't. And I would say that it is rather difficult to understand how it is going to come about.

When you say "officer" I have to assume you mean a man in uniform—

Senator JORDAN. Not altogether. Procurement officials, let's put it that way.

Senator GOLDWATER. Well, procurement is accomplished by the Secretary of Defense, and the Secretaries of the various forces. They listen to the weapons board, and what they recommend. But the final agreement on a contract is done with the approval of a secretary or the Secretary. Collusion? No, I just can't believe it.

There have been suggestions that that would have happened with the TFX. Now, Robert McNamara and I disagree. But there is one thing I agree to—he is an honest man. And I just don't think a thing like this of that size could come about and be kept quiet.

Now, is there any hanky-panky that goes on? I would say there isn't. In haven't seen any. But when you are talking about \$78 billion you could have a little of it here and there.

They talk about the C5A contract, for example, as being a buy-in. They charge Lockheed with underbidding so that they could get the job even if they lost money, so they would have the first leg forward on the know-how on big aircraft. Well, this isn't true, because Boeing has gone ahead with large aircraft, and it is flying. And they are selling.

So I have just never seen it. And I have never heard any reports of it. And I can assure you that you would hear these things, you would hear them from competing companies. They would say, well, we didn't get that because the President agreed to do this.

These are not trade secrets.

I have to admit it doesn't look good, just as Senator Proxmire says, for the man who is just out of uniform taking a job, I will have to say it doesn't look good. But I have never had any evidence presented to me of any wrongdoing.

Chairman PROXMIRE. Thank you.

Mr. Moorhead?

Representative MOORHEAD. Senator, coming to this idea that it doesn't look good, it is my understanding that most of what I call the front line procurement systems project officers are the uniformed military. I am concerned about the promotions system—you are

either up or out. Although I agree with this policy, the military man must think to his future. And I think we put him in a position of temptation if he gets too close to the man he is supposed to be dealing with at arm's length. Do you have any opinion as to the type of procurement that I understand is carried on in Canada, England, and France, which is using civilian procurement officers, who presumably wouldn't have this up or out situation, or career rotation and we could provide them with an excellent career so that they could provide a greater degree of continuity, and then we could direct that these people shall not leave the service to go to work for a contractor with whom they have dealt?

What would be your reaction to that kind of change in our procurement procedure?

Senator GOLDWATER. I think the procurement procedures should be changed. And I think the military would be the first to agree with you on this.

Representative MOORHEAD. I think they agree. But they don't all agree on how it should be changed.

Senator GOLDWATER. No. But I think this should be a well taken duty of Congress, to provide a new way of procurement.

Now, it is true that the man in the uniform has something to do with many small contracts. But the man who signs the contract, the big contract, is a secretary. He is a civilian.

And also it is true that these men who are temporarily in positions of procurement aren't there forever. The average length of time might be 3 or 4 years, when they move on to some other job.

And again, I have never in my life—and I have known, I guess, as many military people as anybody in this town—I have never heard of a deal, I have never even heard of any rumors of deals. And if I had I would tell you.

I don't think there is a more dedicated person in this country than the man in uniform. He has to be, to put up with what he has had to put up with throughout most of his career. And most of them know that if they do a good job, and keep their noses clean, that when they retire they are not going to retire with a small income.

But I can't blame them for wanting to make more money than they get after they retire, even as a four-star general.

The situation you suggest I think would be an interesting one to explore.

Representative MOORHEAD. One of the real problems is that a military officer is transferred after a relatively short time on the job—he is a dedicated citizen and intelligent, but with 3 years' experience he is not up to competing with and dealing with the team that a corporate contractor could field against him. Maybe a permanently assigned civilian type could do that job better.

Senator Goldwater. Well, it might be, but I have my doubts. You have to keep in mind that the weapons team, a large team of academic types, business types, scientists, engineers, and military people, I think they number close to 200, are the ones that finally decide what the weapons system is going to be.

Now, in the case of the TFX, if you recall, the civilian, the Secretary overrode the advice of the committee, and gave the job to the highest bidder, a company that had not been noted for its success in making aircraft, whereas the other company had. I don't say that there was

anything wrong in this. I think it was a mistake in judgment. But there was the biggest booboo of the century, and the military man had nothing to do with that.

The C5A entered into the same way.

The company, to begin with, can't risk this kind of thing. I have to admit, it doesn't look good. But if I were Lockheed or Boeing or North American or anything, if I were looking for expertise, I would look for a man who had been in that business, who had known the aircraft, who had preferably been an engineer in the Air Force, so he could go into the engineering end of it and help. I see nothing wrong in industry turning to the military, any more than I see anything wrong in a law firm hiring a former Secretary of the Interior to represent them on land matters. I think that is logical. If I have land problems I know where to go.

Representative MOORHEAD. I want to assure you, Senator, that I didn't mean to limit this to the uniformed military. But a civilian who was working in procurement with a particular contractor and then left the Government and went across the table would be the same thing.

Senator GOLDWATER. This goes on, though, pirating. A big corporation in my home town lost five or six of their top personnel to another corporation. And you should hear what they got. They had the know-how on a certain something this other corporation wanted to make. And this base corporation is even still thinking about going to court on this type of pirating. So this is done.

If I had been one of those five or six I would have thought a long time.

Of course, the thing that would have made up my mind to stay would have been the nice climate in Arizona.

Representative MOORHEAD. Thank you, Mr. Chairman.

Chairman PROXMIRE. Thank you very much, Senator Goldwater.

Before you go, I would ask you to do us one favor. We are going to take you up on your suggestion for a priority committee. I think this is an excellent idea. And we haven't had that kind of a suggestion. And I think this committee could be created and something like this could be worked out more practically without redtape and a lot of waiting.

I would like you to—like to ask you if you could, not right now, but think about it a while, consider recommending to the committee any expert or experts that you would think would be useful to us in giving as realistic as possible a view of the Russians' intention and capabilities. Because you stress how important that is. On June 23 we are having Prof. Merle Fainsod, Prof. George Fischer, Prof. Alex Inkeles, and a man from RAND, Thomas Wolfe, on this. And on Tuesday we are having Prof. Abram Bergson, Joseph Berliner, and Holland Hunter, all experts. But we would be very grateful to you if you could give us from your knowledge people who might give us better insight.

Senator GOLDWATER. I have three that come to my mind quickly, because they have been a great help to me. I don't know if you could get Dr. Warren Nutter over here. There is not a man in the world, with the exception of possibly Colin Clark of England, who knows as much about the Russian economy as this man.

He is now the Under Secretary of Defense. But he has just pub-

lished a book, I have got a copy of it this morning, comparing the Russian man with the American man.

I think you should, if you can, get Dr. Robert Straus-Hupe of the University of Pennsylvania, who is a very fine expert in this field, and Dr. Bill Kintner, of Pennsylvania, has written a wonderful paper on what the Soviets are up to in their buildup.

I think Straus-Hupe from the ideological standpoint, Kintner from the hardware standpoint, and Nutter from the dollars or rubles standpoint would give you a fine viewpoint if we can get them.

Chairman PROXMIRE. I will try to invite all of them.

You have presented this morning a very, very helpful and useful viewpoint, you have done it extremely well.

We had a man from RAND, we have had two Assistant Defense Secretaries, and we are going to ask Mr. McNamara, we are trying to get as broad a spectrum as we can. And we thank you for coming.

Senator GOLDWATER. I was unemployed for 4 years. Thank you very much.

Chairman PROXMIRE. The next two witnesses will be able to testify to something which has been going on in the dialogs between Congressman Moorhead and Senator Goldwater with relation to those who have worked in the Pentagon and then go in the private sector, and I understand we will hear from two experts in military procurement. Gordon Rule has been the Director, Procurement Control and Clearance Division, Office of Naval Materiel, since 1963. His lengthy and distinguished career includes service in the Navy during World War II from 1941 through 1946, during which he rose to the rank of captain; head of the Contract Division, Bureau of Ships, during the Korean war, and negotiator for U.S. base rights with NATO in 1952. He has lectured at the Naval War College and is the author of the book "The Art of Negotiations."

Following Mr. Rule, we will hear from Merton Tyrrell. Mr. Tyrrell is a graduate engineer and has been employed in the defense industry since 1956. He worked for the Firestone Guided Missile Division on the Corporal missile project as an industrial engineer from 1956 to 1958, following which he went to work for the Lockheed Missiles & Space Co. where he was employed from 1958 to 1963. His job there included work on the Polaris missile. From 1963 to 1965 he worked for the Management Systems Corp. and since 1965, has been with the Performance Technology Corp. where he is now vice president.

Mr. Tyrrell worked on the Minuteman program from 1965 through 1967, as a consultant to the Department of Defense. His work in that capacity included the design of the performance measurement program, the Air Force cost schedule, planning and control specification, and worked on the cost schedule control systems criteria. He has also worked for the Air Force helping to train Air Force personnel in cost schedule planning and control.

We will begin with Mr. Rule.

**STATEMENT OF GORDON W. RULE, DIRECTOR OF PROCUREMENT
CONTROL AND CLEARANCE, NAVAL MATERIEL DIVISION,
DEPARTMENT OF THE NAVY**

Mr. RULE. Good morning, Mr. Chairman and members of the committee.

This is quite an awesome occasion to me. Frankly, I thought I was going to appear at a small committee, and here I come into a room like this. So if I am a little nervous, please forgive me.

Chairman PROXMIRE. I am sure you will have no trouble at all, Mr. Rule. You have a superlative background and you have the great advantage of knowing what you are talking about.

Mr. RULE. Thank you.

I do appreciate very much the invitation to come up and talk about procurement.

And one of the things your letter mentioned was the "should cost" exercise that I had a part in with Pratt & Whitney. I won't go through my background. You have done that.

I would like to tell you what my present position is in the Navy so that you will understand a little more of my background.

The Navy has a system of reviewing contracts before award that none of the other services have. I happen to be head of a division called the Procurement Control and Clearance Division in the Chief of Naval Materiel's office. We have to review and approve, prior to award of the contract, all Navy contracts over a certain dollar amount. The dollar amount fluctuates from procuring activity to procuring activity. But the point is that we have the review of the business aspects of Navy contracts before they are awarded.

I happen to have unlimited authority to approve contracts. And I have approved and signed two in the last 12 months of over a billion dollars.

It was a little inaccurate what Mr. Goldwater said about the Secretaries having to sign these contracts. They do not have to sign them. The contracting officers sign them, the Secretaries do not.

But sitting as I do, reviewing all these contracts, I do have an overview of what is going on, certainly in the Navy. I am not familiar with what is going on in the Air Force and the Army, but I am familiar with the Navy.

And at this point I would like to say, sir, that all procurement in the Government is not quite as bad as some of your reports make it appear. I don't think you will mind my saying that. It is a fair statement. And I think we asked for criticism, unfortunately, in the DOD.

I think our attitudes toward the work of this committee—this committee we need, they are not only helpful, we need them because anybody in this Government, whether it is the GAO and this committee or the Holifield committee, or any other committee, or Members of the Congress, that can point out and illuminate ways for efficiency, and where we have goofed—and we certainly do goof—we want to know it.

But unfortunately I find—and I was thinking about this just last night again—I think the reaction that criticisms get, particularly over in DOD is that they take these criticisms personally, and the result has been that communications have almost broken down between the staffs of your committee and the staffs of the Holifield committee, because we don't communicate. I think it is tragic that some of the people have not learned the basic lesson, if they are going to be in Washington and represent Government agencies on the Hill. They ought to learn that if they ever kid one of these staffs just once, they

will pay for it. And if they don't level with the staffs of these committees they are going to pay for it.

Because of these reactions they ask for criticism. When you find things, if these people in authority in procurement in the Pentagon would come and sit down and talk logically, there isn't anything that can't be worked out with the staffs and through you gentlemen. But they won't do that. They crawl in a shell and they react. And I just hope that this situation can be overcome.

We have a new Secretary over there, Mr. Shillito. And I think it can only improve, because it can only go one way.

I would like to suggest, subject to your approval, Mr. Chairman, that I first discuss for a brief time the "should cost" exercise at Pratt & Whitney. Following that, if you don't object, I should like to discuss briefly how the defense dollar is spent, and touch on several points in that connection, some that were mentioned here this morning—the conflict of interest is one of the things I am very interested in. And then I should like to make a specific recommendation to this committee for action that I think should be taken at this time.

If that arrangement is satisfactory, I will proceed.

Chairman PROXMIRE. Go right ahead. You will be able to do that in about 10 minutes or so? I don't want to press you on it, if you would prefer longer you may take it, but we do have Mr. Tyrrell, and we want to question you, and we don't want to retain you too long.

Mr. RULE. I can shorten it any way you want to.

Chairman PROXMIRE. I think it would be helpful if you did it in 10 or 15 minutes.

Mr. RULE. I cannot do it, sir.

Chairman PROXMIRE. If you want more time, then go ahead.

Mr. RULE. I think the best thing to do would be to just give you my recommendation.

Chairman PROXMIRE. Fine.

And then we can question you on these other matters.

Mr. RULE. I don't know how I can do it in 10 minutes.

Chairman PROXMIRE. Be our guest and take 15.

Mr. RULE. Now you are trying to negotiate, and that is not good enough.

As a result of my study and all the things I was going to talk about, I have come to one conclusion, that I respectfully submit. And I would like to read it:

Mr. Chairman, I am sure we will all agree that sufficient evidence has been adduced of inefficiencies, questionable contracting practices, including withholding of information, and lack of public confidence in defense contracting, et cetera, to warrant the conclusion that the time for talking is past and the time for action has arrived.

The challenge now is to find the best ways and means of channeling the concerns, desires, and recommendations of all interested persons and groups, both in and out of the Congress and Government, into intelligent, meaningful, and constructive action, action if you please, which is bottomed on carefully sorted out facts, rather than action based on emotions, possible preconceived views, misconceptions, or misunderstanding.

I very respectfully submit to the subcommittee and through it to the Congress as a whole that the corrective measures we are all seeking

in the spending of the taxpayers' defense dollars are not and cannot be permitted to become partisan in nature. This problem is and must remain strictly bipartisan.

As a taxpayer and a Government contracting official I therefore call upon the President, the Secretary of Defense, the Senate and House leadership, and the membership of both the Senate and House to vigorously support early passage of S. 1707 by Senator Jackson and H.R. 474 by Mr. Holifield, which are companion bills "To Establish a Commission on Government Procurement."

This 14-member commission, assisted by the GAO with ex officio membership, seems to me to be the ideal answer to the question of what action should be taken now.

I happened last night to run into Mr. Staats, of the GAO. And I told him what I was going to testify to today. And he said he was delighted. He said he felt that now was the time to set up that commission.

It is difficult to see how or why anyone sincerely interested in the prudent spending of the defense dollar could oppose this 2 years in-depth study and investigation of Government procurement. There may be some who would prefer more precipitous action, but this would be most unwise, in my opinion. Others may consider this proposal to be a challenge to or an infringement upon their particular committee jurisdictions, but I suggest the time has come to raise our sights and recognize that our problems are of the magnitude and importance of "oceans" rather than mere "rivers."

Some may feel this study commission is an attempt to buy time in the hope that the problems will go away. The problems will only go away when intelligent corrective action is taken, and the people today want that action taken. The object of the commission study is not to buy time, it is to obtain and implement the right answers to these problems in a statesmanlike fashion. When enacted this legislation would provide the American people with the knowledge that positive, albeit calm, deliberate, and orderly action was being taken and I firmly believe that they would overwhelmingly support this reasonable and happy medium approach.

I suggest that the commission, or subgroups thereof could, following adjournment of the Congress hold hearings in various parts of the United States in order that our citizens could be heard without having to come to Washington to make known their views. Obviously, Mr. Chairman, leaders in this continuing fight for better defense procurement like yourself and Congressman Holifield should be members of the commission in order that your good work can be continued to fruition.

And I don't think that took over 10 minutes.

Chairman PROXMIRE. No, sir. You can go right ahead. And I didn't mean to abbreviate you, but it is just that I do think it might be helpful if we could have time for questioning. So if you would like to go a little further, go right ahead, sir. If there is anything else you think we should know before we question you.

Mr. RULE. It would be anticlimactic now. I was building up to this.

Chairman PROXMIRE. I think that is very good. We would be delighted to question you on the basis of that testimony.

Mr. Tyrrell, you may proceed.

**STATEMENT OF MERTON TYRRELL, EXECUTIVE VICE PRESIDENT,
PERFORMANCE & TECHNOLOGY CORP.**

Mr. TYRRELL. The hearings of this subcommittee last November and this past January concerning the spiraling cost of the C-5A airplane, as well as press media articles on the Cheyenne helicopter and the Mark II avionics, have had a wholesome effect in pointing up to Members of Congress and to the American people that major problems exist and considerable improvements must be made in the defense acquisition process.

However, to any observer not familiar with the acquisition process as it has been practiced for the past 10 years, several apparent implications of these disclosures need to be dispelled. First, it would appear from these disclosures that cost problems in weapon system programs are a recent development. The revelations to date—the C-5A, the Mark II avionics, and the Cheyenne—all relate to new programs whose starts took place in the mid-1960's or later. The problem of overruns, and especially cost growth, is not a recent manifestation. There was no unique turn of events in the mid-1960's which led to the creation of cost problems. A number of the earlier programs—still with us today—have exhibited the same pattern of cost growth as can be seen on the C-5A program. The climate wherein cost growth is "socially acceptable" within both the Department of Defense and the contractor community, predates the C-5A by a number of years.

A second apparent implication of the recent disclosures which needs to be dispelled is that questionable actions or decisions are solely attributable to high-ranking, appointed civilians within the Department of Defense. To the contrary, much information relating to cost problems has existed for some time; and many decisions—or lack of decisions—to do something about these problems have been made at the field level.

To help illustrate these points, I would like to explain some of the facts surrounding the Minuteman program, especially the Minuteman II program. The Minuteman is a very complex program, involving eight major associate contractors and hundreds of minor subcontractors. Many millions of dollars have already been spent on it. It has been with us for over a decade, and will be around for some time to come. Therefore, what I have to say is also complex. But if you will bear with me, I think I can demonstrate:

—Cost growth on this program was inevitable.

—There was potential for reducing costs and at least blunting this cost growth. This was demonstrated to the Air Force repeatedly.

—The Air Force waited for 2 years before beginning any formal cost-control program.

—Their cost-control program was not backed up with concrete action and so accomplished virtually nothing.

MINUTEMAN II BACKGROUND

The Minuteman solid-fueled ICBM is the backbone of the Nation's strategic and retaliatory arsenal. The full-scale development program for Minuteman I began in the late 1950's and production continued up through the mid-1960's.

In the early 1960's an advanced Minuteman was proposed: the Minuteman II. The primary advancements of Minuteman II over Minuteman I were to be:

—An extended range that would result from a new second-stage rocket motor.

—A modified ground electronics system.

—An overall system capability hardened against nuclear effects.

—An improved guidance system.

—Greater overall system reliability.

The same contractor team that had produced the Minuteman I was retained on Minuteman II, except that a new source was selected for the ground electronics system.

The original cost of the research and development phase, exclusive of Vandenburg effort and reentry vehicles, proposed by the Ballistic Systems Division of the Air Force through higher headquarters and the Department of Defense was \$490.4 million. The contractors involved were directed to proceed under letter contract in the spring and early summer of 1962. These contracts were negotiated approximately 1 year later.

COST GROWTH

Almost immediately costs began to grow, through amendments to these contracts. The guidance and control system contract provides a most striking case in point. The development contract was negotiated between Ballistic Systems Division and the contractor in June of 1963. The original contract, including supplemental agreement No. 1, was negotiated at \$170 million. By November of 1963, 5 months later, the contractor estimated that a total of \$252 million would be required to complete the effort. In August of 1964, slightly over a year after the contract had been negotiated, the contractor estimated that it would require \$320 million—an increase of almost 100 percent in slightly over 1 year's time.

It should have been obvious from the beginning that the contract would grow. Beginning in July of 1963, the consulting firm for whom I worked was engaged by the Minuteman System Program Office to conduct a survey of four of the Minuteman associate contractors. The guidance and control contractor was one of these four. Our primary task was to test the feasibility of a management information system. However, during this survey it became apparent that there was already a severe cost problem. Three factors led us to this conclusion:

—Inordinate delays were being experienced in the delivery of certain components, especially the PIGA's (pendular integrating gyroscopic accelerometers). Since these were being produced under cost-plus-fixed-fee (CPFF) contracts, schedule slippages generally would entail cost increases, although the contractor did not disclose any cost increase at the time.

—The actual claims for overhead costs by the contractor in the last quarter of 1962 and the first half of 1963, expressed as a rate per hour, already exceeded the average composite rate for the entire life of the contract as shown in the Government's negotiation and settlement memorandum.

—There appeared to be a reliability problem with certain of the components within the system. This was obvious since the contractor

already had proposed a component quality assurance program (CQAP) to improve the reliability of certain components. And even though the system outlook was being reported as favorable by the technical director, contractor personnel indicated there was a problem.

These findings were documented in a report submitted to the Minuteman System Program Director in September of 1963. In that report, we recommended that remedial action be taken, including a definitive cost reduction program to be undertaken jointly by the Minuteman System Program Office and the Minuteman associate contractors in order to help maintain the program costs within the bounds of the contracts. As part of this, we submitted a proposal for follow-on assistance to the System Program Office on October 21, 1963. This ultimately was negotiated with our firm. However, all tasks in our proposal which dealt with cost reduction were deleted.

In November of 1963, 5 months after negotiation of the guidance and control development contract, the contractor declared an overtarget condition in his estimate of requirements for funds. At this time, the contractor estimated that the overrun at completion would be \$14 million. By the following April, the estimate of overrun at completion had grown to \$24.7 million. An analysis of the overrun was performed at that time by the Western Contract Management Region of the Air Force (now called the Contract Management Division).

In this analysis, based upon data furnished by the contractor, the overrun was separated into the following categories:

- Material overrun—\$13.2 million.
- Engineering overrun—\$4.2 million.
- Manufacturing overrun—\$6.7 million.
- Quality assurance overrun—\$0.6 million.

The material overrun was due primarily to increases in the supplier prices of the PIGA's. The contractor had included these in his proposal at \$43,000 apiece. The Air Force, during contract negotiations, had used a unit price of \$25,000. At the time the analysis was made by the Western Contract Management Region it was determined that the unit price might approach \$64,000 by the end of the contract. The System Program Director had been notified 7 months earlier in our report dated September 30, 1963, that schedule, and probably cost, problems existed in the PIGA acquisition. It is interesting to note that in the WCMR analysis, they stated that all actions on the part of the Air Force had been proper and that the contractor had gone out of his way to apprise the Government of its current cost position. However, it neglected to indicate whether anybody was doing anything to contain the cost problems.

Aside from the admission of the PIGA problem, a curious fact emerged from the Air Force analysis of the overrun: \$4.2 million of the overrun was shown to be within the engineering area. All of this overrun was explained to be the result of redesign, engineering miscalculations, and other specific, in-scope changes to the effort. None of the overrun was shown to result from increasing rates—direct labor rates and overhead rates. Yet our September 30 report had shown this to be a severe problem.

Concurrently with the overrun disclosure in April 1964, we were conducting a feasibility study on the implementation of cost perform-

ance measurement at four of the Minuteman associate contractor plants. The guidance and control contractor was one of the four. The trial area was the engineering task of the development contract. The performance measurement analysis showed that, within the engineering task alone, the contractor was overtarget—currently, not at completion—by significantly more than the Air Force study showed. A substantial part of the engineering overtarget was the result of labor and overhead exceeding the originally anticipated rates. Our analysis was furnished to the Minuteman Program Control Office and to the Air Force guidance control project officer.

COST CONTROL PRACTICES

As a result of these findings, our follow-on contract directed not the implementation of a cost reduction program or some other concrete actions designed to control costs, but rather a continuing survey into the contractor's cost position. This survey was made difficult by reluctance and tardiness on the part of the contractor in supplying necessary information. At one point our personnel, as well as a Ballistic Systems Division military representative, were denied access to the contractor's plant. Nonetheless, with the information that was obtained, a certain picture of the results of cost control practices by the contractor began to emerge.

In the area of overhead, which we had known since the summer of 1963 to have contributed to the cost problem:

—Engineering burden rates had increased by 58 percent between 1960 and 1964.

—Manufacturing burden rates had increased by 34 percent between 1960 and 1964.

—Material burden rates had increased by 58 percent between 1960 and 1964.

—Administrative cost rates had increased by 65 percent between 1960 and 1964.

Most of the increase—approximately 70 percent—were in the area of controllable overhead—that is, those expenses that are related to the number of personnel employed. For example, the dollar expenditures for bidding on other contracts had increased by 1,450 percent between 1960 and 1964.

The number of people charging to indirect accounts—that is, not charging to any contract—had increased substantially during this period. This increase amounted to some \$20 million per year in additional overhead costs to be absorbed by contractual effort. Minuteman, at that time, amounted to almost 90 percent of the contractor's contractual effort.

In the area of hardware costs, much of the data that had been requested was never supplied by the contractor, even after finally having been requested by the Air Force plant representative's office. However, by using data that had been supplied for an earlier study conducted by the Department of Defense, some indications of the difference between hardware unit costs on Minuteman I and Minuteman II became evident. The average equivalent unit cost of a guidance and control system for Minuteman I on a previous contract was \$401,000. The planned average equivalent unit cost of a guidance-and-control

system for Minuteman II on the development contract was \$1,600,000. These figures represent manufacturing costs only, and do not include the development engineering, tooling, or quality assurance. While there were undoubtedly differences resulting from the changes between Minuteman I and Minuteman II hardware, as well as the stage of production, an increase of four times would seem to be inordinate. One of the major changes in the Minuteman guidance and control system was the redesign of the computer. Yet the increase in the average unit cost of the computer was only \$188,000 out of a total increase of \$1,200,000. Even subassemblies such as the cable assemblies—which were virtually unchanged—increased in unit cost from \$13,700 to \$19,800 apiece.

In spite of these increases in the planned unit costs within the development contract, and taking into account the effect of the learning curve upon budgeting, the contractor had a significant overtarget condition in manufacturing alone by the time the third guidance and control set had been produced.

The guidance-and-control equipment was not the only hardware on the Minuteman II development program that appeared to have been estimated, negotiated, and planned at more than it should cost. Certain other aerospace vehicle equipment also appeared to fall into this category. The instrumentation and cabling, instrumentation wafer, interstages, aft skirt, base heat deflectors, insulation, and certain other miscellaneous hardware was procured under one contract for the Minuteman II development program. With the possible exception of the instrumentation, none of this equipment is complex. To help appreciate the extent of this equipment, the interstages and the aft skirt are primarily structural. They are cylindrical, several feet long, the diameter of the missile and are used to separate the motors. The base heat deflectors are used to prevent flame from the motor from damaging the aft end of the motor and the flight control equipment attached to the motor. While there is quite a bit of cabling, there is nowhere near the amount that is included in an airplane. And while the instrumentation is complex, it is not nearly as complex or extensive as that included in an airplane. Yet the average unit cost of a set of this hardware estimated and negotiated on this Minuteman II development contract far exceeded the unit cost of a four-engine, commercial airplane; or for that matter, the unit cost of assembly and flight test of a military cargo airplane.

This information was also supplied to appropriate personnel on the Minuteman program in an attempt to demonstrate the possibility for cost reduction.

The budgeting practices employed by a number of the contractors were far from stringent.

—In manufacturing, budgets were typically based upon a learning curve. The true work content indicated by industrial engineering time standards or even just estimates was assumed to be attainable only after 200 to 300 units had been produced. This value was then projected upward along a logarithmic scale to arrive at the budget for the units produced prior to the 300th. As a result, the average budget for a unit of hardware was as much as 20 times the standard work content. By comparison, in commercial, competitive industry, budgets are typically set anywhere from 1.1 to 2 times the standard work content. Here again it could be argued that the standards employed were

not realistic. However, in the case of the guidance and control contractor, direct observations of contractor personnel on the factory floor revealed less than optimum activity. The contractor's own internal labor utilization reports indicated the same. In our report to the Air Force we noted that such a condition could have a twofold detrimental effect. Not only would the hardware cost more than it should, but the quality of the product was likely to be less than it could be. The cause of this stems from the fact that when workers are given less than a reasonable workload, they become inattentive and the quality of their work and the quality of the product suffers.

—Staffing levels (the number of people on board) appeared to be generally determined on the basis of contractual hours available, plus an estimate of the hours for business not yet received. Staffing in this manner assures an overtarget position if the company does not sell new contracts or contract changes.

These were some of the findings of our surveys based upon information received prior to April 1965. Those relating to the guidance and control contractor were documented and transmitted to the Minuteman Guidance and Control Project Office and to the Minuteman Program Control Office on April 30, 1965. In this report we again recommended the rapid implementation of stringent cost reduction plans in order to attempt to curtail the program's requirement for increasing amounts of funds.

THE AIR FORCE COST REDUCTION PROGRAM

It was at this point that the Air Force did begin to plan some definite action. However, a jurisdictional dispute arose within the Air Force. Within the Air Force organizational structure, the SPD or System Program Director is responsible for the acquisition of the program. In this case the SPD was located within the Ballistic Systems Division (BSD) (now a part of the Space and Missile Systems Organization) of Air Force Systems Command. Contract administration, including negotiation of overhead and certain contractual changes is vested in the Air Force Plant Representative (AFPR) and his office. These in turn report through the Contract Management Division (CMD) of Air Force Systems Command. Therefore, while the SPD may be responsible for the acquisition of a weapon system, there are certain large cost elements, such as overhead, over which he cannot exercise direct control. When the Minuteman System Program Director first attempted to establish a program to control overhead costs, the Contract Management Division claimed that it was their purview and not the Program Director's. In any event the Minuteman overhead cost reduction program was started in April of 1965 under the joint auspices of the Minuteman System Program Office and the Contract Management Division. In this program, all eight associate contractors were required to appear at BSD and indicate what steps they were taking to control growth in overhead costs. Additionally, the cognizant Air Force plant representatives were required to appear and commit to projections of overhead rates for their respective contractors that they considered equitable, reasonable, and attainable. The commitment made by the Air Force plant representative at the guidance and control contractors plant provides a good illustration.

Lack of detailed planning. If people are not willing to subject themselves to the discipline of planning in detail the design, development, and production tasks of a weapon system together with what they should cost and objective measures of their completion, then the program almost certainly will grow or overrun.

RECOMMENDATIONS

These qualities are deficient in the present acquisition process—within industry and within the Government. To regain control over costs in the defense industry, the qualities of discipline and responsibility must be instilled. To help accomplish this, I would recommend:

1. The regular use by the Department of Defense of cost analyses tailored to determine what a weapon system should cost, rather than what it probably will cost. Until this form of cost analysis is used as the basis for negotiating all major procurements that can be competitively procured, the Government never will know whether the contract effort is overpriced, or whether the contractor has “bought in.”

2. The assignment by the Department of Defense throughout all its echelons, of definite and explicit responsibility for control of overruns and cost growth. Further, the Department of Defense should impose sanctions in the form of lack of promotion or career advancement or termination of employment against those who do not perform these responsibilities.

3. The imposition of sanctions by the Department of Defense in the form of withholding new business or developing second sources of supply against those contractors who either purposefully do not control or do not have the capability of controlling costs, or those who do not promote the Government goal of curtailing cost growth.

4. The regular reporting of summarized data depicting cost growth and current overrun status on all major weapon systems should be instituted both from the defense contractors to the Department of Defense and independently from defense contractors.

5. Finally, a more complete separation between the buyer and the seller should be brought about. The switchover of personnel between Government and industry might be considered a natural course of events. The formation of joint industry/Government organizations may indeed help to promote some communication between the two groups. And the popularizing of the joint “Government/industry team” concept may have some psychological advantage. However, these all have deleterious effects. They serve to destroy the distinction between the buyer and the seller; and they detract attention from the fact that the goals of the buyer and the seller are different. The buyer’s goal is to acquire the desired defense at a minimum cost; and the seller’s primary goals are profit and perpetuating the existence of the company. Therefore, to preserve the integrity of the goals of the buyer and of the seller, the interrelationships and communication between these two communities should be scrutinized, regulated, and policed with as much attention as is paid to more obvious problems.

If these actions are taken, they will have a most visible effect upon controlling and reducing weapon system costs. When and if this proper state of controlled and reduced costs is achieved, then the subject of national priorities can be discussed more meaningfully without having to interject continually the imponderable effect of inefficient utilization of resources.

His commitment represented an admirable goal for containing and reducing overhead costs. For the periods of 1965, 1966, and 1967 he projected a manufacturing burden rate that showed no increases. The remaining overhead rates, engineering burden, material burden, and administrative costs, were all projected to decrease each year for the same 3-year period. Based upon what we had seen during our surveys, these goals were attainable.

ITS RESULTS

Unfortunately, there is a great deal of difference between cost reduction goals and their attainment. Without positive action being taken, nothing will happen. As it turned out, except in the area of material burden, the rates continued their climb upwards during 1965, 1966, and 1967. Based upon an approximation of the direct labor base during this period, had the Air Force plant representative's commitment been realized, the savings to the Government during this 3-year period from one contractor alone would have been \$44,500,000.

SUMMARY

The cost problems that have been illustrated here were evident on the Minuteman II program from the beginning in the form of rising overhead rates, material costs that were underpriced in the light of past experience, and other hardware costs that appear to have been planned to cost more than they should cost. These, however, are all symptoms; they are not the basic problem. The basic problem stems from the fact that there has been little intent and little action taken to control costs. It has not been necessary. Until quite recently, adequate—or more than adequate—funds always have been available. This in turn has fostered an attitude on the part of personnel—both in industry and in major Government procurements—wherein little thought is given and almost no responsibility exists for truly containing and reducing costs. At one point during our effort at BSD, I requested and obtained copies of the written statement of functions and responsibilities for all of the offices within the Minuteman System Program Office. There was not one word in any of them that even alluded to cost control. They designated who was responsible for technical performance, schedule attainment, and the administration of funds. But no one within the system program office was formally and explicitly responsible for controlling and reducing costs. Hopefully, this omission has since been corrected.

Within contractor operations contributing to the Minuteman program as well as others that we have witnessed at first hand in assisting the Air Force to implement performance measurement so that they might be apprised of overruns in their early stages, the most dismally recurring weaknesses have been—

Lack of contractor management's discipline over their own operations;

Lack of stringent budgetary practices wherein budgets are used as a true management control. Within many contractor's operating organizations, budgets are formulated on the basis of "What we want to do the job" rather than upon "This is what we have to do the job," or better still, "This is what the job should take";

I thank you, Mr. Chairman.

Chairman PROXMIRE. Thank you gentlemen, very much.

Mr. Tyrrell, this is one of the most shocking examples of waste and extravagance that I have seen in the years I have been in Washington.

As I understand it, on Minuteman overall, we have been told by a witness before our committee last November, there was a profit of 42 percent on invested capital. Now, in your statement you refer to the harmful effects as you put it "of the switchover of personnel between Government and industry," the very thing Senator Goldwater and I were discussing, that is, procurement officials who go to work for the industry, and sometimes industry officials who come in and go to work in procurement. Can you explain what you mean specifically, how much of a problem was it on Minuteman—let me put it this way—first, how many Defense Department officials, civilian or military, made the switchover to the contractor?

Mr. TYRRELL. Well, in the area of the guidance and control alone, there were a number of them. For example, Colonel Rowland, the Air Force plant representative when we first arrived, retired and went to work for North American. Another Air Force plant representative while we were there, Colonel Yockey, retired and went to work for Autonetics.

Chairman PROXMIRE. What jobs did these men hold in the Defense Department before they went to work?

Mr. TYRRELL. They were the Air Force plant representatives locally stationed at the contractor's plant and who in effect head up the administration of the guidance and control contracts.

Chairman PROXMIRE. Isn't there a law that prohibits a procurement official from going to work for the contractor with whom he is dealing within a period of 2 years?

Mr. TYRRELL. I am not a lawyer, sir, and I could not tell you if there is a law to that effect.

Chairman PROXMIRE. At any rate, you know as a matter of fact that these men did work on the Minuteman contract for the Air Force?

Mr. TYRRELL. That is correct.

Chairman PROXMIRE. And then went directly to work for the Minuteman contractor?

Mr. TYRRELL. That is correct.

Chairman PROXMIRE. What were their jobs with the contractor when they went to work for them?

Mr. TYRRELL. Colonel Yockey is, I believe, a director of business operations there.

Major Klecker, who was the guidance and control project officer, is an assistant program manager at Autonetics.

I am not familiar with Colonel Rowland's title.

Chairman PROXMIRE. Are there other people whose names you could give us?

Mr. TYRRELL. Well, as I mentioned, Major Klecker, who was the project officer, went to work for Autonetics.

Additionally, when we first arrived at BSD there was a Col. Richard Cathcart who subsequently retired and went to work for North American. He was the head of the BSD pricing before his retirement.

Chairman PROXMIRE. In your judgment, is this prevalent in defense industry in its relationship with the Defense Department?

Mr. TYRRELL. I think it is relatively prevalent. We see it quite frequently. A large number of personnel or military people retire at a relatively early age, and they quite frequently go to work for the defense contractors.

Chairman PROXMIRE. Is it your conviction that this is one of the reasons why there is a soft attitude toward cost overrun and why there isn't the kind of strict surveillance and discipline which you recommend?

Mr. TYRRELL. I think the two are related. I am not sure whether it is the sole cause. I think one of the things that tend to create the softness as you phrase it is this team concept that I mentioned in my statement, wherein officers and contractor personnel consider themselves all members of the same team. It becomes rather difficult for them to disassociate themselves from this team. I don't think it is conscious collusion as was pointed out by Senator Jordan, it is something that has just evolved.

They are all part of the same group.

Chairman PROXMIRE. Autonetics is a division of North American is that correct?

Mr. TYRRELL. Yes, it is.

Chairman PROXMIRE. And what companies made up the contract or team to which you refer in your statement?

Mr. TYRRELL. There were eight major associate contractors in the Minuteman II program.

The Autonetics Division of North American Rockwell is the guidance and control contractor.

The Boeing Company is the integrating contractor, and produces some of the aerospace vehicle equipment.

The Thiokol Wasatch Division produces the first stage motor.

Aerojet General, Sacramento, the second stage motor.

Hercules Bacchus Works did produce the third stage motor.

Sylvania Electronics the ground electronics system.

The General Electric Re-entry Systems Department the Mark 12 reentry system.

Avco Lycoming and Missile Systems Divisions the Mark IIA reentry system.

Chairman PROXMIRE. You say \$490.4 million was the original cost of the research and development for the Minuteman II as of 1962?

Mr. TYRRELL. That is correct.

Chairman PROXMIRE. What were the total original estimates including R. & D. and production as of 1962?

Mr. TYRRELL. The total original estimate, as I recall, in the original cost effectiveness studies for the design and development and deployment of 500 Minuteman II missiles was in the area of \$3.2 billion.

Chairman PROXMIRE. What are the current estimates?

Mr. TYRRELL. That becomes a little difficult to explain, but if you give me a minute or so I will attempt to.

The current estimate for the Minuteman program as I understand it is somewhere in the area of \$9 billion.

Chairman PROXMIRE. It was \$3.2 and it is now 9?

Mr. TYRRELL. It is now 9. However, the Air Force no longer estimates Minuteman II separately from Minuteman III.

Chairman PROXMIRE. What is your judgment on what the Minuteman II costs are now?

Mr. TYRRELL. I would say that the Minuteman II is probably somewhere in the area of \$7 billion. That is just an estimate.

Chairman PROXMIRE. These figures include annual operating costs?

Mr. TYRRELL. I believe they do, sir.

Chairman PROXMIRE. In both cases?

Mr. TYRRELL. I believe they do.

Chairman PROXMIRE. They would be comparable figures?

Mr. TYRRELL. They should be comparable.

Chairman PROXMIRE. Who is the contractor you are now referring to?

Mr. TYRRELL. The guidance and control contractor?

Chairman PROXMIRE. Yes.

Mr. TYRRELL. The Autonetics Division, North American.

Chairman PROXMIRE. What do you mean by field level?

Mr. TYRRELL. The field level includes people at the Systems Program Offices, and the people in the Plant Representative's Office. They are the military people who head up the offices, and also the civil service personnel who contribute to this effort.

Chairman PROXMIRE. How much of the program is controlled at the field level?

Mr. TYRRELL. Considerably. I know it was pointed out earlier, by Senator Goldwater, that there are signatures at the top level whenever a new program is approved. But considerable of program content these days results from growth. This growth through the approval of CCN's, is very frequently controlled at field level. Therefore, to the extent that growth is included in our present programs, it is largely controlled at the field level.

Chairman PROXMIRE. So that the point is that the field decisions are the really important decisions in terms of cost, and not the decisions of some high-ranking Pentagon official here in Washington, they are made out at the field level by a number of people, including civilian field people and military personnel?

Mr. TYRRELL. That is correct. And I might add that while it is true that individuals at the top, within the secretariat, do make initial decisions at the time the weapons system is selected, from that point forward a great deal of it is administered and controlled—

Chairman PROXMIRE. So a great deal of this enormous cost overrun, which in this case would be two and a half times or so, is the responsibility or the decision of the lower ranking people who are out in the field?

Mr. TYRRELL. That is correct.

I would like to interrupt to qualify one point, Senator. And that is, you used the words "cost overrun."

Chairman PROXMIRE. Cost difference.

Mr. TYRRELL. In the jargon of the military and also the industry, cost overrun has a distinct meaning. Cost growth, however, takes in both. If you ask either the military or the contractors if there are overruns, they will say, in our contracts we have less than two-tenths of 1 percent overrun, but they don't explain that, growth may be \$200 million and \$300 million.

Chairman PROXMIRE. As I understand it, this is, of course, a very complicated weapon, and many people feel that it is an excellent weapon. There were an enormous number of changes.

Mr. TYRRELL. That is correct.

Chairman PROXMIRE. I have heard some estimates.

And there were 8,000 changes over all in the Minuteman.

Mr. TYRRELL. That is approximately correct.

Chairman PROXMIRE. At any rate, how much of this increased cost is the result of changes having been made? Is there any way of telling that? One of the criticisms we made in our procurement report was that when changes are made it is not like when you and I build a house and we tell the contractor, the architect, we want to change, he will usually tell us how much it costs, and if he doesn't we have a big fight with him when it comes time to pay the bill.

Mr. TYRRELL. That is correct.

Chairman PROXMIRE. As I understand it, in this case the Pentagon doesn't know what the costs are, and records are not kept. And the result is that at the end of the time the contractor gives its overall, generalized bill for changes, and it is very hard to break it down and analyze it, justify it in detail. Is this true of the Minuteman contract, or am I misunderstanding this?

Mr. TYRRELL. That is probably a correct assessment.

I might indicate one of the reasons that it becomes difficult to pinpoint the cost effect of specific changes. While contractors will individually propose a whole series of ECP's or CCN's, when it comes to negotiating, they will often lump all of these together in a few supplemental agreements. You can no longer go back and point to specific changes and determine their cost.

Chairman PROXMIRE. My time is up, I will come back later.

Senator Jordan?

Senator JORDAN. Thank you, Mr. Chairman.

Mr. Rule, I will start with you. You recommended very strongly the enactment by the Congress of S. 1707, or its equivalent in the House bill. Will you describe for us, because we haven't got around to familiarizing ourselves with S. 1707, what it purports to do?

Mr. RULE. Well, sir, it sets up a commission composed of 14 members with the Comptroller General an ex-officio member. It will make a 2-year study and report to the Congress. The declaration of policy, "it is hereby declared to be the policy of Congress to promote economy, efficiency, and effectiveness in the procurement of goods, services and facilities by and for the executive branch of the Federal Government." There are several cosponsors in the House, but I think Senator Jackson is the only one in the Senate. But this is a Hoover type—

Senator JORDAN. Single shot?

Mr. RULE. It is a Hoover-type commission study lasting 2 years. And I remember, I listened to some of the testimony in the House in favor of H.R. 474. Admiral Howard, who is down at the DCASA, made a very fine statement, and one of the finest in my opinion, in favor of the commission. He states that it has been over 20 years now since the Armed Forces Procurement Act was passed. The Pentagon has been operating under that act for over 20 years. It is a fact we all know that there is disillusionment among the people of this country over procurement practices in the Defense Department.

And the admiral made a point that appealed to me, that the time is very ripe to have a calm, objective look-see at the procurement practices; does this Armed Services Procurement Act need amendment, does it need changes? If not, it would serve to reassure the people that the basic ground rules, the basic legislation is sound. But his point was that after 20 years, and after all the money that Defense has spent, it is time to take a look at it. And I think it could be done by such a commission, provided one thing, Senator, provided the right type of people were put on the commission.

Senator JORDAN. You have said that it is a time for action, and yet you are recommending a 2-year study?

Mr. RULE. This is positive action. This is intelligent action, in my opinion. Otherwise we are going to be shooting from the hip, we are going to have the GAO making studies, the different committees of Congress. I think the time has come to put able people on a Hoover-type commission, which is a recognized good way to do things, and go to work on it. But only if you put the right people on it.

Senator JORDAN. Are you recommending that we sit idly by for 2 years awaiting the pronouncement of that commission?

Mr. RULE. No, sir. If I recommended that you would never help pass the bill to set up the commission, because you fellows don't want to be hidden in the wings for 2 years, I know that. As I said, I would expect Senator Proxmire to be one of the 14 members. But committees should continue. As I said, we welcome whatever help we can get to find out what we are doing wrong. And I would hope that the committees would continue to expose whatever they can expose. But this seems to me to be the logical, sensible, and happy medium way to do it. I am afraid, Senator, frankly, with all the ground swell that is going on against waste and inefficiency, I am afraid that we may overplay our hands and be precipitous and take precipitous action. And I think the time has come for reasoned and deliberate action. And I think the people of the United States would welcome that, because they would know something was being done.

Senator JORDAN. Thank you.

Turning now to you, Mr. Tyrrell, you make one intriguing suggestion that I want to explore with you when you contend that it has not been necessary for the Department of Defense to effectively control costs because more than adequate funds have always been available for military procurement. Do you believe that attempts such as the one by this committee to focus on the total size of the defense budget and to identify waste in Government and defense procurement will have a salutary effect in changing the attitude of the Department of Defense personnel and the military contractors?

Mr. TYRRELL. I would hope that it would, sir. I do think that the Department of Defense and the contractor community listen to you quite carefully, and they see signs not just within your own subcommittee, but also throughout the country, that something has to be done to make weapon system procurement more efficient.

It is my own personal opinion that a lot of the discussion to date has mixed up two problems. We have the problem of whether we should or should not have a certain weapons system, but we also have this problem of inefficiency. Inefficiency just cannot be justified. Nobody can defend it. This is why I do think they will listen to your subcommittee

and others like it when you point up inefficiency, waste, and the necessity for cleaning it up.

Senator JORDAN. Do you think we have made money too readily available for it?

Mr. TYRRELL. I think there was a period in time when funds were made available to the Department of Defense too readily.

Senator JORDAN. You note in your statement too that the cost growth and overrun of the Defense Department is not a recent manifestation, it did occur in the 1950's, and prior to this period of the 1960's.

Mr. TYRRELL. That is correct.

Senator JORDAN. My question is, did the cost control technique introduced by former Secretary McNamara reduce the size or the rate of occurrence of these overruns?

Mr. TYRRELL. I will have to say, no, they did not.

I will state further, however, that a lot of the techniques that were attempted during McNamara's rule might have helped had they really been implemented. They filtered down one or two layers but you didn't see any real effect at the field level.

Senator JORDAN. They were not effective because they were not applied at the point where they might have been productive.

Mr. TYRRELL. That is correct. The upper echelons of the Department of Defense talk about such things as system analysis and cost effectiveness. But you have to have real, legitimate and accurate data from the field level before these techniques become useful.

Senator JORDAN. How do we make it more effective, how do we get this down to the point where it is effective?

Mr. TYRRELL. I think my recommendations sum up at least what I think needs to be done. As I indicated we have got to change the attitude in the whole of procurement, both in Government and in industry. Now, to do that—you know a lot of people are quite in favor of rewards. I am a little bit more stringent. I am more in favor of punishment. You must punish people within the Department of Defense by using the sanctions that I mentioned when they do not control costs. You can't keep promoting them. And similarly, contractors who do not produce efficiently must have business withheld from them. That is punishment to them. Then they will shape up. If this is done, both the Department of Defense and the contractor community will tend to police themselves and improve their own efficiency.

Senator JORDAN. You point out that the goal of the buyer to acquire the materiel at the lowest cost, and the seller's primary objective is profit for his corporation.

Mr. TYRRELL. That is correct.

Senator JORDAN. And you think there should be a little less fraternizing between them.

Mr. TYRRELL. I honestly do. I saw the hearings yesterday, and Professor Shapero mentioned the word "disengagement." If taken in the context I am talking about, I agree with him. I think there should be a separation between buyer and seller. You have to have at least some semblance of an adversary relationship to make negotiated procurement work.

Senator JORDAN. In your statement you said that the Air Force identified cost overrun in the Minuteman II contracts in the late 1963, and yet there is no indication whether anybody took any measures to in-

investigate it or to contain the cost problems. What could have been done at that stage to restrain those terrific cost increases?

Mr. TYRRELL. As I indicated, a substantial amount of the cost increases were due to increasing overhead rates. These are controllable. The Air Force sits down periodically and negotiates forward pricing rates with the contractor. The Air Force during these negotiations can insist on economies in the overhead area, and indicate to the contractor that they are just not going to buy that large an amount of overhead, until the contractor has demonstrated that he is doing everything within his power to bring indirect costs down. In my estimation this is something that could have been done.

Senator JORDAN. You are talking about the indirect overhead as distinguished from the overhead costs of power and rental.

Mr. TYRRELL. That is correct.

Senator JORDAN. You are talking about the indirect costs such as supervision, management—

Mr. TYRRELL. Management, bidding, and research and items of that type—people related items. I am not talking about power, depreciation and things like that.

Senator JORDAN. And that is largely the area where the abuses have occurred?

Mr. TYRRELL. It is one of the most significant areas, in my estimation.

Senator JORDAN. Thank you.

Chairman PROXMIER. Mr. Moorhead?

Representative MOORHEAD. Thank you, Mr. Chairman.

Mr. Tyrrell, in your testimony you refer to a reliability problem with respect to the Minuteman II. There was an article in the *New York Times* in July of 1967, that reported a reliability problem with Minuteman II, saying that as recently as that spring nearly 100 missiles, 45 percent of all the advance Minutemen II missiles, were out of action because of the trouble with the weapons guidance and controls system. I presume that has been corrected now. But is that what you were referring to when you referred to reliability problems?

Mr. TYRRELL. I can't state definitely that they are referring to the same problem that we brought out. As I mentioned in my testimony, we did find that there were problems with some of the components' reliability. The technical director of the Minuteman program was then reporting the system outlook as favorable. We found internally that the system outlook was not favorable, and the problem related to the system mean time between failure.

We did document this in our September 30 report.

Representative MOORHEAD. Of what year?

Mr. TYRRELL. This was 1963, September 30, 1963. It was transmitted to the Minuteman system program director.

Representative MOORHEAD. Do you know if it went to a higher level than that?

Mr. TYRRELL. You would have to ask somebody in the Air Force.

Representative MOORHEAD. You indicated that as to the cost growth on this Minuteman program, both the military and the contractor, were aware of the fact that it would grow. What factor led you to believe that this growth would take place?

Mr. TYRRELL. I think they were. Let me explain why. Take the PIGA's, as a case in point. The contractor had included them in his proposal at \$43,000 each. On that particular contract there were 232 of these things, so I am not talking about an insignificant cost item. The Government in the negotiation and settlement memorandum used a price of \$25,000 apiece. The difference between these two figures is substantial. During some of the interviews we had with contractor personnel, they indicated that the PIGA's presented a problem from the very beginning. They tried to get this across to the Air Force during the negotiations, but the Air Force persisted in using the price of \$25,000. As it turned out, they actually cost \$64,000 apiece.

Now, I am quite sure that the contractor during negotiations mustered a great deal of evidence to the effect that it could not obtain the PIGA's for the amount the Government was using. And I think the Government itself realized that this was not possible. This, coupled with the rates used in the negotiation and settlement memorandum, which were actually lower than the rates that were already being experienced, were used to rationalize the low contract price. There are too many indications pointing to the fact that it was known from the very beginning that the contract costs were not attainable.

Representative MOORHEAD. Mr. Rule—

Mr. RULE. Mr. Moorhead, may I please add a comment to what Mr. Tyrrell has said on the point you have been talking about.

Let me put it this way. I think that one of the things that we have got to stop doing in our contracting is playing games—the Government and the contractor. We play games. We know that if we tell the DOD across the river how much something is really going to cost, they may scrub it. And they know that if they tell the Congress how much it is really going to cost the Congress may scrub it.

So you start in with both sides knowing that it is going to cost more. And that is not an overrun, because we know.

Just as the gentleman here said—these PIGA's—the Air Force wouldn't use a figure other than \$25,000. What we do is, we say we want something, how long will it take?

And the contractor says 2 years.

And we say, that is too long, you have got to give it to us in a year and a half. How much will it cost?

Two hundred million dollars.

Well, we have only got \$150 million, so you have got to do it in a year and a half for \$150 million.

This is what we do. And this is ridiculous. And this is why we get in trouble. How you knock it off I don't know.

Representative MOORHEAD. It is absolutely clear that they have been playing games with us—

Mr. RULE. Of course.

Representative MOORHEAD. If the Air Force wants a C-5A and they give us a price that is indeed what it will cost, they run a greater chance of having the program turned down.

Mr. RULE. You might not get the program, that is right. So we start knowing that it is going to cost more, and we are so deep in down the road that we get more money. There is no question about this:

And then one other thing that we do that I wish we could stop doing, and that is, you show me a program that is in trouble, and I will bet you that that program has concurrent development and production.

We won't wait, we won't develop something and test it and try some test models and then produce it, but we are in such a hurry all the time that rather than develop and test we develop and produce all at the same time. I have heard that Mr. Packard has said not long ago to the effect that he was going to stop that, that the military was going to have to wait. That will really be a salutary day if we can make the military wait until we have developed and tested something. But we kid ourselves on the price and delivery, then we concurrently develop and produce, and no wonder things get screwed up.

Representative MOORHEAD. Mr. Tyrrell, you have made some recommendations in your testimony. Have you conveyed these recommendations to anybody in the Defense Department, and if so, to whom?

Mr. TYRRELL. As a matter of fact, we have, perhaps not phrased the way they are phrased in my written statement, but we did make basically the same recommendations in February of this year to Mr. Packard.

Representative MOORHEAD. To whom?

Mr. TYRRELL. To Deputy Secretary of Defense Packard, soon after he was appointed in February.

Representative MOORHEAD. Did he receive these recommendations favorably?

Mr. TYRRELL. I don't know. The gentleman hadn't been in office but a fairly short period of time. He did thank us for making the recommendations.

Representative MOORHEAD. Mr. Rule, you were in the group that recommended the termination of the F-111-B contract. And I think you said at one time you were the No. 2 man on that group. And then later in the testimony you said, when the actual termination took place you didn't even want to read the termination paper. Why was that, sir? I was just looking over the old testimony the other day, and this came up, and I was fascinated.

Mr. RULE. Why don't you leave it in the old testimony?

Representative MOORHEAD. Were you still on the board at that time?

Mr. RULE. No. What happened was, I was the No. 1 Navy representative. Mr. Charles was the No. 1—he was the head of the team, I was heading the team for the Navy. And it very effectively became a one man negotiation, the team for all intents and purposes dissolved. And I guess you can say my nose was sufficiently out of joint that I wasn't interested to read what they finally came up with.

Representative MOORHEAD. So you didn't participate in the final termination negotiations?

Mr. RULE. No, sir.

The final negotiation was conducted between Mr. Nitze and Roger Lewis, just these two.

Representative MOORHEAD. Mr. Tyrrell, in your recommendations, you mentioned these joint Government-industry organizations and their effect upon the procurement process. Could you expand on that a little bit, sir. What organizations, and what is the real effect on the procurement process?

And if you have any comments on that, Mr. Rule, I would certainly welcome them also.

Mr. TYRRELL. I can think of one such situation. Over the past 4 or 5 years I have been involved in assisting both the Air Force and also certain people within OSD in the promulgation of the DOD instruction 7,000.2, that cost-performance measurement instruction. When it was written, it was submitted to one of these joint industry groups, the Council of Defense and Space Industries Association, and their member associations such as the Aerospace Industries Association, and so forth.

They commented upon it. Now, I have seen some of the comments written by individual companies which were sent forward to the AIA. I also saw what came out the top from the Council of Defense and Space Industries Associations. In the cases that I have seen, there was very little resemblance between what went in and what came out.

I might further add that in my own estimation the comments that have been received by the Defense Department from the Council of Defense and Space Industries Association in the area of the DOD 7,000.2 have not been constructive. This type of dialog has been going on, as I say, for a number of years. I think that this type of communication between Government and industry ought to be looked at a little more carefully, and perhaps regulated a little more carefully.

Representative MOORHEAD. It is just a little too cozy?

Mr. TYRRELL. I am not saying a cozy relationship. I just am not sure that it fulfills as useful a purpose for communications between the Defense Department and industry as it could if it were regulated and policed more carefully.

Representative MOORHEAD. Thank you, Mr. Chairman.

Chairman PROXMIRE. Mr. Rule, the statement you have just made to Congressman Moorhead, if the Pentagon were honest with the contractor and the contractor honest with the Pentagon, and the Pentagon honest with Congress, and Congress honest with itself, we might scrub some of these weapons systems, is one of the most revealing and significant statements that has been made in these whole hearings. It is an excellent statement. I think you are absolutely right.

I think the situation as it is, is a disgrace. Just consider what that really means. It means that we are being pushed into a position where we make a commitment to buy equipment and weapons at a cost which we think is proper in the light of our priorities. Actually we are committed, and once we are committed and once we are in the ball game we have to follow through, we are in the poker game and we can't get out of it. Now, in my view, if the Congress were told the truth, we would go ahead when we should go ahead.

For example, I think you are still right. I think the ABM system is going to do a lot more, with the warheads included, than what we have been told. And maybe it will cost twice as much. I don't think that would change the vote, I really don't. The determination is not in this particular case, the determination on a weapon like that is not really made so much on whether it is going to cost \$10 billion or \$7.5 billion, it is whether or not we think it is worthwhile. But on many, many other weapons systems, if our congressional decision is going to have any validity at all, it has to be made on as close an approximation to the truth as we can get.

And we are being lied to? Is that what you are telling us?

Mr. RULE. That word "lied" and that word "honest" are your words, not mine.

Chairman PROXMIRE. It is a soft lie, a white lie; it is a nice lie, but it is a lie.

Mr. RULE. I said we were playing games.

Chairman PROXMIRE. That is a nice way to put it, too, but we are not being told the truth.

Mr. RULE. The Government, the Department of Defense, the service involved, and the contractor, they know that it is going to cost more. And if that is being dishonest—

Chairman PROXMIRE. Of course, it is being dishonest, if they know it, and they say it is going to cost less, that is being dishonest. That is a deception for the Congress and the taxpayer. And it is just as wrong as it can be.

Mr. RULE. I think it is wrong, but I think it would only be disingenuous.

Chairman PROXMIRE. Then, your second recommendation is that we wait until research is finished, prototypes proven before we commit to production. And I think you are right. Then you have a much better idea of what you are working with, and then you can get an estimate that perhaps you can analyze and determine as to whether or not it is an honest and accurate estimate.

And if you do that, your bids are likely to be much sounder, is that your view?

Mr. RULE. Yes, sir. And then sometimes at that point you should even freeze the design and not let the technicians play with it.

Chairman PROXMIRE. Why do we need a 2-year study, a 2-year "Commission" study to do this? No. 1, President Nixon has already appointed a commission to study procurement, as I understand it, with Roy Ash—the head of Litton Industries—as the head of it. An interesting appointment. And Secretary Laird has also appointed a commission to make a study of procurement and recommend improvements. Now you favor a third study commission.

My administrative assistant has just finished working 2 years, or a year and a half, for a commission. And it was a good commission. But he believes that the purpose of the commission procedure is to sweep a problem under a rug. Agencies under the spotlight fight to control their staffs, their budgets, their recommendations, and they report back, the commission does, after the excitement has died down. In this case, it would be 2 years from now.

And too often what they write is added to the great unread literature of the world. So I wonder if under these circumstances it is wise to postpone this for another 2 years instead of striking while the iron is hot.

You are right, the American people are concerned and the Congress is concerned. This committee has just finished a report which was a unanimous report on the part of all these that took part, the Republicans and Democrats, in which we have a whole series of recommendations about procurement. Why do we have to wait 2 years to determine whether your kind of a commission is going to approve that?

Mr. RULE. You have largely misunderstood what I was saying. I didn't say postpone anything. I said, let's start, let's take action, but

let's take intelligent and happy-medium action. Let's not be precipitous.

I said right here that the problems aren't going to go away. Nobody is trying to sweep them under the rug, because it is too important. The Congress has given too much illumination now to these problems and they can't go away.

Chairman PROXMIRE. But you know, Mr. Rule, when these recommendations were brought to the attention of Mr. Shillito and the Pentagon, the Assistant Secretary who has great responsibility in this area, his view was that the recommendations were interesting, and perhaps some of them were good, but each specific recommendation he seemed to reject. Now you are giving him an excuse, the Defense Department an excuse to say, "Well, let's wait, and let's see what this commission has to say, we had better not act, don't let's act precipitously." But most of these recommendations don't require study, we know they are wrong, and we know it right now.

Mr. RULE. I will guarantee that I am the last one in this room that is trying to give the Pentagon on these procurement practices an excuse, or give them time to sweep something under the rug. Quite the contrary.

Chairman PROXMIRE. I am sure that is true. But I just say that if we pass this bill—and it will take another month or two to pass, at least, and maybe it won't pass until next year—then you will have 2 years to wait until you get your recommendations, and there is that temptation.

Mr. RULE. Well, sir, I am a believer in building a firm foundation. If you want to get an overall look at the procurement laws, whether or not the 20-year-old Armed Services Procurement Act is up to date enough, if you want to look at this whole spectrum, I am not sure, sir—and I say this very respectfully—that you have built a sufficiently broad foundation upon which to bottom this action. You have pointed out some areas, and you have pointed them out real well, and you have found them and you have illuminated them, but I am still not sure that that is enough to bottom overall necessary reform action on. And I think it would be much sounder bottomed if you had a 2-year study by a high-caliber group of people—not the president of Litton Industries, and not the president of General Dynamics—who understand the problem.

Chairman PROXMIRE. Mr. Rule, you asked whether or not this policy of proceeding with procurement after you have your prototype firm is a policy that is followed in other countries. Is it your knowledge that it is in general, or do they follow our policy of proceeding with a total package?

Mr. RULE. I am unable to answer that question, I am sorry.

Chairman PROXMIRE. Will you check that for us, for the record, and give us the answer?

Mr. RULE. Yes, sir.

(No answer had been received as this volume went to press.)

Chairman PROXMIRE. In England the military is entirely divorced from procurement, as I understand it. The procurement is under civilian control, an independent agency. Do you believe that that kind of an arrangement would work better for us?

Mr. RULE. Now, you see, I had nine points I was going to discuss with you, and that was one of them.

Chairman PROXMIRE. Good. Now is your chance.

Mr. RULE. The point is that I did have nine points. That was one.

Chairman PROXMIRE. But incidentally, your complete statement, or anything you would like to file supplementary, can be included in the record, you didn't have a written statement, but anything you would like to file to supplement your remarks we would be grateful for.

Mr. RULE. I purposely didn't write a written statement because I think I would have to clear it through the Navy if I wrote it.

Chairman PROXMIRE. We understand that.

Mr. RULE. On the question of who should buy, I personally agree that this commission—and this is one of the eight things I had—that the commission should study, should the military people be buying, spending the money. The military people are taught to fight wars and defend the country. And they do it well. However, their training, their complete training and upbringing in my opinion is antithetic, completely antithetic to what we are supposed to do in prudent procurement. The Armed Services Procurement Act says, the policy of the United States is to advertise. And if you don't advertise you would have to get Secretarial authority to negotiate. However, the average military man is trained to get hardware to the fleet, tanks to the Army, et cetera, just as soon as possible. And if they had their way, I am sure—and I guess I would, too, if I had gone through this routine—they would go to a sole source producer where they knew they could get a good plane or a good engine, and they wouldn't care what it cost, they were going to get the hardware.

So there is a constant pulling between the procurement people to make sure that the technical people, the military people don't go to sole sources and that they get competition. And I would like to see this commission study the question of whether or not the military people should be spending the procurement dollars at all. The very fact that Senator Goldwater said they were only there 2 or 3 years and then they moved on—this is one of the biggest reasons why they shouldn't be in it at all, if they are in it.

We have a Supply Corps in the Navy, as you know. A great many of those Supply Corps officers are very, very good in procurement. They are not line officers, they are supply officers. And they come closer to being good businessmen in spending the dollars in my opinion than do the line officers. If you were going to have those people in procurement on a full-time basis, on a basis so that they could continue to get promoted Supply Corps procurement officers, I wouldn't gag on that at all. But I don't like to see them come in and go out and not have any continuity. I think that the commission could study the advisability of a single organization which would be composed of the negotiators making the contracts, the DCAA, the audit agency and the DCAS organization, the technical people. Maybe those three should be a separate group.

That is just a suggestion for part of the study of the commission. But there are things. Senator, organizational matters like that—whether the military should be a part of these things is a pretty deep subject, and I don't think you would handle it overnight. And that is why—I am not a patient person, believe me, patience is not one of my virtues. And if I thought this thing could be handled—

Chairman PROXMIRE. I think that you make a good distinction. I think that there are questions that should be studied at great length of course. This is perhaps one of them. This after all is a major reorganization, it is a reorganization that we can't kid ourselves that we would do anyway. But there are other changes of procurement which we could make right now. But I think your answer is excellent. And I think this is one thing that should perhaps be studied by an appointed commission.

Mr. RULE. There certainly are others. This whole conflict of interest question—leaving or going to work for a company while they have been administering—this isn't peculiar. And there is no report on that.

Chairman. PROXMIRE. We asked the GAO in our committee report to make a report to us regularly on the personnel leaving the GAO and going to work for the contractor so that it can be made available to the public and the Congress, and so forth.

Is there anything you can recommend that could be done in addition to the study which you think would be helpful?

Mr. RULE. That can be done now?

Well, I have recommended before, and I would like to recommend again, on this question of "should cost" as distinguished from "will cost," I went through this exercise at Pratt & Whitney, and I won't bore you with all the details, but I will just read you one thing. After it was all over, and we had found that the company was between 30 and 35 percent inefficient; we gave them a report, and we gave them 74 recommendations as to what they could do about it—obviously we couldn't make them do anything about it.

One of the recommendations was that they hire an outside consultant to go into their plant and make a real stem-to-stern industrial engineering survey of their entire operation. And finally they agreed to do that. And I would just like to read you from the request for proposal, the RFP, that Pratt & Whitney sent out to about 20 consulting firms. This is the Pratt & Whitney Division of the United Aircraft:

Gentlemen: Pratt & Whitney Aircraft Division of the United Aircraft Corp. has determined to undertake a comprehensive program of evaluation of its manufacturing and manufacturing-related procedures, policies and work methods in order to enhance management visibility and control and achieve better economy and efficiency in its manufacturing and manufacturing-related operations.

Now, that is the most beautiful statement you could find. We were in there, and made this survey. They couldn't believe our findings, but we finally got them to retain this outside consultant. And that is what they said they wanted done.

Chairman PROXMIRE. Will you put that whole document in the record, if you have it, for the record, and delete any name you wish to delete. We would like to have the document for the record.

(No additional materials had been received as of time of publication.)

Mr. RULE. I will chat with Mr. Kaufman about that, if I may.

But when we put on a presentation of "should cost" of what we did up at Pratt & Whitney, to Mr. Staats of the GAO, he brought in his people from all over the country, his top management people—this was the one thing that impressed him the most, that if we could get companies, more companies—you see, this is an odd situation. Let me fall back—when we buy hardware, when the Department of

Defense buys anything, we want three things. We want quality, delivery, and a reasonable cost. And oddly enough, Pratt & Whitney gave us a quality product. They always have. And they gave it to us on time. But they didn't give it to us at what we considered to be a reasonable price. But they are odd in that respect, that we do get from them two of the three things we want. There are a lot of companies that don't give us one. And those are the companies that we ought to do something about. But here is a company that gives us a fine product on time. But because we are worried about their costs we go over there and we make a "should cost" study.

And then we prevail upon them to go out and get their own consultant. And that is a very fine statement. If we could get more companies—that is what Mr. Staats thought was the best outcome of the Pratt & Whitney study, if we could get more companies to do that.

Chairman PROXMIRE. Senator Jordan?

Senator JORDAN. I just have one more question. I share the chairman's opinion. And we have heard a number of witnesses talk about the arrangement between the suppliers and the purchasers. And you have been as frank as anyone, Mr. Rule. But it all adds up to a kind of subterfuge where the Congress is taken down the primrose path in the belief that these defense systems are going to be provided at a certain cost, and then everyone but the Congress seems to know that the cost is going to be escalated clear out of all reason. You haven't used the word collusion. You have come very close to it. Would you say that this is a form of collusion?

Mr. RULE. No, sir; I would not.

Senator JORDAN. Not collusion. Is it conniving?

Mr. RULE. No, sir; it is not. And I don't think that the Congress is as naive as you seem to think they are, either.

Senator JORDAN. Well, I suspect that some of us are too uninformed to appreciate the overrun.

Mr. RULE. No.

Senator JORDAN. I don't have any more questions.

Chairman PROXMIRE. I would just like to ask if, Mr. Rule, in view of your very honest and very helpful assertion that the Pentagon is kidding itself often when they make their original estimate on the cost of weapons systems, can you give us your realistic estimate of what the Defense budget is likely to be if we proceed on the basis of what we are now being requested in weapons systems after the Vietnam war is over?

Mr. RULE. I was with you until you said "after the Vietnam war."

Chairman PROXMIRE. After the Vietnam war—absent Vietnam—on the assumption that Vietnam is phased out. We have had various estimates. We had estimates from a Rand official. We had estimates from the academic economists. And we have had an estimate from the Defense Department, Mr. Moot. And I am just afraid that these estimates may not have been as realistic an assessment, or could be a more disingenuous assessment of the cost of our weapons systems than you would have.

Mr. RULE. I couldn't begin, Senator Proxmire, to give you that in dollars. I can only say that it is true that if Vietnam stopped tomorrow there is a terrific job that should be done to fill the pipeline that has been exhausted in almost everything. And I do not think that the

Defense budget is going to be cut very much in the coming years, even if Vietnam is phased out.

Chairman PROXMIRE. Mr. Moot estimated that it would be about the same level, close to \$80 billion after Vietnam, because of the various costs. And I take it that it might be reasonable to assume on the basis of your estimate that this can be substantially higher because of the escalation of these weapons systems.

Mr. RULE. Well, we are getting escalation every year, 6 or 7 percent.

One of the things I think we really ought to do—you know in the marketplace, the commercial marketplace, companies that can't hack it go bankrupt. But you have never heard of a Defense contractor going bankrupt, because there is a philosophy that they shouldn't lose money. I think someone alluded to it—I know that this is Mr. Charles' philosophy.

Chairman PROXMIRE. Mr. Charles told us that to his knowledge no Defense contractor had ever lost money on any major system. Senator Goldwater pointed out that Lockheed might lose money on the C-5A, and that on certain weapons systems they may lose money. But the C-5A contract is far from finished, and I would be very much surprised if Lockheed loses a nickel on the C-5A.

Mr. RULE. I agree. But two things we ought to do. If Defense contractors can't hack it, and there are these contractors around, they ought to be terminated for default, and if they lose money and go bankrupt, let them do it. Maybe a couple of bankruptcies and defaults in the Defense industry is going to do them good.

I don't know what else is going to make them put their own house in order.

Chairman PROXMIRE. You are the first person to say that, and it is good.

Mr. Tyrrell, I have just a couple of brief questions for you. In effect you did a "should cost" on Minuteman II. That is, you studied, as I understand it North American's performance to determine what the contract should have cost with reasonable efficiency as distinguished from what it was actually costing, is that correct?

Mr. TYRRELL. That is correct.

Chairman PROXMIRE. Now, North American also built the Mark II avionics system for the F-111 on which there has also been an enormous overrun, and other problems, although the Air Force has refused to publicly disclose the source of the overrun. Can you tell us anything about the Mark II, or whether in your opinion the lessons learned on Minuteman apply to the Mark II?

Mr. TYRRELL. I have not been engaged directly in the Mark II program. I would say, however, the lessons learned on Minuteman, or rather, the situation that existed on Minuteman could relate to the Mark II as far as the contractor's efficiency is concerned. It is being built in the same plant, by the same people, and so on. I understand that the Air Force did do a cost study on the Mark II.

It was done, I believe, by the pricing division of Air Force Systems Command, and was published in December of 1967. I am quite sure that they have documentation similar to what we prepared for Minuteman.

Chairman PROXMIRE. Then I would like to comment—you have just had a large overrun, an enormous cost problem, and extensive

delays and serious reliability problems on some components of Minuteman II; can you tell us the reason for these problems, why they occur?

Mr. TYRRELL. I think, as I pointed out earlier, it stems from a lack of necessity to control costs and, secondly, it stems from—call it an overzealousness on the part of both the contractors and the military procurement. It is not just the military.

Chairman PROXMIRE. Overzealousness in trying to sell a program to the Congress?

Mr. TYRRELL. That is correct, not only to sell the program at successively higher levels—I am not saying, and I would hate to imply, that it is done by subterfuge. Many people on Minuteman actually believed that they could produce within the program costs, but I think it tends to become obscure with time. Some of them believed it; but some of them knew very well that it could not be done.

Chairman PROXMIRE. In your opinion, were these results unique or typical not only of Minuteman, but other extensive weapons systems?

Mr. TYRRELL. I think it is typical. It is more typical than unique. It has happened on almost all of the large weapons systems programs. I think the study done by the RAND Corp. relating to cost growth tends to bear this out.

Chairman PROXMIRE. Again, I want to compliment both of you. You have been unusually fine witnesses. And you have come forward with real courage and honesty, and have given us some information that we did not have before.

Mr. Rule, I am especially apologetic to you, because you did have an outline that you wanted to give us.

Mr. RULE. You will never know what gems you missed.

Chairman PROXMIRE. When you correct your remarks, maybe we will get an idea.

Tomorrow we will hear from Ernest Fitzgerald, Deputy for Management Systems, Department of the Air Force, and Barry J. Shillito, Assistant Secretary of Defense for Installation and Logistics.

And in the afternoon Mr. Dean Acheson, former Secretary of State, will appear at 2 o'clock.

The other gentlemen will appear at 10 o'clock.

(Thereupon, at 12:45 p.m., the subcommittee adjourned, to reconvene at 10 a.m., tomorrow, Wednesday, June 11, 1969.)

THE MILITARY BUDGET AND NATIONAL ECONOMIC PRIORITIES

WEDNESDAY, JUNE 11, 1969

CONGRESS OF THE UNITED STATES,
SUBCOMMITTEE ON ECONOMY IN GOVERNMENT
OF THE JOINT ECONOMIC COMMITTEE,
Washington, D.C.

The Subcommittee on Economy in Government met, pursuant to adjournment, at 10 a.m., in room G-308 (auditorium), New Senate Office Building, Hon. William Proxmire (chairman of the subcommittee) presiding.

Present: Senators Proxmire, Jordan, and Symington; and Representatives Griffiths, Conable, and Bolling.

Also present: John R. Stark, executive director; Richard F. Kaufman and Robert H. Haveman, economists; and Douglas C. Frechtling, minority economist.

Chairman PROXMIRE. The subcommittees will come to order.

First, I would like to make a brief comment about yesterday's discussion leading to the possibility that the former Secretary of Defense, Robert McNamara, might appear as a witness in these hearings.

The suggestion was made yesterday by Senator Goldwater and warmly seconded by Senator Jordan that Secretary McNamara be invited to appear, in view of the central part that he has played in some of the decisions that we are discussing now. I said at that time that Secretary McNamara had been invited to appear. And I stand corrected. The word had been passed to him through a third party, but apparently Mr. McNamara did not receive it. But I did write him yesterday, and I talked to him on the telephone this morning. And Mr. McNamara informs me that it is the policy of the World Bank for its executive officers not to testify in congressional hearings. And neither Mr. Black nor Mr. Wood nor Mr. McNamara has ever appeared.

And this includes testimony on the central concerns of the World Bank Act, the International Development Association, and so forth. And no World Bank President has ever testified or appeared before a committee of the Congress even regarding World Bank matters.

Consequently, Mr. McNamara has declined. And I agreed to abide by his decision. The decision is perfectly proper.

Our first witness this morning is Mr. Barry J. Shillito, Assistant Secretary of Defense for Installations and Logistics.

Lets just say in this connection that the Honorable Barry J. Shillito will make the first presentation. Secretary Shillito has a distinguished and fascinating career dating back to his service with the Air Corps in 1942. From December 1943 until the end of hostilities he was a prisoner of war in Germany. From 1949 to 1954 he was section chief and contracting officer in the Procurement Division of Air Force

Headquarters, Air Materiel Command, Wright-Patterson Air Force Base. In 1954, he was made Director of the Materiel and Services Division, and in 1958 director of sales for Hughes Aircraft Co. From 1959 to 1962, he was with Houston Fearless Co., where he served as vice president, and later president. In 1962, he became president of the Logistic Management Institute. In 1968, he was appointed Assistant Secretary of the Navy for Installations and Logistics. In 1969, he was appointed to his present position.

Following Secretary Shillito, we will hear from A. Ernest Fitzgerald, Deputy for Management Systems, Department of the Air Force.

Secretary Shillito, we are delighted to have you. Would you identify the gentlemen who you have with you for the record?

STATEMENT OF HON. BARRY J. SHILLITO, ASSISTANT SECRETARY OF DEFENSE (INSTALLATIONS AND LOGISTICS); ACCOMPANIED BY JOHN M. MALLOY, DEPUTY ASSISTANT SECRETARY FOR PROCUREMENT, AND DON R. BRAZIER, PRINCIPAL DEPUTY ASSISTANT SECRETARY OF DEFENSE (COMPTROLLER)

Mr. SHILLITO. Thank you very much, Mr. Chairman and gentlemen of the committee.

I have to my right Mr. John M. Malloy, Deputy Assistant Secretary of Defense for Procurement. Judging from your letter of invitation, we will possibly be touching on procurement matters in some detail.

On my left Mr. Don Brazier, who is the principal Deputy Assistant Secretary of Defense, Comptroller. There is quite a tie-in between the things that we find ourselves involved in in installations and logistics and in which he and Mr. Moot, who previously testified, are involved in. We are pleased to have the opportunity to appear before this subcommittee. Considering the broad range of issues discussed during the hearings, I am confident that we will benefit from them in carrying out our responsibilities.

At the outset, Mr. Chairman, I want to assure this subcommittee, the Congress, and the American people that all of the officials and employees of the Department of Defense—and particularly those who play a role in managing its affairs—are dedicated to rooting out waste and inefficiency wherever and whenever they appear. This is a never-ending task. There will regrettably, always be human error and there will always be transactions that in retrospect we can improve on. Almost every decision we make involves an opportunity for savings or waste depending on the soundness of our policies and the skill of our people. Secretary Laird has charged his entire management team with the task of insuring the integrity of Department of Defense fund requests in the first instance and then the spending of these funds under conditions of maximum efficiency. We make no pretense that this will be accomplished completely satisfactorily overnight nor do we suggest that we can eliminate all human error. We can assure you, however, that all our energies will be devoted to this purpose. We welcome—and, in fact, we will surely need—constructive suggestions from this and other committees of the Congress. We would be less than candid, however, if we were to agree that our combined best ef-

forts would produce dramatic changes in the near term or that reductions in Defense spending to the degree suggested by the subcommittee's report could be made on the basis of improved management techniques and greater efficiencies.

The report recommendations highlight a weakness in the governmental process which has not provided sufficient information concerning how defense procurement of major programs is conducted. As a consequence, perhaps there has been a general lack of understanding in Congress—in other Government agencies—in the general public—on how the Department of Defense manages the acquisition of major weapons systems. To explain this, a very brief and perhaps overly simplified paper has been prepared describing the process. We are submitting it as a supplement to this statement. I will cover the highlights of the paper during this presentation. (See p. 533.)

First, the environment.

Recognizing that the acquisition of major weapons systems requires substantial outlay of public funds and that this is a primary interest of your committee, I would like to discuss the environment in which these actions take place in the hope that we can minimize any misunderstandings as to its complexities. Attached to the supplemental statement is a conceptual depiction of the acquisition of a major program.

And this is the depiction that you see over here on my right and your left, sir. Normally I do not like procedural depictions. However, this particular one, which is not time oriented—and I emphasize that—may help in the understanding of this very complex problem.

Before getting into the details of the flow diagram, I should mention that one of the more complicating facets of this situation is the exploding technological environment in which we are involved. Over 90 percent of the scientists and engineers who have ever been alive in the world are alive today. We sometimes fail to realize that virtually every field of technology has exploded over the past few years and that a significant number of our expanding technologies are often interdependently tied together in a major system. I am inclined to think, for example, that major weapons systems presently in development encompass many technological advancements significantly superior to similar technologies to be used in the next Apollo flight. Recently our technology has evolved in an electric manner. A staggering cross-fertilization of the individual segments of specialization has taken place. Things have consequently become photoelectric; econometric; electromechanical; biochemical, and so forth. The explosion is consequently being pushed additionally. This severely complicates our problem in that we are talking about projecting the cost of a major weapon system involving hundreds of subsystems, tens of thousands of parts, hundreds of thousands of connections, miles of wire, over a period of possibly 5 to 7 years in the future. We are attempting to do this within a continuously changing environment. This will always present problems. Hopefully, we can lessen some of the problems.

As you may know, in the office of the Secretary of Defense, the Director of Defense Research and Engineering has the primary responsibility for the major weapons system acquisition process up through development. The technical environment dictates the early

contractual situation. Those of us with the responsibility for the installation and logistics area assume the responsibility for the equipment being acceptable as ready for going into production. We play a significant role during the early period—prior to release to production—in such things as advance procurement planning request for proposals preparation, contract planning, support planning, et cetera. It is our intent within the installations and logistics areas, by the way, to give much greater attention than has been the case historically to the decision regarding the release of major weapons systems to production.

Now to talk about the management of weapons systems acquisition. [Indicating on chart—Flow Diagram.]

(Chart follows:)

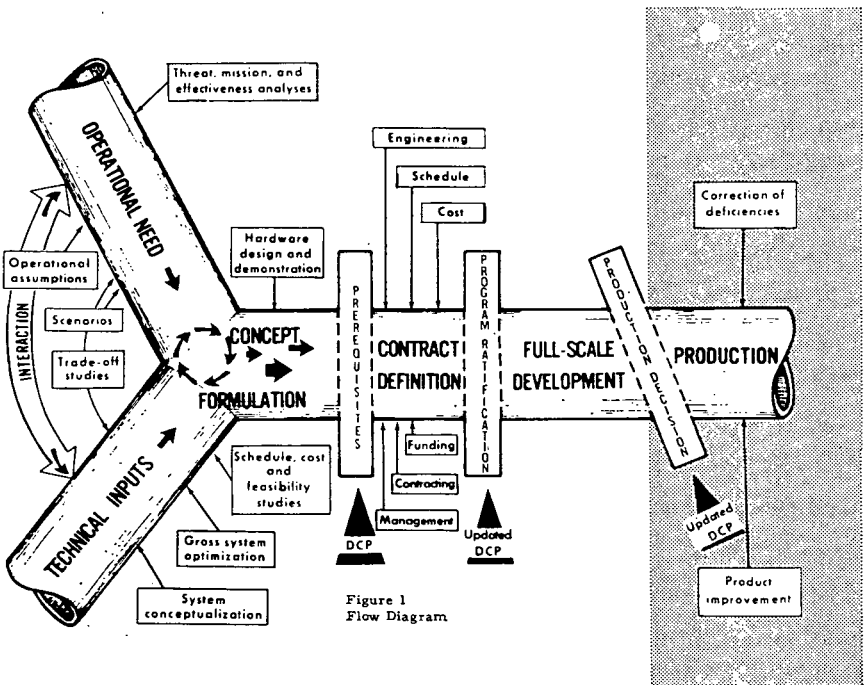


Figure 1
Flow Diagram

Turning now very briefly to the procedural depiction describing the acquisition and management of a major weapons system, as you will note, we have a pipeline with two major channels feeding into it from the left. One channel represents the operational need and the other represents the combined technical input.

Of course in the operational need will be included such things as the national security objectives, the threat, or international objections, et cetera. Requirements for new weapons systems may be created by intelligence information concerning a new capability on the part of a potential adversary, a tactical problem, or from international com-

mitments. There may be a recognition by one or more of the military departments or the Joint Chiefs of Staff that there is an operational need which is either currently unfilled or which will be unfilled in the future as the threat changes and our current weapons tend to become obsolete.

Coincident with this, we are aware through the technical work we do in our laboratories and the technical dialog that develops between these laboratories and industrial concerns that technology is advancing—that there are new techniques—methods of doing things better, for example, higher reliability, lighter weight, lower volume, and, of course, greater overall combat capability. These two come together and are further refined in an area which we call concept formulation. During this period, we are frequently required to stop one approach that we have taken and come back and pick up another. It is frequently an iterative process. However, ultimately we arrive at the point where we feel we have the best combination of operational need and technical input—in other words, we can visualize an actual weapons system.

Before we allow the system to go into the next step—contract definition—we require that six prerequisites be met. These are described in the supplement to my statement which I referred to earlier.

Where concept formulation has frequently taken a matter of years, contract definition normally takes a year or even less. The first phase, and that piece of the environment there is broken into three major parts, phase A, B, and C.

The first phase, phase A, is where we insure that we have qualified bidders—takes, on the average, 3 months. The second phase, phase B—the central part of the contract definition in which competing contractors study the requirements and submit proposals—averages 6 months. The evaluation phase averages approximately 3 months.

The evaluations as regards the contractors proposals. During contract definition, competing contractors carefully define the proposed design, the engineering plan, schedule, cost, funding, contract provisions, and proposed management plan. Again, the full purposes of contract definition are set forth in detail in the supplement to my statement.

Following contract definition, if the Secretary of Defense and the Director of Defense Research and Engineering are convinced that the objectives of contract definition have been fulfilled and if there has been no major change in the requirement for the system, the system then proceeds into full scale development. Full scale development can take anywhere from a year to 3 or 4 years, sometimes more. During this time, decisions are made with respect to whether to produce and deploy the weapons system.

I will talk for a moment about the development concept paper, or the DCP, which you see depicted twice on this chart on the right. There is another process—a fairly new one—which should be understood and which overlays everything we have presented so far. This process is the development concept paper (DCP). This management tool was instituted primarily to insure that a comprehensive look would be taken by the Secretary of Defense and his appropriate principal advisers at the major decision points on an important program. That is, before heavy financial resources were committed to the development

of a major program. Major programs are those which are anticipated to require at least \$25 million of R. & D. funds or \$100 million of production funds, or both. Other programs may be selected for control by this management tool where it is considered appropriate.

You will note on the flow diagram, across the bottom the references to "DCP" and the "updated DCP." Sometimes the DCP will be updated much more frequently than twice. At these times the DCP presents issues for decision. For example, the requirement for the weapon system is reevaluated at the Secretary of Defense level. These types of questions are again asked: Is there a continuing reason for the system? Does the system meet the threat for which it was designed? Are there different ways of meeting the threat or of fulfilling the military mission? What are the proposed costs of the system and its expected effectiveness? Would it be cheaper, for example, not to have a system at all but to take certain recognized losses that we might face if we did not have this system?

The DCP also has another important part which sets forth certain thresholds for management purposes. This is most important because it is the gross management tool which the Secretary of Defense can use thereafter to insure that the system is remaining within specific parameters throughout its life.

We are talking about such things as reliability, range, weight, and these kind of things. In the case of an aircraft, for example, the threshold page of the DCP would contain figures on operational performance, such as a maximum weight growth which would be allowed before the entire development program would be reopened for review.

Contractually—and I think this is rather important—contractually and from a cost growth aspect, we have very few problems during research, concept formulation, contract definition and, in fact, after a major system is in production. During the research period, even when we find it necessary to go to industry, we can contract on, and frequently do contract on, a level of effort basis. During contract definition, we operate in a fixed funded environment. Sometimes contractors spend more during contract definition than we make available and as a consequence absorb these costs. We can also contract in a fixed-price type environment after we are well into production and the contractor has had experience producing the item involved. In other words, the "unknowns" no longer exist or present minimal problems.

Our major problem, technically and contractually, involves the development period after contract definition and the phasing over from development to production.

And I would reemphasize that point. This problem is often exaggerated by the tendency on the part of contractors to be overly optimistic during contract definition as to both their technical and cost capabilities. The services also tend toward optimism in their desires to obtain the military items which they sincerely feel are needed. These two optimisms, working in harness, frequently can and do exaggerate the overall problem.

This phase over problem will not go away. It happens in every type of business, commercial and defense, as you move from development to production. We can and will, however, attempt to lessen the problem by a number of different actions such as tying in development benchmarks which must be met prior to releases to production; by improving the reporting system that will allow both management and

the Congress to maintain current awareness as to that which is taking place as these major programs progress, and so forth.

In this connection, I should mention that a defense systems acquisition review council has recently been established by Secretary Laird to assure greater management control by the services over the large investment which must be made in a few major systems. The council will serve to complement the development concept paper system, which continues as a formal Department of Defense management and decisionmaking system for the acquisition of major systems. The council will evaluate the status of each candidate system at three basic milestone points: First, when the sponsoring service desires to initiate contract definition; second, when the service desires to go from contract definition to full-scale development and third, when it is desired to transition from development to production for service deployment.

I might mention here, too, as an aside, that while a significant portion of our total major decisions are made prior to that point of production, that it is not abnormal to expect 90 percent of our total life cycle costs to be to the rate of that line in the production piece of our total environment.

STRENGTHENING AND RESTRUCTURING THE ACQUISITION PROCESSES

I will outline a number of other approaches that we are exploring to improve the efficiency and effectiveness of the acquisition of new weapons systems. These include:

Improved program management.

Modifying the approach to the weapons acquisition process.

Improved initial cost estimates.

We are hopeful that these management improvements will reduce the expenditure of unnecessary funds for the acquisition of weapons systems and other military hardware.

First, improved program management.

We believe the proper selection of the management team and assuring the efficient performance of that team to be critical to the success of the acquisition of our major weapons systems. Therefore, we have directed a review of both the organization and the procedures for accomplishing the management job as related to all of our larger and more important weapons systems. In analyzing our approaches to weapon acquisition, we expect to improve existing management systems in a way that will enable us to identify problem areas sufficiently in advance to permit corrective action.

I would emphasize here, though, that regardless of how good these management systems are, it is much more vital that we have the right kind of management.

The next, modifying the approach to the weapons systems acquisition process.

We are encouraging the services to apply various tradeoff techniques and cost-effectiveness procedures in their decisionmaking processes. It is our opinion that we are often designing and building weapons that are too complex and, therefore, are too costly. We further compound the problems by sometimes trying to produce hardware before it is sufficiently developed. So, we are going to take a very hard look at the degree of sophistication being requested when we go into a new

development. One of our principal concerns will be to assure development of a reliable weapon before release to production.

We expect to structure our development programs so that the major technological advances that are required have been achieved before the initiation of operational systems development. This may well serve to reduce the risk for contractors and to lessen the temptation for over-optimistic forecasts by both the services and the contractors involved.

In arriving at our decision to undertake full-scale development, we expect to place more emphasis on prototype and laboratory subsystem demonstrations in order to reduce the amount of our reliance on competitive paper proposals for the development of complex weapons systems. The idea is to secure as much proof of concept or design validation as is feasible during the contract definition phase and the early phases of full-scale development. We expect where the circumstances warrant; to pursue parallel development for high risk subsystems, equipment, and components where the risk of failure or the risk of financial loss is high. This will insure a choice of production options on those high-risk items. Again, our aim is to do a better job of relating production to development by insuring that the development has been sufficiently accomplished before production is undertaken. Again, the critical period in the acquisition of major weapons systems is that period involving the transition from development to production.

Before approving the transition into full production, we must be assured that consideration is given to potential problems, including: (1) completeness of design, (2) sufficient testing to demonstrate a satisfactory product, (3) specifications which do not exceed the production state of the art, (4) potential delays in production, and (5) initiation of production after substantial performance demonstration but prior to completion of development. Except for programs of extreme urgency, production will not be initiated until major uncertainties have been eliminated. We expect to give effect to this policy by the use of a series of meaningful development milestones, contractually defined prior to the start of the program, which shall be accomplished before exercising options or placing orders for production. In those programs which contain production options, the Government's right to exercise these options shall be related to the accomplishment of the defined milestones. This means that a tight deployment schedule will not be allowed to force the initiation of production before sufficient development has been completed. However, once production is authorized, rigid compliance with production schedules will be expected.

IMPROVED INITIAL COST ESTIMATES

Our objective in the future will be to require realistic initial cost estimates and then to insist that the contractor remains within established ceilings or absorb any overrun. Admittedly, during development we may sometimes, due to uncertainties, have to contract on a cost-contract basis. This objective will, however, always be a requirement as we move into production. Independent Government cost estimates based on engineering or mathematical models will be used as evaluation aids in contract award whenever appropriate. All new major programs will contain a performance measurement manage-

ment control system which is aimed at significant improvement in cost management of the contract and in achieving better technical and schedule performance against targets. It involves reporting actual information against a planned fork path from the beginning of development.

I would like to now talk about defense industry profits for a moment.

In view of the fact that your committee has stated that many of our defense/defense industry problems are manifested by high defense industry profits and since this is a subject matter of utmost importance on which the opinions of many knowledgeable persons appear polarized, I think it might be desirable to briefly discuss the subject and make a few suggestions.

It is Government policy to place primary reliance on private industry for the development and production of weapons systems and other military hardware. The alternative would be a system of Government-owned arsenals. Under any criteria, the profit portion of the cost of defense hardware is a relatively small percentage of the total cost of those goods. It is, however, a portion which is extremely sensitive to the companies on the one hand and to the general public on the other. Defense profits are rightly of concern to the committee. They are also of concern to the Department of Defense.

We agree with your committee that a better understanding is needed regarding the defense industry profit environment. We recognize that profit, when measured solely as a percentage of cost or sales, does not give a complete financial picture of a company and that the Government should study alternative means of evaluating profit in relation to both equity capital and total capital investment. I do believe that within defense we are more concerned with and involved in this subject than many people realize.

As you know the Department of Defense has an internal profit review system which enables us to track the profits of our contractors on all types of contracts except firm-fixed-price contracts. For information regarding profits on all types of contracts, including firm-fixed-price contracts, we make use of data supplied to us by the Renegotiation Board as well as a special study of defense profits conducted for us by the Logistics Management Institute.

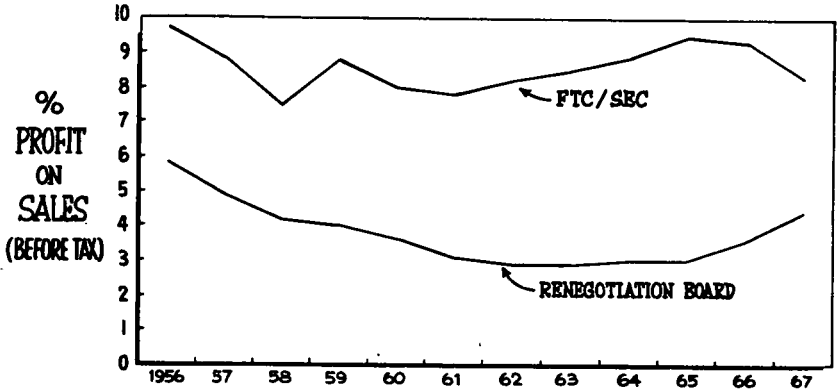
We are able to make only limited use of the Renegotiation Board published data in evaluating the impact of our profit policy because first, they do not separate defense business from all other Government business and, second, they do not contain any information on the companies' return on capital. Nevertheless, I believe Renegotiation Board data is more meaningful than was suggested in your May report.

(See chart No. 1 for profit-to-sales comparison of Renegotiation Board and FTC/SEC total sample.)

(Chart follows:)

PROFIT ON SALES

(BEFORE TAX)



| | | | | | | | | | | | | |
|-----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| FTC/SEC | 307.3 | 320.0 | 304.6 | 337.8 | 345.7 | 356.4 | 389.4 | 412.7 | 443.1 | 492.2 | 554.2 | 575.4 |
| % PROFIT | 9.7 | 8.8 | 7.4 | 8.8 | 8.0 | 7.8 | 8.2 | 8.5 | 8.9 | 9.5 | 9.3 | 8.3 |
| RENEG. BD | 27.7 | 26.6 | 26.3 | 28.5 | 25.1 | 29.3 | 31.2 | 39.3 | 34.8 | 31.8 | 33.1 | 38.8 |
| % PROFIT | 5.8 | 4.9 | 4.2 | 4.0 | 3.6 | 3.1 | 2.9 | 2.9 | 3.0 | 3.0 | 3.5 | 4.4 |

Chart No. 1

And we have here on my right, and again your left, a depiction that we can refer to should we care to discuss this as we go along.

While the data released publicly covers only profits to sales, it does encompass the vast majority of all Government dollars awarded at the prime and subcontract levels and, in recent years, identifies the profits realized by type of contract. It is true that the data is unaudited but it is equally true that a number of safeguards exist providing validity to the substance of the data. We understand, for example, that information submitted to the Board is generally accompanied by certified public accounting statements. The Board has access to the company's tax returns, which it may obtain for comparison and analysis purposes; the regional boards have an accounting staff which examines companies' accounting practices, thus giving every reasonable assurance that the accounting information reported is accurate; and finally, as you know, criminal penalties are provided in the law for willful misrepresentation of data submitted to the Board. Under the current law, the Board has the right to audit the books and records of any company subject to the Renegotiation Act. We believe, therefore, that the Renegotiation Board data does represent a reasonably accurate depiction of the industry-profit environment as measured on the basis of sales dollars. Conceivably, if Renegotiation Board data is sufficient to give us the understanding we need of this environment, consideration should be given to making it more meaningful.

I might make just a point here, sir. I have compared Renegotiation Board data here as depicted, 1956 through 1967, with total FTC-SEC data. Again, I have covered the deficiency in the Renegotiation Board data. The total FTC-SEC data is in a sampling of about 11,000 of about 178,000 companies. It, too, has some deficiencies in it. The FTC-

SEC, I think, states this in their opening comments. But again this is almost the universe of our Government submittals as far as renegotiable data are concerned. This is 11,000 of 178,000 companies which they considered to be quite valid. My point again is that if the Renegotiation Board data does have deficiencies, I think that consideration should be given to attempting to make it more meaningful.

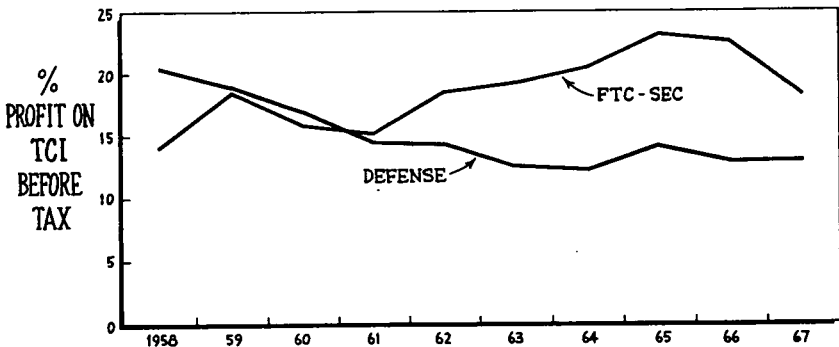
We believe that the profit data supplied to us by the Logistics Management Institute provides us with a basis for evaluating the effect of our profit policies on high-volume defense contractors—those with an annual volume of defense business of \$200 million or more—and on our medium volume contractors—those with an annual volume of defense business between \$25 million and \$200 million. The profit data which LMI obtained on low volume companies—those with an annual volume of defense business between \$1 and \$25 million—do not meet our needs.

You see on chart No. 2 the profit to total capital investment comparison.

(Chart follows:)

PROFIT ON TCI

HIGH AND MEDIUM VOLUME COMPANIES (BEFORE TAX)



| | | | | | | | | | | |
|-----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|
| DEFENSE TCI \$M | 3,267 | 3,486 | 3,416 | 3,942 | 4,316 | 4,425 | 4,184 | 4,123 | 4,911 | 5,556 |
| % PROFIT / TCI | 20.4 | 19.1 | 17.0 | 14.6 | 14.3 | 12.5 | 12.2 | 14.3 | 13.0 | 13.0 |
| FTC-SEC TCI \$M | 54,100 | 57,800 | 62,100 | 65,200 | 70,000 | 73,400 | 77,900 | 86,000 | 97,900 | 110,400 |
| % PROFIT / TCI | 14.1 | 18.8 | 15.9 | 15.1 | 18.5 | 19.2 | 20.4 | 23.1 | 22.6 | 18.2 |

Chart No. 2

By the way, a consolidation of these two adds up to a depiction of roughly 82 percent of the hard goods data of companies doing in excess of \$25 million per year with the Department of Defense. We have here a depiction of this LMI data versus the hard goods portion of the FTC-SEC data. The hard goods portion is, as I recall, approximately 3,500 of these 11,000 companies that are in the total FTC-SEC sampling.

Chairman PROXMIER. What does the TCI stand for?

Mr. SHILLITO. Total Capital Investment. This is equity capital investment plus long-term debt.

Chairman PROXMIRE. Does it include the Government investment?

Mr. SHILLITO. No, sir; this is strictly the company's investment. Let me clarify that point—the company's equity capital investment plus the long-term debt of that company.

Aside from the fact that LMI in their studies as we mentioned produced useful profit data on only high- and medium-volume defense contractors, our principal problem with the study has been the doubt expressed by some key people, including members of this committee, regarding the validity of the LMI sample.

As you may know, I was the President of the Logistics Management Institute at the time the defense profit study was initiated and at the time the first profit report was made to the Department of Defense in November of 1967.

During that time the profit study was my major preoccupation. I noticed on coming in that one of the persons in attendance here is Mr. Kelstaff, chairman of the board of LMT. I would say that the objectivity of the board of that company was made continuously clear to all of us in the conduct of our efforts. It was continuous insistence on constructive criticism, if you will. We did go out of our way to insure the validity of this data.

Extensive measures were taken by LMI and for that matter by the Department of Defense to establish the validity of the profit data furnished by the companies who participated in the study. While the study has some deficiencies, and I would be the first to admit it, it is presently the best information available on high and medium volume defense contractors.

I consider it to be of the utmost importance that the question of what are the facts about defense profits be removed from controversy. We could then turn to the heart of the matter, which is the question of the correct or proper level of defense profit. One approach to removing the controversy about the facts which I should like to lay before this subcommittee for its consideration, would be to have the General Accounting Office review the LMI profit study and provide the Congress and the Department of Defense with an independent evaluation of the validity of the study. I believe that LMI would welcome such a review. I also believe this would help all of us in determining our future course of action relative to studying defense industry profits.

In summary, Mr. Chairman, we are reviewing the entire logistic function and critically examining how it is being performed. We offer no panacea—we make no lofty promises or spectacular predictions. We pledge to do our very best to develop ways to improve the performance and effectiveness of the logistic function—and to do that job with the least possible expenditure of public funds. In performing the logistic function, we will necessarily continue to incur substantial obligations for ammunition, helicopters, communications equipment, textiles, clothing, and other military items required to maintain our forces throughout the world. We will perform this function by careful scrutiny of every program to assure ourselves that each program is necessary and is being conducted as efficiently and economically as possible.

Mr. Chairman, I would like to spend one brief moment paying tribute to the professional officers and civilians of the Department who perform the logistic function. Whatever the Congress should decide with

respect to the future size of the military budget in relation to other national needs, you may be assured of the continued loyalty, dedication to duty, and efficient performance by the defense personnel performing these functions.

That concludes my statement, Mr. Chairman.
(Mr. Shillito's supplemental statement follows:)

SUPPLEMENTAL STATEMENT OF HON. BARRY J. SHILLITO
MANAGEMENT OF MAJOR WEAPON SYSTEMS ACQUISITION

This paper covers the subject of how DOD manages its weapon systems acquisition. It points out some of the trouble areas we have found in our recent analyses of weapon systems management—areas that we can definitely recognize as needing correction or providing room for improvement—and identifies some of the actions we are taking to attempt to improve our methods.

Technical management

Figure 1 shows how DOD manages the acquisition of a typical weapon system on a technical basis. As it may be seen, we have a pipeline with two major channels feeding into it from the left. One channel represents the operational need and the other represents the combined technical input. Requirements for new weapon systems may be created by intelligence information concerning a new capability on the part of a potential adversary, an unsolvable tactical problem, or from international commitments. There may be a recognition by one or more of the Military Services or the Joint Chiefs of Staff that there is an operational need which is either currently unfilled or which will be unfilled in the future as the threat changes and as our current weapon systems tend to become obsolete. Coincident with this we are fully aware through communication with industry and with our laboratories that technology is advancing and that there are new techniques and methods of doing things which will permit us to gain greater weapon systems effectiveness—lighter weight/lower volume, sometimes less cost, generally higher reliability and of course greater over-all combat capability. As we continually examine mission requirements, conduct threat assessments, and evaluate required effectiveness, we are also conducting tradeoff studies of the technical inputs and performing gross system optimization and system conceptualization. We are feeding both of these into operational scenarios to see how the going pipeline input fit. These two come together in an area which we call Concept Formulation.

There is considerable iteration in Concept Formulation, and we are frequently required to stop one approach that we have taken to go back and pick up another approach. Ultimately, we come to the point where we feel we have developed the best combination of operational need and technical input, or, in other words, the visualization of an actual weapon system. In the meantime, of course, we are looking at matters of program schedule and cost. We also, where possible, have been designing and demonstrating hardware. At this time, referring to any given weapon system, the system proponents feel that they have completed Concept Formulation and are ready to go into Contract Definition.

Before we allow a system to go into Contract Definition, we require that six prerequisites have been met. The first prerequisite is that the mission and performance envelopes have been defined; that is, we have a full understanding of what the mission and performance requirements are for the system that we need. We attempt insofar as possible to define the desired system or equipment through performance specifications rather than through detailed specifications so as to give our potential contractors maximum flexibility of approach in meeting our requirements and to permit maximum innovation, while assuring that we get a weapon system which will do the things that we need it to do.

Second, we require that a thorough tradeoff analysis has been made. This tradeoff analysis involves the elements of cost, schedule and performance. In other words, among these three features we endeavor to insure that we get the most effective product when we need it and at the most reasonable cost by looking at all three from the viewpoint of the optimum overall combination.

Third, we must insure that the best technical approaches have been selected for the new weapon system. This means that we must have done our homework on technical input so that we capitalize on the most advanced state-of-the-art

while at the same time not basing our development on components which have high remaining risk areas.

Fourth, we look for a guarantee that we have ahead of us primarily engineering rather than experimental effort in the remainder of the program and that the technology needed is adequately in hand. This prerequisite is included to avoid the problem of finding, after we have moved into full scale development, that we have problems which require further high risk experimental effort. At this point, we sometimes find ourselves in a situation where we must forge ahead to meet an initial operational capability date and cannot afford the time or expense to return to advanced development.

Fifth, we insure that the cost effectiveness of the proposed item has been determined to be favorable in relation to the cost effectiveness of competing items on a DOD-wide basis.

Sixth and last, we insure, insofar as we can, that the cost and schedule estimates are both credible and acceptable. When we have satisfied all of these prerequisites, we are ready to go into Contract Definition.

Where Concept Formulation has frequently taken a matter of years, Contract Definition normally takes about one year. The first phase, or phase A, (where we insure that we have qualified bidders) takes approximately three months. The second phase, or phase B—the central part of Contract Definition in which the competing contractors work up proposals—takes about six months. The third, or evaluation phase, takes the balance of approximately three months. During Contract Definition the competing contractors carefully define the proposed design, the engineering plan, schedule, cost, funding, contract provisions and the proposed management plan. Generally, Contract Definition is conducted by two or three qualified contractors, although it can be conducted with only one.

The purposes of Contract Definition are first, to verify that only engineering development remains ahead—to insure that one of the prerequisites mentioned previously for going into Contract Definition has in fact been accomplished. This is most important. Second, to establish realistic and firm specifications, schedules and costs for development and also, if possible, for production. Third, to attempt to identify all possible risk areas ahead so that plans can be made to accommodate them. And, fourth, to obtain a signed contract, preferably in the presence of competition.

Contract Definition as explained in Department of Defense Directive 3200.9 constitutes a conditional decision on the part of the Secretary of Defense to allow a program to proceed into full-scale development. This conditional decision is subject to ratification at the end of Contract Definition. At that time, the Service sponsoring the particular weapon system looks at the work done by the competing contractors, satisfies itself that the objectives of Contract Definition have been met, and makes a source selection, provided that the source selection has been delegated to the Service Secretary by the Secretary of Defense. If the Secretary of Defense and, in particular, his Director of Defense Research and Engineering, are convinced that the objectives of Contract Definition have been fulfilled and if there has been no major change in the requirement for the system (e.g., in the threat), the system then proceeds into full-scale development. A full-scale development can take anywhere from a year to three or four years. During this time a production decision is made; that is, a decision to produce and to deploy the weapon system.

This production decision can be made at any of several different points during full-scale development. Occasionally, a production decision may have been made immediately upon entry into full-scale development. These cases are fairly scarce. They normally occur only when there is a high priority need for the system, there is high confidence that full-scale development can be conducted on schedule, and there are no major risk areas in the way. At the end of full-scale development, production starts. At this time, the basic responsibility for weapons acquisition passes to the Assistant Secretary of Defense for Installations and Logistics.

Installations and Logistics personnel support the DDR&E staff in such areas as:

- Advanced procurement planning;
- Contractual arrangements;
- Request for proposal preparation;
- Support planning, and;
- Configuration management.

Obviously, DOD's primary interfacing document with industry is a contract. The basic policies governing the entire spectrum of the contracting process are

published in the Armed Services Procurement Regulation (ASPR)—which is primarily an Installations and Logistics responsibility.

Contractually, DOD problems are rather minimal as we move through concept formulation. The kinds of things that are acquired involve engineering studies and management studies. However, at the end of concept formulation various action documents result. Following the approval by the Secretary of Defense of a systems development plan, requests for proposals are issued to industry—covering the contract definition effort. This is our first formal contract on the program with prospective contractors and it leads to competition among the qualified firms with an examination of each competing contractor's approach.

During contract definition, there is always the potential problem that competing contractors may have a tendency to become extremely optimistic, both as regards their technical capabilities and their cost promises. At the same time, there is similar optimism portrayed by the Services involved in order to insure that the program in which they are deeply involved, and feel strongly as to its military need, is launched.

One basic problem we have recognized is a technical, contractual problem as we move through development into production. The problem does not appear to be unique to the Defense Department. Practically every major industry has the same kind of problem. It will not go away, but we are convinced that there are alternatives to be pursued which can lessen the problem.

In development, we have long recognized that uncertainties and unknowns must be brought within increasingly narrower bounds for fixed-price incentive and firm fixed-price type contracts to be justified. The use of firm fixed-price development and total package procurement type contracts, following contract definition, when significant development is still required, is at times inconsistent with this principle.

The alternative solutions to this problem have advantages and disadvantages. For example, there would be delays in contract definition until:

The technology is well in hand;

The mission performance envelopes have been defined;

The technical approaches and trade-off analyses have been made in detail;

We know the schedule and cost are both credible.

Alternatively, there are advantages in deferring our production decisions—with admittedly some disadvantages. It is our plan to establish a few development benchmarks in a flexible contractual environment that will insure that such benchmarks are met prior to the release of our major programs to production.

In summary, we believe that there must be more realism in the contracting decisions as related to technical uncertainties. Since World War II, the Defense Department has made many contractual innovations. There have been numerous new techniques used and there have been some advancements. Obviously, there are many problems left that will require our constant attention.

Now, there is another process and a fairly new one which must be understood which overlays everything we have presented so far. That process uses the Development Concept Paper (DCP). This management tool was instituted primarily to insure that a comprehensive look would be taken by the Secretary of Defense and his appropriate principal advisers at a major decision point on an important program, e.g., before heavy financial resources were committed to the development of a major program. The officer who has the primary responsibility for the Development Concept Paper in the Department of Defense is the Director of Defense Research and Engineering. It is his responsibility to insure the initiation of a Development Concept Paper at the appropriate time in the life cycle of an important system. Important systems are those which are anticipated to require at least \$25 million of RDT&E or \$100 million of production funds or both, are high priority or are otherwise important, e.g., because of unusual organizational complexity or technological advancement. The most common point at which Development Concept Papers have been introduced has been when a sponsoring Military Service is ready to go from Concept Formulation into Contract Definition.

Before discussing the content of a typical DCP—a word about the broad objectives of this management system. These are to improve decision-making and implementation on important development programs by increased assurance that:

The full military and economic consequences and risks of these programs are explored before they are initiated or continued;

Information and recommendations on these programs are prepared collaboratively or coordinated with all interested parties prior to review and decision by the Secretary of Defense;

The premises and essential details of his decision on these programs are regularly recorded and made known to all those responsible for their implementation;

An opportunity for review is provided to the Secretary of Defense if any of the information or premises on which his decision was based change substantially.

The content of a typical Development Concept Paper contains, first, the issues for decision; that is, the management issue or issues involved.

Next are the program purposes. That is, the threat which the system is designed to meet or exceed. In short, the reason for the system.

Third, alternative solutions. Are there different ways of meeting the threat—of fulfilling the military mission?

Fourth, the DCP covers the proposed cost of the system, the expected effectiveness of the system in meeting the threat, and the planned schedule on which the system would be developed and put into production.

Next, the pros and cons of the system itself: Is the system in fact needed? Would it be cheaper, for example, not to have such a system at all, but to take certain recognized losses that we might face in combat if we did not have this system?

Next, the DCP contains a threshold page. This is a most important part because it is the gross management tool which the Secretary of Defense will use thereafter to insure that the system is remaining on track throughout its life. In the case of an aircraft, the threshold sheet would contain figures on technical and operational performance, such as the maximum weight growth which would be allowed before the entire development program is reopened for review by the Office of the Secretary of Defense. Similarly, other thresholds having to do with cost and with schedule are established in this portion of the DCP. For example, if the estimated cost of a system in development is \$100 million, a threshold of say \$110 million might be established. Within these bounds, the sponsoring Military Service is fully responsible for the entire management of the program. If, however, a system runs over or threatens to run over the \$110 million threshold figure, then the system is fully examined not only by the sponsoring Service but by DDR&E. A new Development Concept Paper may be written and a new decision may be made as to which way to go.

Next, the DCP contains a management plan; that is, how does the Service plan to manage the program? What is the composition of the System Program Office and so on?

Next, the matter of security: What has to be classified about the development—what can be unclassified? This is very important with respect to industrial considerations.

Next, the DCP covers conditions for revision. As previously indicated, a Development Concept Paper is supposed to be a living document which can be referred to throughout the life of the system and found to be accurate at any time. The Development Concept Paper will normally be updated at the end of Contract Definition so that it contains more accurate figures on the system, its performance, its schedule, and its cost. Figure 1, illustrating technical management, shows an updated DCP between Contract Definition and full-scale development and also an updated DCP at the time the production decision is made. This updated DCP is to insure that we go forward into production with a valid and current understanding of the major features of and surrounding the system including the threat which it is intended to meet, the performance parameters and the cost and scheduled features. (So far, no system yet covered by a DCP has reached this point in its life cycle and we are still exploring the best way to use the updating feature of the DCP.)

Next, the DCP contains decision options or alternatives. This means that there is presented for decision by the Secretary of Defense various alternatives from which he may choose, such as to allow the candidate system to go into Contract Definition. Another alternative might be not to go ahead with Contract Definition, but either to do further advanced development or simply not to develop this system in favor of developing another one or making another do to meet the mission requirement.

Last, a Development Concept Paper contains the signatures of the Director of Defense Research and Engineering, the sponsoring Service Secretary, certain Assistant Secretaries of Defense (such as Installations and Logistics, Comptroller, Systems Analysis), and then the signature of the Secretary of Defense or the Deputy Secretary indicating his decision.

Problems

As previously mentioned, there are certain problem areas which we recognize in our weapon systems acquisition—areas which we feel without question are subject to improvement and which we are looking at in order to make a decision as to how best to proceed.

One is the area of source selection and decision making. This involves the whole matter of Concept Formulation and Contract Definition—how we narrow down to and finally select one contractor—how and when we make the various decisions relative to development and readiness for production—and how we select the type of contracting which is best fitted to a particular program. We are generally convinced that in the past several years the R & D management changes that have been made have been basically in the right direction. Problems were identified in the mid and late 1950s with respect to improving the disciplines of weapon system management. Since that period, there has been a continuum of improvements in this area. However, contracting methods as well as Concept Formulation and Contract Definition policies and regulations may have moved so far that we have deprived ourselves of appropriate flexibility to allow most effective acquisition to take place. It may well be that a combination of different types of contracts for development and procurement is to the best advantage of the Government.

The matter of covering risks is subject to further analysis, evaluation, and improvement. There have been many criticisms in the past few years by industry that they have been forced by the Government or by the prevailing environment into making over optimistic estimates of the cost and schedule of the development and production of a system in order to allow themselves any real chance of winning the competition. The Department of Defense does not want industry to be over optimistic. We want to be informed what industry considers to be an accurate appraisal of the development risks ahead in a program. The Government is prepared to pay a fair price for a system provided it is assured that system is needed and can make an estimate ahead of time of what it is going to cost so it can evaluate its military utility versus its cost. It is not the desire of DOD to put a contractor in a position where he must take an extremely optimistic view of the risks ahead in order to give himself any opportunity to be successful in the competition.

On the other hand, we must know what we may encounter in the way of costs and development problems, and we feel we cannot shift to the other end of the scale where we would do business completely on a cost-plus basis without regard to evaluation of the risks ahead. In this connection, we are convinced at the present time that we would be well advised to attempt to do more design validation and more prototyping rather than to depend as much as we have on paper estimates and paper analyses of what risks lie ahead of us. Most desirably, of course, we would have competitive prototypes for every system or every component that we develop. This practically, as we all recognize is not possible. It is far too expensive, for example, and too time consuming to build two complete competitive aircraft weapon systems and to fly them one against the other to decide which one we want to buy. It is feasible, however, to conduct prototype competitions of certain major subsystems, such as engines or avionics or radars or even aircraft missile systems. We feel that we may have been making our decisions to produce too early in the life of a system. We may be well advised in many cases to attempt to carry competition farther along than we have until we are assured that more of the risks involving unknowns are behind us—that we indeed have purely engineering ahead rather than experimental development and that contractors can make more accurate estimates of what the remaining development and the production of a system will entail. All these things are involved in the source selection and decision making. We are looking at them carefully and expect to make changes indicated by our studies as soon as we have convinced ourselves that we are moving in the right direction.

Next, among the major problem areas is the matter of documentation. This takes two forms: (1) technical documentation, which the contractor is required to provide to the Government in responding to a request for proposal; and (2) documentation pertaining to the management of the program he must conduct if he wins the contract for the development (not only the type of management but the depth of management detail called for).

There is a growing feeling with respect to the former that not only has the Government been asking for too much depth of detail in the technical documentation, but the contractors frequently have overdone the technical documentation on their own initiative in order to convince the Government that their depth

of knowledge of the system is such that they should be given the contract. We are going to try to stem this tendency toward excess technical documentation.

Another major problem area is the program management itself. We are not fully satisfied at the present time with our program management policies and organization. We feel that we probably need better training for our program managers, more extensive training, a longer tenure by the PMs in their jobs as well as longer tenure by other key people in the SPOs or System Program Offices. Further, a program manager frequently does not have authority to match his responsibility, and in some cases he is not fully certain of what his responsibilities are. He frequently is subject in his work to such a wealth of directives that he cannot possibly be fully familiar and comply with them all. What we need are high quality, well-trained program managers, with good teams working for them, in a framework of management which permits them to carry out their jobs with a minimum of impediments and extraneous requirements. One of our major plans in this connection is to take a hard look at the composition and the curriculum of the Weapon Systems Management Course, at the Defense Weapon Systems Management Center. We feel that there is a possibility that the course should be made longer and that perhaps we should turn out program managers with a master's degree in program management.

In summary, the thrust of our on-going efforts in the field of Defense R&D management is this: The management of Defense R&D is a titanic task involving the disposition of billions of dollars a year covering many programs of a widely divergent nature. It is impossible to find one single policy or method of management which best fits all.

We have tried many methods to get the most defense per dollar expended. We have made some improvements in the past but recognize we may have overreacted in our handling of some problems. We want to correct and improve the management of our Defense weapons system acquisition and do it as fast as we can, which means when we are sure we have identified a problem and developed a solution which will move us in the right direction.

Chairman PROXMIRE. Thank you very much, Mr. Secretary, for a thoughtful and helpful statement.

I would like to ask you some questions first that may indicate to you the trouble which we are having. I think there is an increasing gap between the kind of assurances which your statement represents and the growing skepticism on the part of many people in the Congress and the public because of the case after case after case we get of enormous differences between original estimates and the eventual cost that the Congress has to appropriate and the taxpayer has to pay.

For example, as the former Assistant Secretary of the Navy, you are familiar with the deep submergence rescue vehicle, called DSRV. The DSRV's are supposed to be small submersible vehicles capable of rescuing personnel from submarines which are disabled.

The original cost estimate of February 1964, was \$36.5 million for 12 DSRV's. Current estimate is \$480 million for six units, according to my information. In other words, the unit cost has risen from about \$3 million to \$80 million.

One of the interesting facts about this program, and the way by which we might gain some insight into its value, concerns the nature of submarine disasters.

According to facts provided to me, since 1928 there has been only one submarine accident during peacetime operations from which there was even a possibility of rescue. There, thus, seems to be a very low or remote probability of submarine rescue. In addition, there are at least two existing means of rescuing personnel from submarine disasters.

In view of these facts, I wonder how the Navy can justify this program and the astronomical cost overrun that has occurred? I under-

stand that Lockheed is the contractor. I wonder if you will confirm that?

Mr. SHILLITO. That is my understanding, Mr. Chairman. I will confirm that.

(The following was subsequently received from Mr. Shillito:)

Lockheed is the prime contractor for the vehicle. About three-fourths of the costs of the complete vehicle is managed by Lockheed. The balance is procured directly by the Government and furnished to Lockheed. The major contract for GFM is with MIT for the guidance and control system.

I would like to break your question into two parts. I cannot answer the question dealing with the need and the overall requirement. This is not the area that we get into on the I. & L. side. Frankly, we did not get deeply into the DSRV. I would like to state, however, that I think this is possibly typical of the environment that we are talking about. Let's call it the growth, if you will, rather than overrun—environment that we are talking about generally breaks growth into about three pieces. Cost growth is brought about by changes frequently that we—the DOD—initiate that we feel are necessary in a development process as it goes along.

Specification modifications that tie in to this is another segment of this growth trioka. Then, of course, there is this overrun piece.

Now, I will not attempt to stratify the DSRV. But I understand the program is virtually totally different from that which was initially embarked on. Assuming that there are no classification problems, I will be more happy to bring this data together and pass it on to the committee if you care to have it.

Chairman PROXMIRE. Will you confirm those figures?

Mr. SHILLITO. I will, for the record.

Chairman PROXMIRE. It was \$36 million, and it is now \$480 million.

Mr. SHILLITO. I will check that out for you.

Chairman PROXMIRE. So it is a unit increase from \$3 million to \$80 million. You say you will check that out?

Mr. SHILLITO. I will check it out and give it to you. I think there was a GAO report on that that said pretty much the same thing.

(The following information was later supplied by the Department:)

The \$36 million was the initial estimate made by the Deep Submergence Engineering Group in 1964 following a preliminary study and recommendation for 12 vehicles. However, this \$36 million was never an approved number. A Program Change Proposal approved by Deputy Secretary Vance in October 1965 projected \$119 million as the cost. This was the first firm planning figure, and it covered six vehicles. The change from twelve vehicles to six larger vehicles was made after a detailed engineering study following the initial recommendations by the Engineering Group. The total amount expended to date on this project is approximately \$134 million. However, the actual cost of the first vehicle built by Lockheed was only \$41 million. The total of \$134 million includes everything spent on the project—test programs, training programs, submarine conversion costs, etc.

The \$480 million is our current estimate of total cost of the program through FY 74 if we were able to accomplish everything we wanted to do under the project. However, the Five Year Defense Plan includes only \$220 million. The Navy can complete two vehicles and all the testing, training, etc., with the present FYDP funding. Now, if we were to complete all six vehicles in the program, the per vehicle cost over the entire ten year program would be \$80 million. However, it should be clear that we cannot validly compare this \$480 million with the \$36 million. The first realistic planning estimate was \$119 million. Finally, a large share of the cost is for the collateral items mentioned above.

Chairman PROXMIRE. I wonder if you would also care to comment on the Minuteman II overrun which as alleged in the testimony yesterday. According to that testimony, the cost of the Minuteman II has risen from approximately \$3.2 billion to somewhere in the neighborhood of \$7 billion.

Mr. SHILLITO. I will give you that information, also. It is my understanding these were substantially the numbers that were passed on by the Air Force, also—that there has been roughly that kind of growth. Do you have anything to add to that, Mr. Malloy?

Mr. MALLOY. No.

(Mr. Shillito later furnished the information which follows:)

The original Air Force estimate for Minuteman II was \$3.6 billion. The estimate to complete is currently being staffed to OSD for validation. Today's Minuteman II is *greatly* different, and better, than the system envisioned in 1962. All of the changes and additions have resulted from changes in the threat, national policy, and ballistic missile technology.

Chairman PROXMIRE. Let me ask you about a statement that was made by Mr. Gordon Rule. He made one of the most honest and forthright expositions before this committee that I have heard in a long time. As you know, he is the Director of Procurement Contract and Clearance, Navy Materiel Division, and I understand that he would be under your jurisdiction to some extent, at least.

And Mr. Rule said that the contractor is playing games with the Pentagon and the Pentagon is playing games with the Congress on this matter of providing information on the cost of weapons. He said that the contractor and the Pentagon don't like to have these projects scrubbed, they want to sell them in the most attractive way.

They know, he indicated, that these costs are going to be higher, the contractor knows it, the Pentagon knows it, but the Congress is told that they will be at a level which is consistently far below what they turn out to be. It seems to me this is just plain deception; this isn't telling the truth. I don't see how you can categorize it in any other way than as a calculated, deliberate lie.

You say in your statement that it is a matter of optimism, and that you are working on a defense systems acquisition council which presumably would help in this respect. But I would like your reaction to what I thought was a very honest analysis of it by Mr. Rule. Would you strongly disagree with Mr. Rule?

Mr. SHILLITO. I would disagree with the statement as made by Mr. Rule, Mr. Chairman. Perhaps if Mr. Rule and I sat down and talked about this entire matter we might find that there is a semantic problem here. I made the comment, as you say, in my statement that there is an overoptimism that is most awkward in this regard. In fact, I think about 1962 I said the same thing before another committee that we have an overoptimism problem. The environment in major weapons systems is such that it is not like building to inventory as in other kinds of business. The need comes around one time. Thus, it becomes awfully important to get the job; considering the way the merry-go-round goes round. This engenders overoptimism.

I would have to say, too, that there tends to be this overoptimism on the part of our services periodically as far as their needs are concerned.

Chairman PROXMIRE. I can understand being off by 10 or 20 percent, being off occasionally by substantial amounts, but when they are

consistently, virtually every time off by so much, when the study made by a distinguished and able member of the Budget Bureau showed that in the major electronic procurements that we had in the last 10 years that they have been off 100 to 200 percent consistently, now, this, it seems to me, is more than optimism. It seems to me much more logical that you can explain it on the ground that they just want to sell this program, and if they have to sell it by stating that the cost is going to be less than they know it is going to be, they will do it.

Mr. SHILLITO. There is no question but that we have to do not only a better job in getting on top of the cost estimating side of our business, but also in telling the Congress and the American people what is happening as regards our tracking these many programs.

You know, Mr. Chairman, last week I picked up a paper and read that the Kennedy Center cost was over by about 50 percent.

Last year I had a little bulldozing done on a place I happen to own. Anybody ought to be able to run a bulldozer. And they were off 300 percent on the estimate of that bulldozing job because they ran into rock.

I recall adding a room to my house one time, and I had estimates that were off 300 percent. And we are in a business that is a lot more complicated than the kind of thing I am talking about.

Chairman PROXMIRE. Of course it is. And of course you get some overruns here and there. But when you get a consistent pattern, virtually without exception, of such enormous overruns, and you consider that you have experts making these estimates, not the housewife or the fellow who is a Senator trying to buy a house, but somebody who is a real expert and knows exactly what he is doing—or should know—and is paid to know. These experts make these estimates and they are off consistently; it would seem to me more than a matter of optimism. Recently I asked the Secretary of Defense to tell me what he estimated as the cost of the advance manned strategic aircraft. Mr. Foster wrote me that they would cost in the neighborhood of \$25 to \$30 million each. And this is a plane that is going to be the super manned bomber of the future; it is going to have all kinds of avionics built into it; it is going to be extremely complex.

And it looks to me like the biggest underestimate of a long list of underestimates in the Pentagon. And I just wonder if this pattern which we have had in the past, which has been so very unfortunate, and which has created as big a credibility gap as we have in the Government, is really getting under control, if we are really doing something about it?

Mr. SHILLITO. Again, it is more than estimating. It is also this sophistication problem. The man down the line in the technical environment who is a gyro specialist is interested in the best possible floating of his gyro. He gets real enthusiastic as regards how his gyro will operate. Before you know it, that gyro builds into a major subsystem, and then we have thousands of people working in the systems environment, improving their individual products. This makes it awfully tough to control.

I would like to mention one more point, Mr. Chairman. And I do know that with time that we are going to be able to better answer your question, and I hope not too much time, because we are going to be

looking at the windup of every program involving development. During phase-in from development to production we will question the growth in these programs, what caused the growth so that we may assess this pattern and learn from actual cases. We will be breaking this down into such subjects as changes, who stimulated the changes, deficiencies, specifications, if you will, and overrun.

I have a strong feeling that we will find that the primary cause is not overrun. The primary cause will probably get more and more into this area of change and sophistication.

Chairman PROXMIRE. My time is up. I would just like to conclude by saying that the clear implication of what Mr. Rule said, and the explicit statement of Mr. Tyrrell, who appeared yesterday, and who is an able man with a qualifying background, was that they knew the Pentagon knew, the contractor knew that these cost estimates were too low, that the costs would be higher.

Mr. SHILLITO. I would venture to say, Mr. Chairman, that on most every program that finds itself estimated by the myriad of people that put these estimates together, that you can find quite a spectrum in difference of opinions as to what these estimates are going to run. You are absolutely right. If you were to develop some kind of a probability window as to what the growth is going to be on some of these major programs, including changes due to sophistication, and the others we mentioned, and factor these things in, you would see some of the kind of growth currents. But I do not consider this to be a normal thing. I consider it again to be just plain overoptimism.

Chairman PROXMIRE. Senator Jordan?

Senator JORDAN. Thank you, Mr. Chairman. I would like to continue on this line.

Mr. Shillito, you are not the first witness who has talked to us about the overoptimism on the part of the contractors and the overoptimism on the part of the services. And you suggested that you are implementing ways to break down the difference between the initial estimate and the final cost. But in the meantime would you suggest a multiplier that we in the Congress might use on that initial bid so that we would be approximately in the ballpark when we get the final bill.

Mr. SHILLITO. That is a good point, Senator. I would like to hope, if I am right, that most of this growth is not overrun and that we can do something about. If we can't, we should do something about a projection that would allow a better budgeting on the subject.

Now, I think that one of our problems is—and Mr. Brazier may want to elaborate on this point, and Mr. Malloy may also want to—a lot of our estimating, a lot of our budgeting on major programs where we have both the target and ceiling has been tied to targets. More often than not the contractor who is overly optimistic is more concerned with that ceiling and the risk tied to that ceiling than he is to the target. However, we budget the targets. This is very consequential.

But I agree with your point that we should be able to do a better job in projecting these things.

Senator JORDAN. It would be helpful if we knew in the first estimates that we were only looking at the top of the iceberg, and the rest of it would finally—

Mr. SHILLITO. Sir, we have had many discussions on the subject in the last couple of months—we are not in disagreement with you.

Senator JORDAN. In your statement you mentioned that Secretary Laird has recently established a Defense Systems Acquisition Review Committee. Who are they, what do they do, and do they propose to improve this gap that we are talking about?

Mr. SHILLITO. Yes, sir.

Let me get this one flow chart back up here that we had a moment ago.

I made the comment that the key to the success of any major weapons system is people. I can't overemphasize that point. We have so many people that get involved in the details of management information systems and this sort of thing with the hope that these things will improve on how we do the job. But in reality it is people. We are going to take a people look back up in here (pointing to chart)——

Senator JORDAN. My question was about Secretary Laird's——

Mr. SHILLITO. Yes.

We are going to take a people look as far as this council is concerned prior to going into contract definition. At this point the council is chaired by D.D.R. & E., Dr. Foster. The members of the council are Mr. Moot, the Assistant Secretary for Systems Analysis, and myself.

We take another look as the decision is made to move into full-scale development, still chaired by Dr. Foster. As we make the decision to go into production a third look is taken by the same council, only I became the chairman of the council. Again I would emphasize to you that we find ourselves making the major portions of our decisions prior to this point. We probably end up, however, with 85 to 90 percent of our total dollars throughout the life cycle cost beyond this point. [Indicating chart.]

So it becomes awfully important that these decisions are made right.

Senator JORDAN. When you speak of this council you talk only about management control. I don't hear any mention of cost control. Is cost control implied in management control?

Mr. SHILLITO. Yes, the Assistant Secretary Comptroller is a member of this council—and it sure is intended that we are going to have cost control here, too.

Senator JORDAN. You say in your testimony, "it is our opinion that we are often designing and building weapons that are too complex, and therefore, too costly." As the world's weapons technology advances, is there any way that we can avoid building increasingly complex systems.

Mr. SHILLITO. Well, there are several ways. And of course we have got a problem here again in that we have thousands of people technically oriented working in specialized areas, not just in defense, coming up with new ideas, new thoughts, very important things that they want to build into these things.

But possibly the single most important action we are taking, Senator, is to concern ourselves with this development area, and to attempt to know as much as we possibly can about what it is we are talking about before we make our releases to production. Historically there has been a tendency for this line here to be angled like so, and still to be doing a lot of our development as we phase into production.

This can be awfully expensive if you get into a lot of hard tooling, and so forth. The costs of changes, of mistakes, of course, become almost exponential in many ways, once you get into this kind of situation. So we expect to do a better development benchmark job before we make these production go-ahead decisions. This is key. It is something that Mr. Packard has had a lot of experience with, and I have had a lot of experience with. I can assure you that as far as I am concerned this may be one of the most important areas in which we are going to have to improve.

Senator JORDAN. I will yield to Senator Symington, inasmuch as Senator Symington has to leave.

Senator SYMINGTON. Thank you very much, Senator Jordan.

Mr. Secretary, it is good to see you. I wish I could stay longer. I will read your testimony carefully. I was much impressed with your statement.

I would just ask two questions, thanks to the courtesy of the Senator from Idaho.

First, with respect to these first two committees, how is the decision made? Is it by majority, or is it a decision by the chairman finally? Also with respect to the third committee you chair.

Mr. SHILLITO. To be honest with you, Senator, we have not spelled this out. I would say this, that there is little doubt about the fact that if we have any misunderstanding or disagreements, lack of unanimity, that it will end up going to the Secretary of Defense. That is the way this will work.

Senator SYMINGTON. Thank you. My next question, Will the proposed new F-15 contract be a different contract than previously announced?

Mr. SHILLITO. Senator, this is now in the process of going through very intensive review. I would think I would be out of line to suggest that it would be different. It is being given a lot of consideration now, Senator.

Senator SYMINGTON. I respect that.

My final question, Would that contract be similar to the F-14 contract, or does the F-14 contract stand?

Mr. SHILLITO. The F-14 contract stands as it is now, Senator. There will be probably some similarities between the two contracts, although these are the kinds of things that we are exploring in our analysis prior to releasing.

Senator SYMINGTON. Some of the very constructive things that have been brought out here would seem to apply to the past as well as to the future. I would hope that any contracts in the general field would be comparable to the point of similarity so that we could avoid in the future some of the things you are apparently so anxious to avoid based on your statement.

Mr. SHILLITO. Senator, you are so right. We have had a flood of contractual innovations and variations, and a number of people tie all these things to deficiencies in the contractual environment, and really this is often somewhat secondary. But you are correct, sir. There have been deficiencies in regard to continuity in many of our contracts.

Senator SYMINGTON. I thank the Senator for his courtesy.

Chairman PROXMIRE. Senator Jordan?

Senator JORDAN. Just one or two questions.

What is your opinion of the value of the incentive contract system? It was set up initially, I believe, with the idea of inducing people to be more realistic in their initial cost estimates, with the idea that there would be some reward to them if they stayed within the ceiling. Has it worked?

Mr. SHILLITO. Senator, I am sure that we would agree that the objectives in an incentive contract are sound—the motivations and so forth. The intent behind the incentive contracts is sound. There have been a number of occasions when, due to the myriad of things that are weighted, the interdependency of these things, that we have had some problems with regard to some incentive contracts. But at the same time I think it is very important that we attempt to do a contracting job that will bring about the motivations that we are concerned with. I have a meeting this afternoon, for example, to go into some detail on this whole matter of incentive contracting. We have several studies in process now as to how we can do a better job with incentive contracting. I have heard no one quarrel with our objectives. There are a number of people that have quarreled with those variations and deviations that were touched on by Senator Symington in his suggestions that we maintain good, sound contracting continuity. But the motivations and the objectives are not quarreled with.

Senator JORDAN. Thank you.

Chairman PROXMIER. Mr. Moorhead?

Representative MOORHEAD. Thank you, Mr. Chairman.

Mr. Secretary, you have used the word "overoptimism" on a number of occasions today. I think the key is in your testimony—your objective is to insist that the contractor remain within established ceilings or absorb any overrun.

I think that after the word goes out and a few contractors are held to this and do suffer on losses, you are going to find that they will not be overoptimistic. I think that the climate of the dealing, as Mr. Rule testified to yesterday, was not sufficiently arm's length, and that the contractors were justified in submitting overoptimistic figures because they weren't held as strictly to them.

Mr. SHILLITO. Certainly that is our intent, Mr. Congressman.

As you know, it is interesting to note on this point, there is a tendency to feel that our contractors don't suffer losses. I noted in the Renegotiation Board data this last year—I may be incorrect on these numbers, and I will correct them if I may later—that something like 16 percent of all companies making submittals to the Renegotiation Board this last year reported losses. Now, this is lower than the national average, of course. Our contractors do periodically suffer losses. But you are correct, in some of these major programs losses are going to have to be inflicted on companies in order to avoid some of these overoptimisms. We are going to have to watch this change system again, I keep emphasizing that.

(In reference to the above the following was subsequently supplied:)

Of the 4,027 nonagent contractors whose filings were reviewed in fiscal 1968, 3,351, with renegotiable sales of \$35.3 billion, showed a profit of \$1.9 billion, and 676, with renegotiable sales of \$3.5 billion, showed a loss of \$215 million.

Representative MOORHEAD. There seems to be in some systems almost a reverse incentive. In the C5A case after the first exceeded a certain amount, if the company could be sure that there would be an exercise of the right to have the second run, it was to their advantage to have the costing even higher on the first one. And this disturbs me.

Mr. SHILLITO. I assure you that was not the intent of that contract, even though theoretically it could lead to that conclusion.

Representative MOORHEAD. Yesterday we had testimony about the Minuteman II and the unreliability of the guidance system. As I understand it, the anticipated time between overhauls was less than half what the original specifications called for, is that correct, sir?

Mr. SHILLITO. I can't answer that for sure, Mr. Moorhead, but I will make it a point to find out for you. I am sure that we are pushing the performance state of the art, and the MTBF numbers were undoubtedly greater than might have been the case on previous systems. Of course, this sometimes has something to do with our inability to meet these specifications. But I will check that out.

Representative MOORHEAD. I think for the record we need to make sure that I understand the mean time between failure.

Mr. SHILLITO. Yes, sir.

Representative MOORHEAD. To keep the Minuteman up to scheduled performance you would have to buy more guidance systems—

Mr. SHILLITO. Either that, sir, or correct the deficiencies in the guidance system. I have a hunch and this is more often than not the case. Some simple part like a transducer, resistor, or whatever it might be, and that is the area you find yourself having to modify in order to bring about improved MTBF. I think this is what we would probably concentrate on in correcting this problem. If you will agree, sir, I will look into this.

(The material which follows was later supplied by the Department :)

It is true that in its early operational life Minuteman II did experience low reliability in the G&C units. While some additional sets (55 out of a total of 756 sets) were bought because of the reliability problem, this was done as insurance against a continued reliability problem which could keep missiles off alert for lack of G&C spares. However, the Air Force's primary effort was to improve the reliability and therefore attack the basic problem. This was done by in-line production improvements and retrofit changes to sets already in the field. This program was very successful. The original goal for Mean Time Between Failure (MTBF) for Minuteman II G&C sets was very high.¹ The original units fielded in 1966 exhibited an MTBF of only 20% of this goal. The operational Minuteman IIs show a MTBF 2½ times better than earlier. The latest sets produced within the past year are essentially achieving the original goal. The reliability improvement program has contained the reliability problems and we are able to maintain a very high percentage of the Minuteman fleet on strategic alert.

Representative MOORHEAD. But until you could find, isolate and cure whatever little gadget caused it, if you wanted to keep operational a certain number of Minutemen you would have to buy more guidance systems.

Mr. SHILLITO. You would either have to buy more or increase your maintenance people and do a greater maintenance job to keep those equipments maintained, that is correct, sir. It would cost more money.

Representative MOORHEAD. But if you went the route of buying more guidance systems, the results would be, as I look at it, that those contractors that built components that lived up to specifications only got

¹ Specific data on MTBF is classified in the interests on national security.

one sale, whereas the contractor that built a defective system that had to have more to supply it, he got more sales?

Mr. SHILLITO. I have not looked at this particular program. I feel sure that we would have a time situation—that we would not have time to apply for a new guidance system. I am also inclined to think that in most of these kind of contracts that the contractor would suffer as far as total profits are concerned were this to be the case. But frankly, Mr. Congressman, I can't give you the exact details on it.

Representative MOORHEAD. The June 8 edition of the *Washington Star* reported again about the problems in the guidance systems of Minuteman II, the problem of electromagnetic propagation in flight. What I would like to know, sir, is; is this the same guidance system manufactured by Autonetics that gave the trouble about the mean time between failure?

Mr. SHILLITO. I think it is, Mr. Moorhead. I will correct the record if that is not right.

(Secretary Shillito subsequently furnished the following:)

MINUTEMAN II

In certain cases the guidance systems in the early Minuteman II missiles could be affected by some electromagnetic propagation. This was true because at the time of design we had insufficient information about this threat to specify complete prevention methods. Later, when our understanding was better, the Air Force directed Autonetics (the G&C manufacturer) to make certain changes which improved the missile's survivability.

Representative MOORHEAD. Thank you, Mr. Secretary.

Mr. Secretary, can you tell us how many nuclear powered aircraft carriers and nuclear powered guided-missile frigates the Navy intends to build at this time?

Mr. SHILLITO. No, sir; I can't tell you that, Mr. Moorhead.

Representative MOORHEAD. Can you give us an analysis of why you go to the cost effectiveness of nuclear as opposed to conventional powered carriers?

Mr. SHILLITO. No, sir. I feel that others will be more qualified to give you that information than I will, sir.

Representative MOORHEAD. With respect to the AMSA on the flow chart, where is the AMSA?

Mr. SHILLITO. Right now the AMSA is in the concept formulation stage, Congressman Moorhead.

Representative MOORHEAD. Will there be contract definition?

Mr. SHILLITO. Yes, sir. It is conceivable that we may be talking about a program that will be sufficiently or could be sufficiently well defined that we would not need to go through the normal procedural contract definition flow. But this again is a depiction as to that which happens. All the things we are talking about relative to contract definition and knowing what we are talking about prior to moving into full-scale development would be a part of the overall AMSA program, of course. But it is in concept formulation right now.

Chairman PROXMIRE. Would the Congressman yield to that point?

Representative MOORHEAD. Yes.

Senator PROXMIRE. I have a letter on that from Mr. Foster in reply

to a letter I wrote the Defense Department, in which I asked for their plans for AMSA. And he says this:

We do not intend to pursue contract definition as outlined in DOD Exhibit 3220.9. The past three and one half years of advance development on AMSA has provided technical data which is normally part of the contract on a normal contract definition phase. Instead we propose to proceed on engineering development which would normally follow contract definition phase but without a production commitment at this time. However, by contract award we will have defined a contract on which this development will be based.

Mr. SHILLITO. The point being that so much of that we are talking about having been accomplished during contract definition is or will be accomplished as we move through this time frame on AMSA, and go into full-scale development. I had not read Dr. Foster's letter.

Again, the primary responsibility for major weapons systems up through development is under Dr. Foster.

Representative MOORHEAD. I understand that the F-4 has now cost \$3½ million each, is that correct?

Mr. SHILLITO. That is approximately right, to my knowledge.

Representative MOORHEAD. And the potential enemy plane that this is intended to counter would be the MIG 21, is that correct?

Mr. SHILLITO. I can't answer that—to the best of my knowledge that is correct, sir, but this is not my area of responsibility.

Representative MOORHEAD. I was told that if we attempted to produce the Mig-21 it would cost us approximately \$1 million. Would that be a good approximation?

Mr. SHILLITO. To produce the Mig-21 exactly the way the Russians have it now produced—again, I have not been privy to the cost estimating that you are referring to on the Mig-21. I understand, though, that there have been omitted from the overall Mig-21 a lot of the sophistication we have talked about in some of our statements here this morning. It undoubtedly could be produced for significantly less without these fringes that we find ourselves putting into some of our equipment.

Representative MOORHEAD. What you are saying, then, is that you think we have got a lot better plane in the F-4 than they have in the Mig-21?

Mr. SHILLITO. This would be my understanding, yes sir. We have a number of safety features as far as the pilots are concerned, and quite a few of these kinds of things that naturally we build into them.

Representative MOORHEAD. Could you supply for the record the anticipated cost per unit of the F-14 and F-15, would that be possible?

Mr. SHILLITO. Yes, sir. I don't think there is any problem on the F-14. But the F-15 is of course still in the process of contract definition, and we are still going through quite an analysis of that particular program. I don't think I can supply that.

(Subsequent to the hearing the following was supplied:)

F-14 A/B

The unit cost for the F-14 A/B aircraft based on 463 units priced out in dollars escalated at 4% compounded annually is estimated at \$11.7 million plus development costs. The estimated unit cost consists of \$8.5 million for flyaway, \$1.0 million for support, and \$2.2 million for spares.

F-15

The F-15 is still in the process of contract definition thus precluding definitive anticipatory cost estimates. However, the Department of the Air Force has set

a design objective for an aircraft costing between \$5 and \$7 million each. This objective is based upon (i) costs in terms of 1968 dollars, (ii) a production quantity of 500-600 aircraft, and (iii) costs relating to the flyaway aircraft only and not including the associated cost of spares, ground equipment, data, etc.

Representative MOORHEAD. Thank you, Mr. Chairman.

Chairman PROXMIRE. Congressman Conable?

Representative CONABLE. Thank you, Mr. Chairman.

Mr. Shillito, you put great stress in your statement on what a critical period the production decision represents.

Mr. SHILLITO. Yes, sir.

Representative CONABLE. And it is critical because if you do it prematurely you are likely to be in production with not completely developed hardware, and therefore you are likely to have a lot of waste, isn't that correct?

Mr. SHILLITO. That is right, sir.

Representative CONABLE. Is time the big factor there? Is it wasteful of time to wait until you have a completely developed system before you start producing?

Mr. SHILLITO. This is part of the problem, Mr. Conable. But you know the thing that makes it additionally awkward is that quite often as we move into some of these major programs, back in here (pointing to chart) we will be thinking in terms of when we are actually going to go operational on this major weapons system. So time does become critical. We are suggesting that in addition to the benchmarks that I have talked about and meeting these benchmarks, that production release should not take place unless we are satisfied with the benchmarks, even at the expense of slipping operation dates.

Now, if things happen back in here (pointing to chart) deficiencies develop, if two totally known boxes when married together develop into an unknown situation—this often becomes the case—we will meet these benchmarks before we commit ourselves to these operational dates. This is what we are talking about. So time does become a problem, yes, sir.

Representative CONABLE. In other words, you can very much reduce the chances of waste if you slow down the process to the point where you will permit complete development before you go into production?

Mr. SHILLITO. That is somewhat correct. But you never end up with a situation where you can say, development is totally complete before you go into production. It is a situation where you can have all the design completed, you can know exactly what you are talking about, you can have breadboard models, you can have prototypes, and now you are going to put this thing into production, and you run into problems you haven't foreseen, tooling problems or what have you. But we can do more than we have in the past in working out these unknowns. Historically again this line (pointing to chart) has been like this, and we have been winding up an awful lot of development while we have moved off and moved into too much production too early.

Representative CONABLE. I wonder if because of our failure to develop new systems, new weapons systems in the past, we are going to be even under greater pressure in the future than we have been, and if this isn't likely to be an increasingly difficult moment, this moment of production decision.

Mr. SHILLITO. Your point being that our need may dictate earlier availability of these things.

Representative CONABLE. Yes.

Mr. SHILLITO. That is an awfully good point, because it is not inconceivable that many people will suggest that benchmarking in here, and then release to production after accomplishment of development may cause this entire spectrum to expand. We will get some of these kinds of comments. You will also get a number of people who will say, if we do this job right (pointing to chart) and there is also a tradeoff system, we will get into operation just as soon as otherwise—and we will get in production with a better system.

Representative MOORHEAD. It is true, isn't it, that some of the most flagrant examples of waste have actually been the result of premature production decisions?

Mr. SHILLITO. Yes, sir.

Representative CONABLE. I was interested in your statement and the emphasis you put on the Renegotiation Board figures. I wonder if this indicates that you are putting an undue reliance on the Renegotiation Board in helping to keep profits down. It seems to me that the Renegotiation Board has, historically anyway, not been expanding to meet the expanding defense costs, and as a result, they are rather overworked, and they tend to have comparatively limited capability in audit and in overseeing a very broad defense spectrum now. And I wondered if we really can afford to put very great reliance in the Renegotiation Board at this stage.

Mr. SHILLITO. Mr. Conable, my reason for making this statement was basically this. Your committee has suggested that this whole matter should be gone into in some detail, and that we need more information with regard to profits.

Knowing more about this environment we think is sound.

I didn't analyze what impracticality this would have if any as far as the Renegotiation Board is concerned. But if we take a look at the numbers again that the Renegotiation Board does have coming into them right now—we are talking about, as I recall, \$38.8 billion worth of renegotiable sales. Some of this data may have some deficiencies in it. I won't quarrel with that. Some date is profit on sales. But when we look at this percentage of the universe it would appear that we should give consideration to how this data might be modified to make it more useful for our current problem—that is if we were really interested in attempting to know more about this profit environment. That is my only point.

Representative CONABLE. Let's consider the question of competitive bid, which amounts to, I understand, roughly 11 percent now of the total contract procurement. Is the Defense Department studying ways in which to get major subsystems out competitively, whether or not the complexity of the total system makes it difficult to find two bidders? Are we trying to find ways of subcontracting major components of a very complex system? And do you think this is likely to have any substantial impact on the total amount of competitive bidding that is done on defense systems?

Mr. SHILLITO. Mr. Conable, I would like to break your question into several parts. You refer to competition as being 11 percent. This is formally advertised competition. We would be glad to give the committee a complete depiction of our competitive statistics. But roughly total competition, if you were to include that which goes to

companies after having been competed initially, approximates 60 percent. We can find, depending upon how you look at it, some fault with some of these numbers. The other 40 percent of course ties in to some of our major systems, in to ordnance items, ammunition, and so forth. We do have a directive out, and further instructions will follow shortly, that refers to a logistic performance measurement system that is just getting kicked off. One of the first items that we are going to be concerned with deals with competition, specifically, formal advertising.

Concerning "breakout"—this presents some problems; moving into subsystems and pulling some of these things out of major programs. I would like to hope that as our development concept papers mature, as the Weapons Review Council matures, we will be able to take those areas, particularly involving significant areas of unknowns, and break these things out of our total weapons system. I would like to hope for this, not so much for the competitive opportunities, but to enable our resolving the unknowns.

Mr. Malloy has a man on his staff who is concerned almost continuously with "breakout"—particularly with high-valued spares and components of major end items that we go to the prime supplier for initially.

We regularly concern ourselves with these things, after we have made the major weapons system buy. We will be looking at these things as well as the unknowns and uncertainties in major acquisitions.

We have one big problem which I am sure you appreciate, the problem of responsibility. The more we supply to a major contractor, the more occasion that we have for dropping the ball on particular items of Government-furnished equipment. We have to tie this firm down to that major system, to insure that the major weapon functions the way we want it to function. It becomes essential that the components, the engines, the bits and pieces are integrated in a way that allows that major weapons system to function the way we have to have it function.

Third, the responsibility has to be weighed in total. But we do intend to and will be giving much more attention to this, sir.

Representative CONABLE. I understand your comments about responsibility. I would like to ask you also, if it were possible, and if you were in the future to slow down this moment of decision on production, if that wouldn't make possible a good deal more competitive bidding also, because you would have then a prototype on which people would be more likely to be able to bid, and you wouldn't need to worry about concurrent development and production.

Mr. SHILLITO. On many items; yes, sir. Of course, as we move across this spectrum, it is not inconceivable, as I have touched on in my statement, that in some of these areas involving the greater unknowns that we actually maintain development in some of these areas to bring about the kind of competition that you have in mind; yes, sir.

Representative CONABLE. It seems to me, Mr. Chairman, that in this area, as in other areas of Government, we have the problem of trying to get on a longer term basis, because one of the great incidents of waste is trying to move too fast. But, of course, you have to move too fast if you are moving under crisis, if you move from short-term crisis, to short-term crisis, inevitably there is going to be waste, not only for the Defense Department but for the Government.

So this has got to be one of the missions of the administration and the Government generally, to try to find the time to make wise decisions and to plan them, and to, therefore, reduce the waste implicit in short-term crisis movements of one sort or other.

Mr. SHILLITO. Yes, sir.

Chairman PROXMIRE. You, of course, also have the technological problems. If you go too slowly your technology may move so fast that your weapons become obsolete by the time you get it produced.

Mr. SHILLITO. That is awfully important. We just can't overemphasize that importance.

Obsolescence is a very, very serious subject. You have to consider all these things.

Representative CONABLE. But sometimes I think we overemphasize the speed of movement of the technology to the point where we never get anything in production.

Chairman PROXMIRE. I would like to ask you, Mr. Shillito, about that very helpful diagram which you have made for us.

It shows one channel entering the concept formulation stage, labeled "Operational Need," and another channel labeled "Technical Inputs." I take it that the upper channel represents the judgments and plans of the military departments, that is military planners, concerning weapons systems requirements to meet certain stipulated objectives, for example, the two-major-war and one-minor-war capability objectives. The channel coming in from the bottom, I take it, represents the development of new technologies which could be applied in the construction of the weapons system desired by military planners. These two notions, then, interact in the formulation of the weapons system concept which is the first stage in its development and ultimately, production.

It seems to me that this process is precisely what Charles Schultze was referring to when he testified before us last week. In his statement, he argued that the interaction between continually advancing technology and the propensity of military planners to prepare against almost every conceivable contingency or risk inexorably drive the military budget up. I would like to quote from Schultze's testimony:

If military technology were standing still, this propensity to cover remote contingencies might lead to a large military budget, but not to a rapidly expanding one. As technology continually advances, however, two developments occur. One, as we learn about new technology, we project it forward into the Soviet arsenal, thereby creating new potential contingencies to be covered by our own forces. Two, the new technology raises the possibility of designing weapons systems to guard against contingencies which it had not been possible to protect against previously.

Continually advancing technology and the risk aversion of military planners, therefore combine to produce ever more complex and expensive weapons systems and ever more contingencies to guard against.

Would you comment concerning the interaction of these forces and the concept formulation in regard to that?

Mr. SHILLITO. I believe, Mr. Chairman, that there are a number of people that could comment much more effectively on this matter than

I can. There is this interrelationship, and it does have an impact. But I think we should recognize that when we are looking at this operational need—

Chairman PROXMIRE. Who are these people who would be able to comment more effectively?

Mr. SHILLITO. Dr. Foster, for example, would be able to give you some thoughts in this area that would be much more meaningful than mine.

But when we look at the operational need of this, I think we have to realize that it encompasses such things as our national security objectives, the enemy threat, and our international commitments. All these things have to be taken into account as the operational need develops. There is a flow back. The attachment to my statement shows and interaction here, if you will note.

Chairman PROXMIRE. I would like to ask you about getting more information for the Congress. We recommended in our report of this subcommittee on procurements two actions I would like to call to your attention. The first, "the Defense Department should collect complete data"—this is a unanimous recommendation of all the members of the committee who took part in it, this was a Republican, Democratic, House and Senate, so there was no dissent—

The Defense Department should collect complete ongoing data on subcontracting including total amount of subcontracts awarded, competitive and negotiated awards, subcontract profits, type of work subcontracted out, the relationship between the prime contractor and the subcontractors, the amount of business done by the subcontractor for the prime contractor, and compliance with the Truth-in-Negotiations Act. GAO should have access to this information and should make it available to Congress on an ongoing basis.

The Defense Department should require contractors to maintain books and records on firm-fixed-price contracts showing the costs of manufacturing all components in accordance with uniform accounting standards.

Now, how about those two recommendations, which, as I say, we unanimously agreed?

Mr. SHILLITO. Well, No. 1, we do have an awful lot of information right now on some of our subcontract data.

Chairman PROXMIRE. Does Congress have them? Are they available to GAO?

Mr. SHILLITO. And there is no reason why the information that we have couldn't be available to Congress.

Chairman PROXMIRE. In November we asked for this and it wasn't available, they told us they didn't have it.

Mr. SHILLITO. Well, there were an awful lot of things we didn't have. As far as I am concerned, there is no reason why this can't be made available to the Congress and the GAO.

(The following table was subsequently supplied :)

The statistical data with respect to subcontracting is set forth below. This data is published in Defense publication entitled, "Military Prime Contract Awards and Subcontract Payments or Commitments." We will provide the Subcommittee with a complete explanation of the policies and procedures followed in control of subcontract costs incident to our response to the Committee report recommendations.

DEFENSE SMALL BUSINESS SUBCONTRACTING PROGRAM (BY FISCAL YEAR)

[Dollar amounts in millions]

| | 1960 | 1961 | 1962 | 1963 | 1964 | 1965 | 1966 | 1967 | 1968 |
|--|---------|---------|----------|----------|---------|---------|----------|----------|-----------------------|
| 1. Number of large contractors reporting..... | 298 | 309 | 378 | 453 | 617 | 601 | 735 | 816 | ² 879 |
| 2. Military subcontracts ¹ | \$9,666 | \$9,407 | \$10,560 | \$11,411 | \$9,278 | \$8,518 | \$12,163 | \$15,472 | ² \$15,207 |
| (a) To small business concerns..... | 3,587 | 3,495 | 4,011 | 4,341 | 3,629 | 3,534 | 5,102 | 6,697 | ² 6,485 |
| (b) To other business concerns..... | 6,079 | 5,912 | 6,549 | 7,070 | 5,649 | 4,984 | 7,061 | 8,775 | ² 8,722 |
| 3. Percent of total to small business concerns (line 2a divided by line 2)..... | 37.1 | 37.2 | 38.0 | 38.0 | 39.1 | 41.5 | 41.9 | 43.3 | 42.6 |

¹ Represents commitments starting with fiscal year 1964 and payments for prior years.

² Preliminary.

Chairman PROXMIRE. It would be very helpful.

I would like to ask you with reference to the development concept paper which you talked about in your statement. Here again this would be very helpful information for the Congress to have. I understand it sets forth a projected cost as compared with the ongoing cost that I have talked about, and it sets forth certain thresholds having to do with operational performance, maximum weight growth, costs, permitted cost overruns, and so on. This is precisely what we would like to secure and have it to the greatest extent possible on an open basis.

Mr. SHILLITO. Mr. Chairman, I would like to make one statement here. The development concept papers on balance are very highly classified. The cost portion of them I would think would be such that it would tie into the request that has been placed on the Department by a number of congressional committees. There is no reason, I would think, why this kind of information, the projections and that which is actually happening, should not be available to Congress.

This is certainly our intent. We are working in this direction.

Chairman PROXMIRE. I hope you are also working in the direction of trying where possible to consider very carefully whether the classification is necessary. In some cases, I am sure it is, but in many cases in the past obviously it has not been.

Mr. SHILLITO. Yes. There is a tendency to overdo this. You are right, sir.

Chairman PROXMIRE. When I wrote about the AMSA bomber I got back a letter that was classified as secret. And I couldn't accept it, because I wanted to use it publicly. And I sent it back and said I couldn't open the letter and wouldn't take it. I then received a completely responsive letter giving me all of what I requested and much of the kind of things that we would be getting if we got the paper, the development concept paper to which I referred.

As you know, I wrote to you on May 14 asking for cost and other data for a number of programs which I listed. In your response of May 23, you divided the programs into two categories, current and completed, and you indicated that the information requested would be developed for the current programs. You also indicated that the information would be provided to this subcommittee in the near future. I wonder if you would please amplify your response to my request and state exactly when the information will be available and when this subcommittee will have it?

Mr. SHILLITO. Yes, Mr. Chairman. The information to my knowledge is scheduled in roughly 30 days.

Is that correct, Mr. Brazier?

Mr. BRAZIER. The information is tied basically to the same character of information that has been requested by the Senate Armed Services Committee. We have preliminary reports in from the services that are being reviewed in some detail now. Since this is the first time this character of detail has been requested, we find it a little difficult to correlate some parts of the reports. I would say within the next 30 days this should be resolved, and certainly we are attempting to do it on a current basis.

Chairman PROXMIRE. The staff tells me that this is what you said in your letter of May 23, 30 days.

Mr. SHILLITO. Yes, sir.

Chairman PROXMIRE. So I assume this is some extension. At any rate, 30 days from now you expect to have it.

I would like to ask one other thing which concerns me very much. Mr. Conable in some very able questioning the other day brought out the fact that although we do have a new Secretary of Defense and Under Secretary of Defense and some other Assistant Secretaries that are new, that we still have basically the same Pentagon crowd that we had before. And I don't mean to be at all disrespectful, because I think you gentlemen are extraordinarily able, and you work very long hours, and you contributed greatly to this country's defense. At the same time I think there is a kind of notion developed which we ought to challenge here.

I am bothered, for instance, by the implication of your statement and comments that major radical improvements in the performance of the Defense Department in its procurement activities will only occur after a prolonged period of study and the installation of improved management techniques. For over a decade, now, we have been hearing this same sort of presentation from representatives of the Department of Defense. Studies seem to be made, one upon the other, and management techniques and greater analysis seem to have been so proliferated that perhaps they add to, rather than decrease, the level of efficiency in the operation. Yet we see no tangible improvements in costs and performance.

Many of the witnesses before this committee have argued that the problem is far more deep-seated than simply inadequate management techniques. These people argue that the very environment within which procurement officers and contractors work and, indeed, the relationships between these two automatically generate a set of forces which subvert any management system.

You have some brilliant people proposing new management systems, and I think people with the strongest motivation, and the best intent. And yet these management systems don't seem to have accomplished any real improvements, no matter how ingenious and how well designed.

How do you appraise these assertions concerning the environment and institutional arrangements which permeate the style of life in the Defense Department.

Mr. SHILLITO. I will break that up into several pieces, if I may, Mr. Chairman.

No. 1, as you know, I had not been in the Defense Department too many months prior to staying on with the new Secretary and Deputy Secretary. I came in under Secretary Clifford. I have to say, too, that my wife also wondered why I stayed on, and I sometimes feel the same way. But there has been a very strong and very sound desire brought into this environment by both Mr. Laird and Mr. Packard to do everything that we possibly can do to bring about every conceivable improvement. About half of our Assistant Secretaries, as I recall, are new.

About half of them are people who have stayed one, Mr. Foster, Mr. Moot—

Chairman PROXMIRE. Three of the seven Assistant Secretaries are new and four are people who have been there before?

Mr. SHILLITO. Yes; that is about right.

But there is a very decided intent to bring about improvement. There is just no question about this.

Now, let's talk about improvements—let's talk about management systems for a moment, if we may. I touched on this briefly a little while ago. I don't mean to suggest that our management systems people are cultists, but sometimes these things can be. Improved management systems are vital in this environment, there is no question about it. We do have to be practical about them as far as those that will do the job for us that has to be done. We can get so wrapped up in management systems, which is something which did almost happen at one point to the Department of Defense, that we will spend more time in designing and worrying with the management systems than doing the job which has to be done. This is something which we have to be concerned about.

At one point, as I recall, we had something like 300 and some odd different management systems, many of which were overlapping. I remember one instance looking at one contractor's operations in which he had eight different management systems involved in that which he was concerned with, a lot of it caused by us, which certainly is inefficiency on our part.

Now, improvements come slow in spite of the fact that we would like this not to be the case. We would like to be able to sit down in front of you today and say, "Mr. Chairman, gentlemen, everything is great. We have worked out all the problems."

But we are looking at a cycle that may run 5, 6, or 7 years in a technological exploding environment. These improvements come slow.

Mr. Chairman, if I were to think about this improvement cycle in this environment just a little bit, I might say that I can recall some awareness of the problems that we are facing today, going back even into the mid-1950's and the late 1950's.

In fact, if you were to look at the major things that have taken place since the middle and late 1950's, you will see even then a number of people recognized the problems that we were going to have to face in the middle of this technological explosion.

Things that started out initially as major systems, phasing groups, came into being in the middle and late 1950's. The overall program management concept came into being. Some of the management information systems came into being that we have been building on ever since then.

The kind of system that led to program management and to the management of our Polaris program came into being. In fact, as I recall, even the establishment of research and engineering came into being as a separate entity. D.D.R. & E., as I recall, was formed in something like 1957 or 1959.

But all these things were brought about by people who were aware then of the potential problems and could see this thing in front of us. Continued improvements are going to have to be brought about—and we will be bringing them about. But they just cannot happen overnight in spite of the fact that we would wish very much that they could.

Chairman PROXMIRE. I understand that. But I must say, in view of the record—and I just can't view the record as anything but disgraceful, the enormous cost overruns consistently, the record of inefficiency and incompetence in our procurement program—which, I say,

isn't a partisan matter at all, the Republicans and Democrats on this subcommittee agreed. And other committees have cited it. The press has been critical of it.

It seems to me that it takes something more than saying, "stay with us a little further, we are going to continue to improve, we have some ideas that will take some time, these things don't happen overnight." I think that we must have a drastic change, the kind of change which this subcommittee recommended—and I think that is only a beginning—and frankly, the kind of change which some of the witnesses who appeared and are going to appear before this committee have recommended. I think it is far, far more serious than the Pentagon seems to think it is so far.

Mr. SHILLITO. We feel it is very serious.

Chairman PROXMIRE. I know you do. But I do wish that there was more of a sense of real urgency. I think you are an extremely capable and competent man, and this isn't at all personal, of course. But I just think that, in general, the operations in the Pentagon over the last 10 or 15 years have been bad, inefficient, incompetent, wasteful, and, frankly, I don't see any indication that they are going to change.

Mr. SHILLITO. Mr. Chairman, what would you recommend that we do to bring about the kind of improvement that you are talking about?

Chairman PROXMIRE. Well, we have made a whole series of recommendations. And I would like to call your attention to the recommendations that are going to be made in the next hour by the next witness, who is a man who serves in the Pentagon. And also the kind of recommendations that were made yesterday by Gordon Rule, that we stop playing games, that we crack down on the contractors when they fail to produce, as Mr. Moorhead has indicated, that we simply hold their feet to the fire, and if they can't meet their contract, they simply have a cancellation which may result in a serious loss on their part.

Mr. Charles told us that not one single contractor in his judgment on the basis of his experience has ever lost money in any contract he had to deal with, major defense contract.

With all the mistakes that have been made, and that have been admitted, this just indicates that there isn't any real discipline. And I suppose the basic decision is one that Congress has to make, and that is, to cut the military budget so that you have to make these choices and cut it sharply.

That is not a recommendation for you, obviously, it is a recommendation that some of us are making to our colleagues.

Mr. SHILLITO. I realize that.

I would make one comment, though. I agree with your objectives, Mr. Chairman. Of course, I guess I have seen this environment from a number of sides of the coin. We do have occasions when companies do lose money. In fact, as I mentioned, I guess it was in 1967, or earlier, we looked at something like 36—there was no logical statistical sample involved—something like 36 programs in which \$350 million—about an average of \$10 million per program—was lost. But, again, these weren't audited. So it really statistically doesn't prove much. But, again, we agree with your objectives.

Chairman PROXMIRE. Mr. Moorhead?

Representative MOORHEAD. Thank you.

I have some brief questions, and then some I would like to submit in writing for the record.

Mr. Secretary, the chairman mentioned before this committee that no major defense contractor ever lost any money, and that was also his testimony before a House subcommittee. Mr. Rule testified that there was an Assistant Secretary who believed that a defense contractor never should lose money in a defense contract. I would think that a change in that attitude would be very important.

Mr. SHILLITO. There is no question about that.

Representative MOORHEAD. I realize that there are situations that can develop where a very important defense contractor could be honestly in a real bind, where a catastrophic loss would be suffered. And I have suspected, though I can't, of course, establish it, that the change order technique or some other thing has been used to help out or maintain capability in that situation. We passed Public Law 58-804 to take care of that situation. I wonder, sir, if you could supply for the record the number of times that law has been used to properly protect a contractor, which is an aboveboard way of doing it.

Mr. SHILLITO. I will attempt to supply that for the record, Mr. Congressman. I don't have the number at my fingertips.

(The table below was later furnished by the Department:)

The following tabulation displays the contractual actions pursuant to Public Law 85-804 enacted 28 August 1958 to facilitate the National Defense:

CONTRACTUAL ACTIONS PURSUANT TO PUBLIC LAW 85-804

[Dollar amounts in thousands]

| Calendar years | Actions approved | | | Actions denied | |
|-------------------------|------------------|------------------|-----------------|----------------|---------|
| | Number | Amount requested | Amount approved | Number | Amount |
| 1960 ¹ | 290 | \$19,656 | \$14,469 | 141 | \$6,668 |
| 1961..... | 229 | 6,655 | 4,990 | 109 | 7,108 |
| 1962..... | 242 | 11,260 | 8,824 | 119 | 31,422 |
| 1963..... | 241 | 6,106 | 3,904 | 113 | 13,753 |
| 1964..... | 239 | 4,503 | 3,245 | 120 | 14,680 |
| 1965..... | 287 | 10,741 | 5,989 | 81 | 6,464 |
| 1966..... | 336 | 8,156 | 6,688 | 88 | 2,288 |
| 1967..... | 347 | 5,879 | 4,098 | 116 | 12,476 |
| 1968..... | 342 | 5,165 | 2,870 | 93 | 12,053 |
| Total..... | 2,553 | 78,121 | 55,077 | 980 | 106,912 |

¹ Statistics for earlier years are not available.

Representative MOORHEAD. I wonder if you could supply for the record—remember, I was talking about the guidance system for Minuteman II—

Mr. SHILLITO. Yes, sir.

Representative MOORHEAD. Whether in fact extra guidance systems were purchased above the total number anticipated, and if so, how many.

Mr. SHILLITO. Very good, sir.

(The following was later received:)

MINUTEMAN II

We purchased 55 extra Guidance and Control sections above the total anticipated.

Representative MOORHEAD. And then I have a series of questions in writing which I will submit to you.

Mr. SHILLITO. Very good.

Representative MOORHEAD. Thank you, Mr. Chairman

(The questions submitted to Secretary Shillito and his subsequent answers follow:)

ANSWERS TO REPRESENTATIVE MOORHEAD'S QUESTIONS TO THE HONORABLE
BARRY J. SHILLITO

Question 1. What did the conventional powered carrier John F. Kennedy cost?

Answer 1. The cost of the *John F. Kennedy* is currently established at \$277.3M. (This is the cost shown in the backup data provided to the Congress at the time of the FY-70 Budget Review.) However, delay claims are pending which could increase this amount to over \$300M. These costs are in FY 1964 dollars. To achieve a basis of comparison with the cost of the *Nimitz*, a study was conducted to determine what the cost of the *John F. Kennedy* would be if that ship were constructed in the FY-67 program. It was concluded that the effects of inflation over the three year period (\$51M) and the added specification requirements (\$30M) placed on *Nimitz* that at the time of *Kennedy* were not required would increase the cost of a conventionally powered carrier of the *JFK* design to \$358M in the FY-67 program.

| | <i>Millions</i> |
|--|-----------------|
| <i>JFK</i> basic..... | \$277.3 |
| Inflation factor (inflating fiscal year 1964 dollar to 1967 dollar)..... | 51.0 |
| Fiscal year 1967 specification requirements..... | 30.0 |

| | |
|--|-------|
| <i>JFK</i> cost in fiscal year 1967 dollars with fiscal year 1967 requirements (not including pending delay claims)..... | 358.3 |
|--|-------|

If the claims pending are ruled in favor of the shipbuilder, the end cost of the *Kennedy* in FY 1967 could go to \$388.1 million.

| | |
|--|---------|
| <i>JFK</i> basic plus delay claims..... | \$307.1 |
| Inflation factor..... | 51.0 |
| Fiscal year 1967 specification requirements..... | 30.0 |

| | |
|---|-------|
| <i>JFK</i> adjusted estimated cost..... | 388.1 |
|---|-------|

Question 2. At the time it was decided to go ahead with that ship, around 1965, what did the Navy tell the Congress a nuclear powered carrier would cost?

Answer 2. In October 1963 when the Secretary of Defense decided to proceed with the construction of a conventionally powered attack carrier (*John F. Kennedy*), the Navy estimated end cost for that ship was \$280M. The Congress was informed that the Navy's estimate for a nuclear powered attack carrier constructed in the same shipbuilding program as the *JFK* was \$403M. This ship would have been a four reactor carrier somewhat larger than the conventionally powered *Kennedy* with a 50% greater fuel and aviation ordnance capacity. Also included in the \$403M end cost was \$32M for nuclear fuel—enough for seven years of fleet operations. (The cost of the *Kennedy* did not include any fuel costs.)

This 4-reactor CVAN design was subsequently superseded by the *Nimitz* (CVAN-68) design which utilizes a two-reactor nuclear propulsion being developed by the Atomic Energy Commission's Bettis Atomic Power Laboratory, Pittsburgh, Pennsylvania.

Question 3. What is the current estimate of the nuclear powered aircraft carrier?

Answer 3. The current end cost estimate from the *Nimitz* (CVAN-68) in the FY 1967 program is \$536.0M. This reduction from the previous estimate provided to Congress last year is due to a revision in the definition of end costing. During the past year the decision was made to delete the cost of outfitting material and post delivery corrections from the end cost of Navy ships being delivered subsequent to 1 July 1969. These costs, instead of being included in the end cost, which would not be obligated until prior to ship delivery, would instead be budgeted annually for obligation so as to provide the necessary funds in the year of ship delivery. As a result of this action, a total of \$8.2M for outfitting mate-

rial and post delivery charges have been deleted from the end cost of CVAN-68 to date, reducing its end cost to \$536.0M. This includes the initial nuclear fuel which is expected to provide at least 13 years of ship operations.

Question 4. Have there been any indications that the cost might exceed \$600 million?

Answer 4. There have been no indications that the cost of the *Nimitz* (CVAN-68) might exceed \$600M.

Question 5. Can you assure the Congress in writing that the cost will not exceed \$544 million?

Answer 5. No; the budgeted end cost estimate of *Nimitz* (CVAN-68) including \$8.2M for outfitting and post delivery costs is \$544.2M based on a Naval Ship Systems Command estimate prepared in August 1967. The shipbuilder's (Newport News Shipbuilding and Dry Dock Company) proposed target price for construction of the *Nimitz* is within normal negotiating range of the budget figure for the shipbuilding contract. The Navy has been analyzing the shipbuilder's proposal for construction of the *Nimitz* in depth for several months. This proposal is now in the process of being updated by the shipbuilder in compliance with Public Law 87-653, the "Truth-in-Negotiations Act." The Navy expects to be in negotiation with the shipbuilder in July and to reach a price agreement in September.

Until the contract is finally negotiated, it cannot be determined whether an adjustment will be required in the budget estimate. Further, the final total cost cannot be known until the ship is completed. A major factor over which the Navy has no control is the change in market prices for labor and materials as the economic environment of the United States changes, either pushing prices up or down or holding them steady over the building period of the ship. If this change is different than has been allowed in the budget, the estimated end cost will change accordingly. The Navy is exerting substantial management effort to insure that the *Nimitz* will be completed at minimum cost.

Question 6. Please provide in writing a detailed analysis of (a) the reasons for the additional costs, and (b) justification for spending that extra money in terms of increased effectiveness? Does the increased effectiveness permit us to have a smaller force of nuclear carriers? If so, how many fewer?

Answer 6 (a and b). The total cost of the ship is not known at this time and will not be determined until the contract is definitized. The Navy considers the \$544.2M budgeted cost estimate (\$536.0M estimated end cost + \$8.2M outfitting and post delivery charges) to be valid, and no additional costs over this figure are known at this time. Therefore, a discussion of any gain in effectiveness related to increased costs is not applicable.

It is recognized, however, that nuclear ships do cost more than conventional ships and the Navy has firmly concluded that this increase in cost is clearly justified by a more than equal increase in capability.

The Navy's recommendation for nuclear power in surface warships is based on the improvements in readiness, response, mobility, tactical flexibility, and survivability which derive from being independent of propulsion fuel logistic support. These improvements are important in all circumstances and could be decisive in many situations.

An essential consideration in the conduct of war is the supply of propulsion fuel for military vehicles of all types—land, sea, and air. The history of modern war is replete with examples in which the lack of propulsion fuel was a controlling factor and with examples of offensive operations which were restricted in scope and success by the inability of the logistic support forces to provide adequate propulsion fuel.

The vulnerability of our overseas logistic supply lines required to sustain Army, Air Force and Navy forces in combat is greater today than at any time in the past and is continuing to increase for the following reasons:

The increased threat of submarine attack because of the advent of nuclear powered submarines and improvements in conventional submarines.

The increased threat of air attack because of the increased range of aircraft and missiles and their improved ability to detect targets.

The amount of fuel which must be transported has increased because of the higher consumption rate of post-World War II military units.

Each tanker lost now has a many-fold greater impact because of the substitution of a smaller fleet of larger tankers for the large fleet of small tankers

used in World War II. Most tankers were then of 10,000 to 15,000 tons full load, the largest being about 25,000 tons. Presently, many tankers are over 100,000 tons and plans are being made to build tankers of 500,000 tons and larger.

As the number of nuclear submarines and air striking capabilities of our potential enemies increase, the difficulty of providing logistic support when supply lines to our combat forces are under attack will increase. A principal reason for developing nuclear power for surface warships is to reduce the logistic support required for our fighting forces.

The principal advantages afforded by nuclear propulsion to surface warships derive from their ability to steam at high speeds for unlimited distances without refueling. In the carrier, there are important additional benefits. Because the nuclear carrier does not have to carry black oil for propulsion, there is more room in the ship's hull for aviation fuel and other combat consumables. This gives the nuclear carrier greatly increased combat staying power compared to its conventional counterpart.

These two qualities give the CVAN a capability unmatched by any other tactical air system, sea-based or land-based. This is the ability to:

Respond immediately to a contingency beyond the range of emplaced U.S. forces without waiting for supporting units or the repositioning of logistic support,

Conduct combat operations while approaching the objective area,

Continue combat operations without support or replenishment for the period of time required to establish sea-based logistic support lines. If the threat to logistic supply lines is too great in the combat area, nuclear propulsion provides the capability to transit at high speed to and from distant and less vulnerable sources of ammunition, aviation fuel, and other supplies needed to continue in action.

The presently authorized force level is 15 attack carriers, plus one additional attack carrier for the duration of the war in Vietnam. This force level is based upon the world situation both today and projected into the immediate future, and upon our national strategy for the employment of our general purpose forces.

The third *Nimitz* class carrier is scheduled to join the fleet in 1976. At that time there will be four nuclear powered carriers operating in the Navy. If the force level were to remain constant at 15, the nuclear carriers would comprise less than one-third of the total carrier force, and support forces for the conventional segment of the carrier force would still be required.

Analysis has shown that *Nimitz* class carriers and their embarked air wings will be substantially more effective than the old carriers which they will replace in the carrier force. This increased capability is required to meet the Soviet threat which continues to grow in effectiveness. The *Essex* class carriers cannot operate many of the first line tactical aircraft in our current inventory, namely the F-4, A-6, RA-5C, and E-2. These *Essex* class ships cannot be further modified to accommodate the next generation of aircraft. At an age of more than 30 years, their growth potential is exhausted. As a consequence, these carriers and the aircraft they are capable of operating, cannot survive in the face of the projected threat.

The increased capability which we will realize in the *Nimitz* class, is required to meet the projected Communist threat, which is similarly increasing as a result of Soviet technology. The numbers of carriers required will continue to be a function of the amount of tactical air power required to carry out our national strategy.

Question 7. How much does a nuclear powered guided missile frigate now cost?

Answer 7. The current cost estimate for the DXGN in the FY 1970 program is \$222 million. It is to be noted that this is a lead ship cost estimate.

Question 8. How much did the Bainbridge and Truxtun nuclear powered frigates of the past cost?

Answer 8. *Bainbridge* cost \$155.6 million in 1959; *Truxtun* cost \$130.6 million in 1962.

Question 9. How much would a conventional powered guided missile frigate cost?

Answer 9. A conventionally powered guided missile frigate would cost on the order of \$60 million less than a comparably configured nuclear powered guided missile frigate. It should be noted that the cost of the nuclear powered frigate

includes sufficient nuclear fuel to operate the ship for about ten years. Fuel costs are not included in the acquisition costs of conventional ships.

Question 10. Please provide in writing a detailed analysis of the reasons for the increase between the conventional powered ship and the current nuclear powered ship and between the Bainbridge and the Truxtun and the current estimate. What is the justification in terms of increased effectiveness?

Answer 10. Since *Bainbridge* was the first DLGN her cost experience is not typical. The increase in cost between *Truxtun* and the current DXGN is largely attributed to:

Increased complexity.—The demands of modern warfare have led to increased complexity in each succeeding generation of a ship type. Tactical data systems based on computers and electronic warfare systems using more powerful jammers, signal detectors, and analyzers are examples of this increasing complexity. It is well to note that this complexity is dictated by an ever present requirement to be responsive to increases in the threat.

Increased costs of labor and materials.—There has been a general rise in the cost of labor and materials, and a resultant steady increase since 1962 (*Truxtun*) because complex equipments which make up the major part of the cost of combatant ships have experienced a much higher escalation than has been experienced in other portions of the national economy.

Increased quality control requirements and attention to life cycle costs.—As the emphasis on life cycle cost has increased, requirements in such areas as quality control, automation, maintenance planning, and documentation have been established. These requirements have increased acquisition costs by about 5% to 10%, but are more than offset by expected reductions in future operating and support costs.

Increased endurance.—*Truxtun* has an initial core life of about five years; DXGN has an initial core life of about ten years.

The difference in effectiveness between *Truxtun* and the new DXGN can be seen in the following areas:

Bainbridge and *Truxtun* represent basic designs begun in the 1950s and early 1960s. Technological advances, particularly in sensors and weapons systems have been incorporated into DXGN, making it much better able to cope with the threat of the 1970s. DXGN has two missile launchers of new design capable of firing either AAW or ASW missiles providing tactical flexibility not available in earlier frigates. DXGN has a totally integrated combat system, including a new threat reactive electronic warfare system, providing earlier warning, reduced reaction time and improved coordination and control. DXGN will be the most capable frigate designed to date against the cruise missile threat. Additionally, DXGN is the first frigate built from the keel up with the potential for rapid modernization, and has improved reliability and casualty mode operation in its combat system.

Question 11, part 1a. How many nuclear powered aircraft carriers does the Navy intend to build? What will total cost of this be?

Answer 11, part 1a. The approved Department of Defense program through FY 1971 provides for the construction of two CVANs in addition to the *Nimitz* (CVAN-68) which was authorized and funded by the Congress in FY 67 and is now under construction. A total of \$133M was appropriated for the second carrier in FY 1968 and FY 1969 for long lead time nuclear propulsion plant components, and \$377M is included in the Department of Defense FY 70 budget to complete funding of this carrier. Currently, \$522M is programmed in FY 1971 for the full funding of the third carrier of the *Nimitz* class. The total estimated cost therefore to build the currently approved program of three nuclear powered aircraft carriers is \$1.56B. This includes initial nuclear fuel expected to provide for at least 13 years of operation of each ship.

Question 11, part 1b. How many nuclear powered guided missile frigates does the Navy intend to build? What will the total cost be?

Answer to Question 11, part 1b. The approved program is for four guided missile frigates to be procured one a year commencing in FY 1970 at a Navy estimated cost of \$771.6 million. A long range ship construction program containing higher numbers and designed to modernize our aging Fleet has been prepared by the Navy and will be reviewed by the Secretary of Defense.

Question 11, part 2. Why do we need a force of 15 carriers?

Question 11, parts 3, 4 and 5. Why wouldn't 12 carriers do? Please provide a detailed written analysis of what the difference between 12 and 15 carriers permits us to do. Are the extra three carriers needed for Europe or Asia?

Question 11, part 6. In either case, why can't the job be done cheaper and as effectively and less vulnerably from land bases?

Question 11, part 7. Where are we likely to fight where we don't have adequate land bases?

Answers to Question 11, parts 2, 3, 4, 5, 6 and 7. It is very difficult to determine the precise division of effort between land-based and sea-based forces which will meet our worldwide commitments at the least cost. The program supported by the previous administration included 15 attack carriers. In this program approximately 58% of the tactical forces are Air Force aircraft which can only operate from land bases. About 27% are Navy aircraft which we only plan to operate from attack carriers. The remaining 15% are Marine aircraft which can be operated from either land bases or attack carriers. In response to a directive by the National Security Council to examine alternative General Purpose Force strategies, we are currently reassessing both the total requirement for tactical aircraft to meet each alternative strategy and the relative costs and effectiveness of different mixes of land-based and sea-based aircraft. Pending completion of this study, we are not recommending any major changes in the previous program.

Chairman PROXMIRE. Thank you very much, Mr. Secretary.

I think you have done a very responsive and helpful job. And we do appreciate it. And I didn't mean at all by this kind of questioning to be critical of you personally. I think you are a very competent man, and you have done extremely well.

Thank you.

Mr. SHILLITO. Thank you, Mr. Chairman.

Chairman PROXMIRE. And I, also, have some written questions that we would like you to answer when you correct your remarks.

(Chairman Proxmire's questions and Secretary Shillito's subsequent answers follow:)

DEPARTMENT OF DEFENSE RESPONSE TO QUESTIONS BY SUBCOMMITTEE ON ECONOMY
IN GOVERNMENT

Question No. 1. You have indicated that you would like to save money within weapons systems acquisition. On what programs do you expect to cut costs, by how much, and is there anything that this Committee can do to assist you in this admirable effort?

DOD response. It was stated in testimony before the Subcommittee, that, ". . . we are reviewing the entire logistic function and critically examining how it is being performed. We offer no panacea—we make no lofty promises or spectacular predictions. We pledge to do our very best to develop ways to improve the performance and effectiveness of the logistic function—and to do that job with the least possible expenditure of public funds." It was further stated that, "We will perform this function by careful scrutiny of every program to assure ourselves that each program is necessary and is being conducted as efficiently and economically as possible."

In the supplemental statement submitted for the record, we described the aspects involved in managing weapons systems acquisition and the decision process involved. We will make this process a thorough and viable management key in major system acquisitions.

We cannot foretell precisely what changes or revisions to existing policies and procedures may be appropriate in the acquisition process. It is, therefore, also not possible to anticipate or predict how and in what areas your Committee may be of assistance in solving the problems we face. However, should there be such an occasion, we are grateful for your offer and we will take the opportunity of calling upon you.

Question No. 2. In your statement you talk about performance measurement reporting against a planned work path. Have you implemented this on the C5-A program, and if so, what do the reports show as being the overrun on work done to date?

DOD response. The initial steps to effect implementation on the C-5A program have been taken. The Air Force Cost/Schedule Planning and Control System (C/SPCS) specification to provide performance measurement data was placed in the contract with Lockheed by supplement in January 1969. This specification will be applied on production runs A and B. This matter is presently being pursued with Lockheed and it is expected that an evaluation of the Company's internal management system to determine whether it satisfies the C/SPCS specification will begin within a month.

As to the contract with General Electric, the C/SPCS specification has been incorporated in the contract and the Air Force is currently reviewing and evaluating the Company's internal management system to determine whether it satisfies the requirement.

Question No. 3. In testimony before this Committee last year, Admiral Rickover stated that the Armed Services Procurement Regulation Cost Principles apply only to cost reimbursement type contracts. These cost principles deny certain costs such as advertising expenses and bad debt expenses that have been determined to be inappropriate for Government contracts. However, these principles do not apply to firm fixed price and fixed price incentive type contracts which together constitute more than 75 percent of defense procurement. The Armed Services Procurement Regulation states that its costs standards are only "guides" in fixed price contracting. Admiral Rickover recommended that the Department of Defense should immediately make the cost principles in Section XV of the Armed Services Procurement Regulation mandatory for all types of contracts. Why doesn't the Department of Defense have firm cost standards for fixed price type contracts? Why should costs such as advertising expense or bad debt expense that are disallowed under a cost-type contract be paid under fixed price contracts? What is the Department of Defense doing to correct this situation?

DOD response. In 1958 when the present ASPR format was developed, a significant portion of the DOD procurement was awarded under cost reimbursable type contracts. Since cost control under reimbursable type contracts is effected by review and audit of incurred cost, extensive guidance for determining allowability is necessary. The ASPR cost principles were developed with this purpose in mind.

In considering the application of cost principles to fixed price contracts, different conditions prevail. Contracts awarded on the basis of price competition obviate the need for cost principles. When competition is absent, cost or pricing data is solicited and analyzed with the cost principles being applied to determine the Government's price objective in negotiation. If a firm fixed price contract is then awarded, it is not possible to apply the cost principles to the incurred costs as is done with cost reimbursement contracts since the contract calls for the payment of a price. Let me repeat, however, that the cost principles are used as a guide for analyzing these cost estimates.

Some types of fixed price contracts, e.g., incentive type, require a post negotiation of price based on actual costs incurred under the contract. Here, as in firm fixed price contracts, the cost principles are applied in determining the Government's negotiation objective, both as to the initial award and in the post pricing activity. The ASPR instruction to use the cost principles as a guide was intended to require essentially the same application of cost principles to final price negotiations for these types of fixed price contracts as is required on cost type.

We believe that it should be reasonably clear that our cost principles are, in reality, standards. These standards are applied as guides in negotiating fixed price contracts where competition is absent. It was our intention that items such as bad debts, considered unallowable under cost type contracts, not be allowed on fixed price type contracts. For your information, the annual Defense Appropriation Act has for some years included in its General Provisions a prohibition on the payment of certain types of advertising costs.

In order that our intention will be unmistakably clear, the ASPR Committee is currently reconsidering the advisability of requiring mandatory application of the cost principles in certain fixed-price type contract situations. New language has been developed and the matter is presently being reviewed within Defense, other Government agencies, including the GAO, and industry. If approved for future application, the new policy would essentially provide for mandatory application what already is being applied in the form of guidance.

Question No. 4. In his testimony last year, Admiral Rickover presented some interesting facts about the DIAC. He pointed out that the membership of the DIAC includes people at the highest level in the DOD and the services as well as the chief executives of a large number of defense contractors. This group has a significant influence on procurement policies within the DOD—in fact, Admiral Rickover stated that the DIAC is more influential than the Armed Services Procurement Regulation Committee, which is supposed to be the Pentagon's central procurement policy group. In spite of the great influence that DIAC has on the expenditure of billions of dollars of the taxpayers' money, there are no minutes of its meetings and no public record of what goes on at its meetings. This is not a strategic council making national security decisions. It is a quasi-official body concerned with public contracts and contracting policies. Doesn't the public have the right to know what is said in the DIAC meetings?

Please provide the following information for the record:

(a) What are the names and positions of the industry representatives on the DIAC?

(b) Which of these representatives held previous positions in the Department of Defense? What were their positions?

(c) What are the names and positions of the Government representatives on the DIAC?

(d) Which of these representatives held previous positions with defense contractors? What were their positions?

(e) When and where were DIAC meetings held in 1968?

DOD response: The Council was established in accordance with the procedures prescribed in Executive Order 11007, dated February 26, 1962, and DOD Directive 5030.13, dated April 20, 1962, relating to the formation and use of advisory committees. A copy of DOD Directive 5030.22, dated April 24, 1968, governing the Council's mission and operation is included in the Appendix. Also included in the Appendix is a brief explanation of the Council and its activities. The purely advisory nature of the Council cannot be overstressed. The Secretary and Deputy Secretary of Defense not only choose the members, but the subject matter on which they wish the advice of the Council members. Procurement subjects are frequently discussed; however, no policy is made and the Secretary and Deputy Secretary are free to consider or completely disregard the Council's advice. In actual practice, there tends to be a wide variety of views from the members on any given subject. If desired, LAC viewpoints on procurement policies are made available to the ASPR Committee, but only as additional input along with views of numerous other groups and individuals customarily obtained during the formulation of policy.

Because of the highly informal and open discussion character of IAC meetings, only summary minutes of the proceedings have been maintained. Any other procedure would be inconsistent with the character of the meetings, since the attendees are encouraged to express their personal viewpoint on subjects under discussion. Moreover, no decisions are reached since the very objective of the Council is to allow the Deputy Secretary and others an opportunity to hear the various individual viewpoints of both Government and industry attendees. This Government-industry dialogue is beneficial to the Department of Defense in that it provides an opportunity for all dimensions of a particular policy to be examined before a final decision is made.

The specific information requested for the record follows and is identified by the alphabet letter preceding the separate parts of the question:

(a) Industry Representatives:

Ruben F. Mettler, Assistant President and Executive Vice President, TRW, Inc.—Vice Chairman.

William M. Allen, Chairman, The Boeing Company

George R. Brown, Chairman, Brown & Root, Inc.

Malcolm P. Ferguson, Consultant (former Chairman, Bendix Corp.)

Eugene G. Fubini, Consultant (former Vice President, IBM Corp.)

Paul A. Gorman, President, Western Electric Company

Daniel J. Houghton, Chairman, Lockheed Aircraft Corp.

Donald A. Holden, Chairman, Newport News Shipbuilding and Dry Dock Co.

Thomas V. Jones, Chairman, President, and Chief Executive Officer, Northrop Corp.

Charles H. Kellstadt, Chairman and President, General Development Corp. (former Chairman, Sears, Roebuck & Co.)

- James R. Kerr, President, AVCO Corp.
 Semon E. Knudsen, President, Ford Motor Co.
 John Lawrence, Chairman and President, Dresser Industries, Inc.
 Roger Lewis, Chairman and President, General Dynamics Corp.
 Noel B. McLean, Chairman, Edo Corp.
 Thomas S. Nichols, Chairman, Executive Committee, Olin Mathieson Chemical Corp.
 Leonard P. Spacek, Chairman, Arthur Andersen & Co.
 Gardiner Symonds, Chairman and Chief Executive Officer, Tenneco, Inc.
 Charles B. Thornton, Chairman and Chief Executive Officer, Litton Industries, Inc.
- (b) IAC Representatives holding previous positions in the DOD:
 Eugene G. Fubini—Assistant Secretary of Defense and Deputy Director of Defense Research & Engineering (1961-1965)
 Roger Lewis—Assistant Secretary of Air Force (1953-1955)
 Ruben F. Mettler—Aide to Assistant Secretary of Defense for Research & Engineering (1954-1955)
- (c) Government Representatives on the IAC:
 David Packard, Deputy Secretary of Defense, Chairman
 Barry J. Shillito, Assistant Secretary of Defense (Installations & Logistics) Alternate Chairman
 Gordon H. Tyler, Executive Secretary

In addition, other DOD officials attend Council meetings and participate in the activities. From OSD, in addition to the Secretary of Defense, the Director, Defense Research & Engineering, the Director, Defense Supply Agency, and the Assistant Secretary of Defense (Comptroller), frequently attend, depending on the subject matter on the agenda. From the Military Services, in addition to the Secretary, their Assistant Secretaries for Research & Development, Financial Management, and Installations & Logistics frequently attend, again based on the subject matter on the agenda. Appropriate key military officials also attend when the subject matter is of particular interest.

- (d) Government representatives previously with Defense contractors:
 David Packard—Chairman, Hewlett-Packard Co. (1939-1969)
 Barry J. Shillito—Director of Materiel and Director of Sales, Hughes Aircraft (1954-1959); President, Houston-Fearless (1959-1962); President, Logistics Management Institute (1962-1968)
- (e) IAC meetings were held on 9-10 February, 14-15 June, and 11-12 October 1968, in Washington, D.C.

It should be noted that the membership of the IAC is in the process of changing. A revised list of members will be forwarded to you, if desired, when available. The IAC plays an important role in allowing top Defense management to be aware of the impact of Defense policies on industry.

Question No. 5. I understand that for many years industry has been trying to get the Department of Defense to reimburse defense contractors for charitable contributions under defense contracts. Last April, it came out that the Defense Department was planning to go along with such a proposal. Fortunately, the story broke in the newspapers before the change was implemented. There was considerable outcry in the Congress and the press. As a result, Secretary Laird announced that the plan would not go into effect. If the newspapers had not exposed the DOD plans, I am sure the change would have quietly gone into effect. This is the sort of thing that lends credence to the widespread concern about the military-industrial complex. Was this the work of the DIAC Committee? Was this proposal supported by all the Armed Services? Did you support it? Are there any other moves afoot in the DOD or in the DIAC Committee to make cost allowances under defense contracts more liberal than they already are?

DOD Response. The recent consideration of this cost principle did not stem from an IAC recommendation.

There were mixed reactions on this proposed revision within the Military Departments and other Government agencies. The ASPR Committee had developed language to revise the cost principle on contributions and had circulated it to other Government agencies, including GAO and industry, for comment. No final decision had been made at that time concerning the allowability of these costs. In this case, Secretary Laird reviewed the proposal and decided to continue the current cost principle which provides for disallowance of contributions.

With regard to my view of the proposal, I was the Assistant Secretary of Navy for Installations and Logistics at the time the proposed change was under consideration. The Navy was requested to consider the matter and I informed the Office of the Secretary of Defense by memorandum that I opposed the proposed change. Let me clarify my position. I believe this expense to be a legitimate cost of doing business but, because it is such an insignificant piece of total costs and its allowability could be misconstrued as indicated by the publicity on the matter, I felt this cost principle should not be changed.

Revision or changes to the cost principles are frequently under consideration. Like other aspects of the procurement process, the cost principles are subject to pressures for change because of changing technology and changing business environment.

In general, the cost principles with each refinement become more precise and less subject to varying interpretation. Frequently, these refinements are needed to better describe what is intended by the cost principle where inconsistent application has been noted in practice. On balance, we consider the overall impact of changes in the cost principles to result in a tightening effect rather than a liberalizing effect. Our primary purpose is to establish guidance that will ensure that costs paid by the DOD on its contracts are reasonable and equitable.

Question No. 6. This subcommittee has closely followed the issue of uniform cost accounting standards on defense contracts. As Admiral Rickover has pointed out, without uniform standards, the Government has no common basis to measure the actual costs incurred and profits carried by Government contractors. Government contracting officers have a difficult time determining whether suppliers' proposed prices are reasonable. Admiral Rickover cited examples of how contractors can overload costs on Government contracts with consequent benefit to their commercial work. He cited a case where the Navy, the General Accounting Office, the Defense Contract Audit Agency, and a contractor cannot agree whether a given set of cost records indicates a 10, 20, 27, 45, or 67 percent profit. He further stated that the Truth-in-Negotiations Act and Renegotiation Act cannot be fully effective if there are no uniform accounting standards. I would think these matters would be of great concern to your office. Does the Department of Defense intend to establish meaningful standards for determining costs and profits? How can defense procurement be conducted on a rational basis when present procedures permit such diversities of opinion on costs? Do you intend to support the establishment of uniform cost accounting standards?

DOD Response. As we previously stated, the ASPR XV cost principles are currently used in accomplishing the pricing necessary under DOD contracts. As to uniform accounting standards, it is generally acknowledged that there is no specific body of uniform accounting standards today. The Congress has directed that the General Accounting Office study the feasibility of developing such uniform standards. The Department of Defense is assisting in this effort. Frankly, we don't know how the study will turn out, but we look forward to its conclusions with anticipation. Whether such standards can be developed and whether they can be beneficially used to improve present pricing practices must remain an open question for the present.

Question No. 7. Admiral Rickover told this committee in November that the Truth-in-Negotiations Act has not been as effective as it was intended to be in protecting the Government against overpricing. One reason for this is that the legal requirement for cost data does not apply if the contract price is based on adequate competition or "standard catalogue prices." The Admiral said:

"Contracting officers generally prefer to judge the procurement to be 'competitive' or 'based on standard catalogue prices' rather than suffer the delays inherent in head-on confrontation with a large firm that is unwilling to provide cost breakdowns. It seems that the bigger the firm or industry that is unwilling to provide cost breakdowns, the more likely it is that competition be held to be adequate."

I understand that the entire computer industry, many steel mills, nickel producers, and forging suppliers usually do not provide cost data to the Government or to higher-tier contractors as required by the Truth-in-Negotiations Act. (a) What is the Department of Defense doing to insure that these large firms comply with the law?

Moreover, Admiral Rickover has testified that the DOD waives the requirements of the Truth-in-Negotiations Act for some of the largest defense con-

tractors. (b) Would you please provide for the record a list of all the waivers that have been allowed, and the DOD's rationale for its action in each case?

Admiral Rickover also cited examples of Navy contractors who are not complying with the Truth-in-Negotiations Act. Large prime contractors repeatedly failed to obtain subcontractors' certified cost and pricing data. One shipbuilder had not implemented the law 6 years after it was passed. (c) Shouldn't the Navy tighten its policies to ensure that contractors obey the law?

DOD Response. For ease of presentation, we have divided this question into three parts identified by the small alphabet letters above and will address each in turn.

(a) We are not aware that large firms such as basic material suppliers do not comply with the law. When cost or pricing data is required under the law, it is obtained or a waiver is granted. If the price is based on adequate price competition, established catalog, or market prices of commercial items sold in substantial quantities to the general public, or prices set by law or regulation, certified cost or pricing data is not required under the law.

(b) Waivers granted under P.L. 87-653 are listed below. We have grouped these into 19 categories. Within the categories, several waivers may be included as several different procurement actions involving the same subject matter are involved. These categories account for approximately 50 specific waivers since the law became effective in December 1962, a period of over six years. In FY 1968 alone, DOD recorded over 35,000 procurement actions exceeding \$100,000. Without question, waivers have been sparse and granted only where the public interest has been best served by such action.

Waivers granted under the provisions of P.L. 87-653:

1. *Canadian Commercial Corporation.*—All contracts placed through the Canadian Commercial Corporation are monitored by the Canadian Department of Defense Production in accordance with the regulations of that country. We have found these regulations to be clearly in consonance with the objectives of P.L. 87-653 and have thus determined it to be in the public interest to waive the requirement for the submission and certification of cost or pricing data.

2. *Cost-No-Fee Contracts.*—The requirement for certification, but not to the submission of data or application to subcontracts, is waived on cost-no-fee contracts with nonprofit educational and other nonprofit institutions. Since we will reimburse these contracts only for actual costs incurred, there is no need for certification to effect a contract price adjustment.

3. *Bell System Items.*—Certain selected items procured from Western Electric Company are standard items of the Bell System. Western Electric refuses to provide certified cost and pricing data, contending that these items fall under the category of commercial items sold in substantial quantity to the general public and, further, that most of the users are public utilities subject to other Government controls and regulations. The contracting officials do not believe the items to be commercial products and, therefore, waivers of P.L. 87-653 have been granted in order to obtain the items. The prices paid by the Government are no higher than established "Bell prices."

4. *Martin-Baker Ejection Seats.*—The Martin-Baker Aircraft Ejection Seat, developed and manufactured by an English firm, is superior in quality and cheaper in price than similar U.S. items for selected aircraft. Certified cost and pricing data is considered proprietary by the company and is not provided to the U.S. Government. The procurements are considered critical and waiver has been granted as being in the public interest.

5. *Prior Proposal.*—A waiver was granted in the final settlement of a fixed-price redeterminable contract with New York Shipbuilding Corporation. The contractor submitted his proposal in acceptable form prior to the effective date of the law (1 December 1962), but did not conclude negotiations until after. The contractor refused to certify at time of concluding the negotiation. Only litigation could have been resorted to and it was determined this would have served no purpose.

6. *Auxiliary Heavy Lift Craft.*—Two AHLC, modifications, and towing services were required from Bugsier-Reederei UND Burgungs A G, Hamburg, Germany. Although cost and pricing data was made available, the prime contractor refused to accept the usual contractual clauses, and one major fixed-price subcontractor refused to agree to the clauses. Extended negotiations did not produce results with the foreign firms. The requirements were waived in order to avoid undue delay of a critical procurement.

7. *Salvage of USS Bache.*—The USS Bache ran aground near Greece. The only contractor in the area with sufficient technical capability and equipment, willing to salvage the craft, submitted cost and pricing data but refused to certify and accept the usual contract clauses. International relations with Greece required removal of the craft. It was considered to be in the public interest to waive the requirement of the law.

8. *Italian Government Purchases.*—The Government of Italy entered into direct oral and written negotiations with four U.S. firms for F-104 aircraft parts and service. By prior agreement, the contract documents covering the purchases were signed by the U.S. Air Force at prices affirmed by Italy as fair and reasonable. The contractor refused to furnish cost or pricing data. The failure to process the procurement would have violated a treaty arrangement and a waiver was considered appropriate.

9. *C-5A Airframe and Engine.*—After award of the C-5A program, it developed that certain work required from the airframe contractor should more appropriately be performed by the engine contractor and vice versa. Under the contract where the work is added, cost or pricing data is obtained and certified to. Under the other contract, an equal amount is deleted. It was determined to be in the Government's interest to waive the requirements of the law insofar as it would apply to the work effort deleted.

10. *Fuel Storage and Handling.*—Several waivers have been issued regarding fuel storage and handling for the following reasons:

(a) In the renewal of certain contracts awarded prior to the enactment of P.L. 87-653, the contractor refused to furnish cost or pricing data. It was determined that the renewal prices were very favorable and as such it was in the best interests of the Government to waive the requirements of P.L. 87-653.

(b) Contracts were awarded with foreign firms, often Government-owned, who refused to provide cost or pricing data. It was determined that the price was the best available and the need was critical.

11. *General Electric Ship's Turbine.*—General Electric, a subcontractor to Newport News Shipbuilding and Drydock Company, was solicited for a proposal on a nuclear turbine for an aircraft carrier along with Westinghouse Electric Corporation. General Electric bid more than 20% below Westinghouse. The contracting officer requested certified cost or pricing data from General Electric. General Electric advised that its proposed price was established under competitive market conditions and was unwilling to negotiate the price or elements thereof. Extensive discussions were held wherein limited data was obtained but not complete data. The requirements of the law were thus waived in order not to jeopardize the shipbuilding program after General Electric agreed to accept a repricing clause at the completion of performance. The repricing will be based on certified cost or pricing data.

12. *Shipboard Steel Furniture Drawings.*—The Navy required specifications and engineering drawings for an entire suite of shipboard type steel furniture for future solicitations. Only one firm was willing to provide these privately developed drawings, designs, and attendant rights, but declined to support the price with cost or pricing data. It was considered to be in the Government's interest to obtain these drawings; hence, the requirements of the law were waived.

13. *Computer Component.*—The Johns Hopkins University Applied Physics Laboratory had an International Business Machine System/360 Model 91 under lease arrangement. One of the elements, the Model K Central Processor, was considered more economical to purchase than to lease. IBM refused cost and pricing data on the basis that it was in the category of "substantial commercial acceptance." Negotiations were fruitless and, faced with a forecast \$1 million price raise, the requirement was waived.

14. *Motion Picture Cameras.*—D. B. Milliken Company was the only qualified source of needed motion picture cameras for three models of aircraft deployed in Southeast Asia. The company repeatedly and consistently refused to provide cost and pricing data. The items were urgently needed and it was, therefore, considered to be in the public interest to waive the requirements of the law.

15. *F-105 Aircraft Windshields.*—The Pittsburgh Plate Glass Company refused to provide cost and pricing data for windshields for which they were the sole manufacturer (proprietary interest). Due to the urgent requirement, it was, therefore, considered to be in the public interest to issue a waiver.

16. *TF-41 Engine Parts.*—The Cameron Iron Works was the only qualified source for certain engine parts on the TF-41 engine produced by Allison Division, GMC. Cameron repeatedly and consistently refused to submit cost and pricing

data. Due to the urgency of the program, the requirement for submission of cost and pricing data was waived on this subcontract.

17. *Aerial Film*.—Quantities of aerial film were being bought from Eastman Kodak Company who refused to provide cost and pricing data on the basis that the price is comparative to the prices of other types of film (motion picture) sold in substantial quantities to the general public. Whether the two types of film are sufficiently similar for such comparison is questionable. The film was in short supply and it was, therefore, determined to be in the public interest to issue the waiver on the current requirements.

18. *Model ACK Engine*.—Onan Division of Studebaker Corporation, a subcontractor to Thermo King Corporation, refused to submit cost or pricing data on the basis that the price was based on a catalog price of items sold in substantial quantity to the general public. Onan refused to provide their sales history to justify sales to the general public. All efforts to secure verification data were unsuccessful. It was determined to be in the public interest to grant a waiver.

19. *Manual Metals Storage and Retrieval System*.—An advertised procurement was rejected as the price proposed from the sole bidder exceeded the funds available. Requirements were scaled down and negotiations conducted with this source. Cost or pricing data was obtained, certified to, and the contractor accepted the required contract clauses. The procurement officer did not believe that the data submitted was adequate or complete. Further negotiation, including audit, failed to produce the necessary data. A rise in prices was imminent due to the steel price increases. Therefore, the Department waived the requirement for obtaining complete data prior to award, but retained the full effect of the certificate and defective pricing clauses.

(c) The Navy has conducted P.L. 87-653 training seminars at several contractors' facilities including shipbuilders. The seminars instructed contractor personnel and resident government personnel on what was necessary to achieve compliance with P.L. 87-653 and its ASPR implementation with regard to both the Government's dealings with prime contractors and prime contractors' dealings with its subcontractors.

In all cases of alleged contractor noncompliance with the submission of data, the Assistant Secretary of the Navy (Installations and Logistics) or Chief of Naval Material have given the matter their immediate attention.

Frequently, there is a genuine difference of opinion between the Government and industry as to whether there is adequate price competition or whether the item is commercial. The Navy's problems with this matter have related primarily to whether the item is or is not a commercial item sold to the general public. For commercially oriented industries such as computers, ball and roller bearings, and electronic tubes, contractors contend that military items are produced on the same production lines as commercial work and, therefore, are priced as commercial items. The Navy is exerting considerable effort to obtain cost or pricing data whenever it is necessary and appropriate.

Question No. 8. One of the issues that was discussed at some length in the November hearings was the degree of competition in defense procurement. Professor Weidenbaum made an extensive study of this question, and he concluded that the defense industry is a highly concentrated market with little competition. Col. Buesking, Mr. Fisher of the RAND Corporation, and Admiral Rickover agreed with this conclusion. However, Admiral Rickover testified that the Department of Defense frequently applies the rules and reasoning of formally advertised, competitive procurements to negotiated procurements where competition is limited. He stated that the so-called competitive-negotiated procurement which the Department of Defense reports as a "competitive" procurement provides the simplicity of formally advertised procurements but eliminates the safeguards that protect the Government in non-competitive procurements. What is the Department of Defense doing to modify its procurement policies and procedures to ensure adequate safeguards in procurements that are not truly competitive (that is, not formally advertised) ?

DOD response. With regard to "competitive negotiated procurement", we consider our existing procedures published in the Armed Services Procurement Regulation to be satisfactory. Thus, where price competition is considered adequate, no additional "safeguards" are necessary.

In the absence of price competition, we request and obtain cost or pricing data from contractors even in those borderline cases where it is a matter of judgment whether such data is required. This data is subjected to technical review, audit.

examination, and price analysis prior to negotiation with the prospective contractor. Where required by Public Law 87-653, the data is certified by the contractor and appropriate audit and price adjustment clauses are included in the contract. These clauses provide to the Government the right to make post award reviews and adjust the contract price where data affecting the contract price is later found to be defective in that it is not current, accurate, or complete.

Question No. 9. In the hearings last November, this subcommittee heard numerous examples of defense contractors who refuse to comply with the Truth-in-Negotiations Act, who demand higher profits than DOD guidelines allow, who include unwarranted contingencies in their pricing, and who repeatedly submit large unsubstantiated claims against the Government. The committee has been considering ways to put the Government in a better bargaining position when it faces these situations. We asked Admiral Rickover about this problem, and he commented that the Government could have a great deal of leverage with these large firms—many of them are almost totally dependent on Government work. But the Government deals with these companies on a contract-by-contract basis; it does not bring its massive bargaining strength to bear when it negotiates a contract. I think the Admiral has an intriguing point, and my question is, why doesn't the DOD use the leverage of its bargaining power to bring the defense contractors into line?

DOD response. We believe that the Department of Defense can and does exert tremendous bargaining power. While we ordinarily deal with contractors on a contract-by-contract basis, important issues are often elevated to higher management levels on both the Government and Industry sides. Thus, where necessary and appropriate, the Government's considerable influence as a large buyer is brought to bear on specific issues. A number of knowledgeable persons contend that the lower profit rates on defense business vs. nondefense business is a reflection of this influence.

Question No. 10. In the recent report of this Subcommittee, we recommended a number of actions for improving Congress' information about defense contracts. I think you can see from even the last few days of testimony before this Subcommittee that Congress is woefully ignorant of what is going on in military procurement. We heard that there is an overrun in the Minuteman program of approximately \$4 billion. The overrun in the Deep Submergence Rescue Vehicle program appears to be something over 2,000 percent.

Now, I wonder if you would comment on each of the recommendations in our report which, although they are directed at GAO, would require great cooperation from the DOD.

DOD response. With regard to the matter of overruns on the two programs mentioned, we furnished for the record appropriate explanatory comments as inserts on page 698 of the transcript of the Subcommittee hearings held on 11 June 1969.

Response to the question is attached.

DOD RESPONSE TO QUESTION NO. 10

Our comments on the recommendations contained in the Subcommittee Report are as follows:

Recommendation 1.—The GAO should conduct a comprehensive study of profitability in defense contracting. The study should include historical trends of "going-in" and actual profits considered both as a percentage of costs and as a return on investment. Profitability should be determined by type of contract, category of procurement, and size of contractor. Information for the study should be collected pursuant to the statutory authority already vested in the GAO. The GAO should also devise a method of periodically update and report the results of its profits study to Congress.

DOD Comment.—We have no objection to the recommendation that the GAO conduct such a comprehensive study. We have suggested, in fact, that GAO examine the validity of the data already collected by the Logistics Management Institute. Our only caution, based on our own extensive experience, is that, in view of the expense and difficulty of collecting meaningful data in this field, there be a clear understanding of the use and utility of the data before information-gathering starts.

Recommendation 2.—Total-package and other large contracts amounting to hundreds of millions of dollars and extending over several years should be broken down into smaller, more manageable segments. It should be possible to break

contracts into segments short enough in duration for periodic evaluation of accomplishment, representing parts of the total program with definable objectives, and yet large enough to include acknowledged functions such as engineering and manufacturing, and work sequences such as design phases and fabrication lots.

DOD Comments.—We believe that there is a potential danger in making individual contracts too large. The danger is that it becomes very difficult to meaningfully price an extremely large contract which calls for performance over a lengthy time period. There is the further problem of explaining the complex contract arrangement to the Congress and to the public. On the other hand, we believe that it is sound, under certain circumstances, to combine a portion of the development and some production under a single competitively awarded contract. Our experience with this approach has convinced us that it is a sound concept but that we must be extremely careful in its application. The appropriate application of this concept will greatly assist our efforts in developing additional competition for defense contracts.

Recommendation 3.—GAO should develop a weapons acquisition status report, to be made to Congress on a periodic basis, and to include the following information:

(a) Original cost estimates, underruns and overruns on work completed as of effective date of report, current estimated cost at completion, total actual cost, including underruns or overruns, scheduled and actual deliveries and other major accomplishment milestones such as major design reviews, first article configuration inspection, roll out and flight of first airplane, launching of ship, and so forth, for all programs in excess of \$10 million. Estimated and actual unit costs should be included. Where there are cost variances, whether they be underrun or overrun, GAO should separate them into their components such as labor, labor rates, overhead rates, material and subcontract costs, and general administrative expense.

(b) So-called "progress payments," made by the Government on firm-fixed and fixed-price incentive contracts in excess of \$1 million, compared to work segments satisfactorily completed, rather than simply costs incurred.

(c) Technical performance standards which would compare actual performance of weapons systems and other hardware to contract specifications.

(d) Impact on costs, schedules, and technical performance of authorized contract changes from contract base line described in (a), (b), and (c) above. GAO should be prepared to furnish backup data to support impact on a change-by-change basis.

DOD Comment.—The recommendation suggests that GAO develop a weapons acquisition status report for presentation to the Congress on a periodic basis. As a general proposition, we have no objection to having GAO provide information on weapons systems to the Congress. However, in view of the reports being made by the Department of Defense essentially along the same line, it might well be better for the Congress to determine whether the DOD-furnished report will be sufficient for its purposes in order to avoid the inherent inefficiency of duplicate reports on the same matters. With respect to progress payments, we have no objection to the idea of tying progress payments to work performance where this can be done in a satisfactory manner. We do this today, as for example, for ship construction. However, our experience indicates that it is more practical to tie progress payments to costs incurred on most of our major work.

Recommendation 4.—GAO should develop a military procurement cost index to show the prices of military end products paid by the Department of Defense, and the cost of labor, materials, and capital used to produce the military end products.

DOD Comment.—This recommendation is addressed to GAO. We offer no comment here because frankly we do not understand the recommendation when considering such presently available indices as the Bureau of Labor Statistics Index.

Recommendation 5.—GAO should study the feasibility of incorporating into its audit and review of contractor performance the should-cost method of estimating contractor costs on the basis of industrial engineering and financial management principles. The feasibility study should, if possible, be completed by the end of the current calendar year.

DOD Comment.—We have no objection to a feasibility study by GAO as contained in this recommendation.

Recommendation 6.—GAO should compile a defense-industrial personnel-exchange directory to record the number and places of employment of retired or

former military and civilian Defense Department personnel currently employed by defense contractors, and the number and positions held by former defense contractor employees currently employed by the Defense Department.

The directory should include the names of all retired military or former military personnel with at least 10 years of military service, of the rank of Army, Air Force, or Marine colonel or Navy captain or above, former civilian personnel who occupied supergrade positions (GS-16 and above) in the Department of Defense, and former defense contractor employees who occupy supergrade positions (GS-16 and above) in the Department of Defense.

DOD Comment.—We have no objection to the compilation of a defense-industrial personnel exchange directory by GAO if such a compilation is judged to be necessary and worthwhile. We would suggest, however, that the Congress specifically authorize such a directory and that it be expanded to cover all branches of the Government.

Recommendation 7.—The Defense Department should collect complete data on subcontracting including total amount of subcontractors awarded, competitive and negotiated awards, subcontract profits, type of work subcontracted out, the relationship between the prime contractor and the subcontractors, the amount of business done by the subcontractor for the prime contractor, and compliance with the Truth-in-Negotiations Act. GAO should have access to this information and should make it available to Congress on an on-going basis.

DOD Comment.—This recommendation calls for a tremendous amount of data. We have great concern that the manpower and expense involved would not be commensurate with the likely benefits. Further, we are unaware of the problem which this recommendation seeks to solve. We will look at this area closely over the next several months and institute additional measures, including the collection of additional data, should this prove to be necessary or desirable.

Recommendation 8.—The Defense Department should require contractors to maintain books and records on firm fixed-price contracts showing the costs of manufacturing all components in accordance with uniform accounting standards.

DOD Comment.—Our comment on this recommendation must be held in abeyance pending the completion of the GAO feasibility study previously mentioned.

Recommendation 9.—The subcommittee once again makes the long standing and unheeded recommendation that DOD make greater use of true competitive bidding in military procurement, and that the tendency to award contracts by noncompetitive negotiation be reversed.

DOD Comment.—We interpret this recommendation to mean that the Department of Defense should make greater use of the formal advertising method of procurement. As we previously mentioned, this is not the only "true competitive bidding in military procurement." Nonetheless, we do agree that formal advertising should be used whenever appropriate.

Recommendation 10.—Legislative action should be taken to make the submission of cost and pricing data mandatory under the Truth-in-Negotiations Act for all contracts awarded other than through formally advertised price competition procedures, and in all sole source procurements whether formally advertised or not.

DOD Comment.—This recommendation suggests a change in Public Law 87-653 to make its application more all-inclusive. We suggest caution by the Congress in any such change. We say this for two reasons. One, it is difficult to see the advantages sought by Public Law 87-653 as applying to a competitive situation. Second, the elimination of the waiver authority would result in our inability to place some contracts which are otherwise in the Government's best interest.

Recommendation 11.—Legislative action should be taken to establish uniform guidelines for all Federal agencies on the use of patents obtained for inventions made under Government contract.

DOD Comment.—We have no objection to such legislation.

Question No. 11.—*I notice in your statement you talk of improved cost estimating. Yet, nowhere do I see any mention of "should cost" analysis. Does the DOD plan to use this approach as recommended by this Subcommittee in our last report?*

DOD Response.—As the Subcommittee Report points out, there are limitations on the usefulness of historical costs in projecting future prices. The problem of estimating a future cost is a difficult one, and, to our knowledge, there are no easy solutions. The so-called "should cost" approach has validity and we have used it along with other similar industrial engineering techniques. It is often a good way to combat aggravated problem areas. In our judgment, it is not a

technique for across-the-board application. We will use this or any other technique that can be devised to enable us to estimate better prices for the Government.

Question No. 12 (first No. 12).—I was interested in your statement that, "We further compound the problems by sometimes trying to produce hardware before it is sufficiently developed."

This is precisely the point that other witnesses before this Committee have made. For example, Professor Shapero, testifying before this Committee a few days ago, noted that the engineering and design styles of Western European countries led to substantially more streamlined and efficient development and procurement processes than those under which we work. He noted that where we do paper analysis of a project until it comes out of our ears, they proceed immediately to design and prototype testing.

Would you comment for me on your understanding of the differences in these procedures, and the gains which could be achieved if we were to rely far more heavily on prototype testing?

Mr. Ruc of the Navy Department testified the other day that part of the reason why we do not have sufficient prototype testing is that the military services are always in such an enormous hurry to have their new and fancy weapons systems deployed. Would you explain to me why we have to be in all this rush to get deployment of these systems?

DOD response. With reference to the first point concerning Western Europe development procedures, it is our impression that European development organizations do less analytical work than do U.S. development organizations. Staff representatives of the Director of Defense Research and Engineering have talked with Professor Shapero in an endeavor to secure more information on European development practices, particularly on the degree of analysis work and prototyping. No significant additional information was obtained. We, therefore, find it difficult to evaluate or compare European development to our own because of the sketchiness of available information. If we were to manufacture prototypes and test them completely before starting production, we might have fewer programs cancelled because of technical difficulties, and the expense of later modification would probably be minimized.

In our opinion, there is no single best pattern for acquisition of all programs. The pattern that is used will depend upon the unique characteristics of the program. In some cases, we will use prototype development and testing before commitment to production. Wherever possible, this will be done competitively. In other cases, it may be too expensive to use competitive prototyping and we will depend on competition during the contract definition stage and then contract with one contractor for the development.

With regard to the second point concerning the rush to achieve deployment of new systems, it is clear that military hardware is useful only if it is deployed in a timely fashion. Weapon systems are conceived to counter a potential threat to national security. Such systems often have a limited useful life because of changes in the threat and, therefore, any delay in deployment may reduce their useful life appreciably. In some cases, the urgency of production and deployment is based on a pressing military need; for example, the ICBMs which were required to provide a strategic deterrent. In other situations, it is the economics that press for early production and deployment since the systems and equipments that are in use are inefficient. The savings in early operational replacement of obsolescent equipment may more than offset the additional costs involved in early production.

In hindsight, we conclude that, on some occasions, production has started too early and with insufficient test and evaluation of development models. We plan to address this question on individual programs, to be more deliberate in moving from development to production, and to conduct more test and evaluation prior to making the decision to go into production. However, we recognize that there will still be some programs in which military urgency or economics dictate more compression of development and production than the average program. Looking over the complete menu of weapon systems, we would see a spectrum of development/production/deployment schedules varying from very conservative (long) schedules to shorter schedules which involve greater compression. We expect that the average of this spectrum will be substantially skewed toward conservatism when compared to the spectrum covering systems of the past.

Question No. 12 (second No. 12). In your discussion of the weapons systems procurement process, it appears to me that there are three major points at which crucial decisions are made: (1) the decision to initiate contract definition, (2) to

go from contract definition to full-scale development, and (3) to go from development to production.

Would you submit for the record a list of all of the weapons systems now being considered by the DOD, delineated as to their current position in the pipeline.

That is, which weapons systems are now in the contract definition stage, which weapons systems are now in the stage of full-scale development, and which weapons systems are now in the production stage? I would also like a paragraph or two describing each of the weapons systems that will be found in the list; and for the systems in the latter two categories, the current estimates of the total cost of development, production, and deployment. For those systems for which contracts have been awarded, I would also like the name of the contractor.

DOD response. We are providing the information requested on significant major weapons systems. These significant systems (30 in number) are set forth below and are categorized as requested with cost estimates for those in development and production. The cost estimates reflect the current system acquisition cost but not the operating cost. For those systems in development and production, the principal prime contractor or contractors have been indicated. Brief mission descriptions of the systems have been included in the Appendix.

SYSTEMS IN CONTRACT DEFINITION

SSN-688 Class—Submarine, Nuclear
 DD 963 Class (formerly DX)—Ship
 S-3A (formerly V SX)—Aircraft
 AWACS—Airborne Warning and Control System
 F-15—Aircraft
 DXGN—Ship, Destroyer

SYSTEMS IN FULL-SCALE DEVELOPMENT

(In millions of dollars)

| | Estimate of total system cost | Contractor |
|---|-------------------------------------|---|
| Lance, XMGM-52A missile..... | 459.2 | LTV Inc. |
| Safeguard ballistic missile defense system..... | 4,500.0 | Western Electric Co. |
| CVAN-69 carrier, nuclear..... | 510.0 | Newport News Shipbuilding & Drydock Co. |
| Poseidon submarine and missile system..... | 6,991.0 | Lockheed (missiles (subs)), General Dynamics. |
| Sparrow (AIM 7F) missile..... | 348.2 | Raytheon. |
| Walleye II missile..... | 142.6 | Hughes Aircraft, Martin-Marietta. |
| F-14A aircraft..... | 5,923.0 | Grumman. |
| Torpedo MK 43 Mod-0..... | 1,911.0 | Westinghouse. |
| Torpedo MK 48 Mod-1..... | 111.1 | Clevite Co. |
| Condor missile system..... | (1) | North American Rockwell. |
| Sram, AGM-69A missile system..... | 475.5 | Boeing Co. |
| Maverick missile..... | (1) | Hughes Aircraft, LTV, McDonnell. |
| Phoenix (AIM-54) missile..... | 1,020.6 | Hughes Aircraft. |

¹ Cost estimates are under review and consideration within the Office of the Secretary of Defense.

SYSTEMS IN PRODUCTION

(In millions of dollars)

| | Estimate of total system cost | Contractor |
|--------------------------------------|-------------------------------------|---|
| Sheridan tank..... | 642.2 | General Motors. |
| Shillelagh missile..... | 803.2 | Philco-Ford Aeronautics, Martin-Marietta. |
| CVAN-68 carrier, nuclear..... | 535.9 | Mewport News Shipbuilding & Drydock Co. |
| Sparrow (AIM 7E) missile..... | 281.0 | Raytheon. |
| P-3C aircraft..... | 2,350.8 | Lockheed, General Motors, Magnavox. |
| A-7E aircraft..... | 1,920.5 | LTV Inc. |
| Minuteman II/III missile system..... | 8,943.4 | Boeing. |
| F-111 aircraft..... | 6,666.9 | General Dynamics. |
| C-5A aircraft..... | 4,348.0 ¹ | Lockheed, General Electric. |
| A-7D aircraft..... | 1,891.4 | LTV Inc. |
| LHA ship, assault..... | 1,345.5 | Litton Industries. |

¹ This figure does not include \$483,000,000 for initial spare parts provisioning.

Question No. 13. In hearings before this subcommittee last November, Admiral Rickover expressed the opinion that hundreds of millions of dollars could be saved by improving the Navy's ship procurement procedures. This committee subsequently obtained for the record a memorandum he sent you when you were Assistant Secretary of the Navy, criticizing the Navy's ship buying practices. Admiral Rickover cited poor subcontracting practices as a major reason for the price increases on Navy ships. He pointed out that there is little or no real price competition for shipbuilding contracts or for complex equipment that shipbuilders buy. He stated that the Navy's practice of relying on the shipbuilder's procurement system to obtain reasonable prices for subcontracted work has not been effective. He urged that the Navy face up to the lack of true competition in the shipbuilding industry and among suppliers of shipboard equipment, and he recommended specific Navy review and consent to all subcontracts in excess of \$100,000 under cost reimbursement and incentive-type contracts. Would you please tell us specifically what the Navy has done to tighten up its ship procurement practices in the seven months since you received the memorandum?

DOD Response. The memorandum from Admiral Rickover to me when I was Assistant Secretary of the Navy (I&L) provided his comments on certain matters of interest to the Navy. The Admiral, as Director of the Nuclear Power Directorate of the Naval Ship Systems Command, one of the six commands of the Naval Material Command, commented on his observations of procurement methods and practices of ship procurement. These observations were welcomed and provided additional matters for reflection by those in the Navy responsible for ship procurement. I advised Admiral Rickover of my appreciation of his concern and the sagacity of his suggestions.

The Navy has taken the following actions to improve subcontracting practices in connection with ship procurements:

(a) Consent clauses are placed in all major ship procurement contracts (including fixed price where obtainable) to permit the Government to review major subcontracts. By way of example, the LHA contract contained such a consent clause. Such clauses, in the absence of an approved contractor purchasing system, require submission of the proposed subcontract if in excess of \$100,000 or lower amounts, in some cases, to the contracting officer for his review and consent before award.

(b) The Navy has established a board under the Deputy Chief of Naval Material (Procurement and Production) to review Contractor Procurement System Review Reports with the purpose of pointing out areas of concern for further action by the Administrative Contracting Officer. This will provide greater flexibility and efficiency over the current system of granting blanket approval of a contractor's purchasing system. Blanket approvals normally will not be granted in the future.

(c) The staff of the Chief of Naval Material conducts courses on a continuing basis at contractor's plants in order to improve understanding of the provisions of P.L. 87-653 as it relates to dealings with both the Government and with subcontractors.

Question No. 14. You have spoken about improving program measurement. In fact, you state, "We expect to improve existing management systems in a way that will enable us to identify problem areas sufficiently in advance to permit corrective action." This is admirable. I would like to inquire what specifically are you doing? What actions are being taken and when can we expect to see the results of this?

DOD Response. We are at the direction of the Deputy Secretary of Defense, Mr. Packard, undertaking a review of the procurement and logistics aspects involved in the development and acquisition of our major weapon systems. I cannot predict at this time what the outcome of this review will be, but let me assure you that, where deficiencies are noted, we will strive diligently to effect necessary improvements.

More specifically, the Assistant Secretary of Defense (Comptroller) is in the process of implementing several management reporting mechanisms which we believe will assist materially in improving program measurement.

PERFORMANCE MEASUREMENT FOR SELECTED ACQUISITIONS

Prudent management requires that there be visibility of what is going on during the contract's life. In line with this premise, the Department has issued DOD Instruction 7000.2, Performance Measurement for Selected Acquisition, which

requires in selected major contracts the use of Cost/Schedule Control Systems. A copy of the DOD Instruction is included in the Appendix.

Applicable to contractors with major procurements, this instruction states the following: "To provide an adequate basis for responsible decision-making by both contractor management and DOD components, contractors' internal management control systems must provide data which (1) indicate work progress, (2) properly relate cost, schedule and technical performance, (3) are valid, timely and auditable, and (4) supply DOD managers with a practicable level of summarization."

The contractor is required to demonstrate that its internal management system will accomplish certain objectives in the general areas of organization of work, planning and budgeting, accounting, reporting, variance analysis, and revisions to budgets and plans. This effort is in the initial implementation stages, but we look forward to improved management control.

SELECTED ACQUISITION REPORT (SAR)

We have also developed the selected acquisition report (SAR) which is designed to give, in one document, for use by top management, a summary of the current estimates of technical, schedule, and cost performance of major weapons systems during their acquisition phase. A copy of the DOD instruction and report format are included in the Appendix.

The principal features of this report are:

1. The requirement to compare the current approved program/current estimate to the original plan approved by the Secretary of Defense.
2. A summary of contractor performance in relation to his original schedule/budget baseline.
3. The highlighting of major cost and technical problems which may require additional analysis and/or secretarial action.

While this report is too new to make any general observations as to its efficacy, we have high hopes that it will provide the vitally needed early warning mechanism which will alert top management to procurement problems in time for something to be done about them.

APPENDIX

Department of Defense Directive No. 5030.22, 24 April 1968, "Industry Advisory Council"

The Industry Advisory Council—Purpose and Activities

Department of Defense Instruction No. 7000.2, 22 December 1967, "Performance Measurement for Selected Acquisitions"

Department of Defense Instruction No. 7000.3, 23 February 1968, "Selected Acquisition Reports (SAR)"

Description of Major Weapon Systems

DEPARTMENT OF DEFENSE DIRECTIVE

Subject: Industry Advisory Council.

References: (a) DOD Directive 5030.13, "Regulations for the Formation and Use of Advisory Committees," April 20, 1962.

(b) DOD Directive 5030.22 "Defense Industry Advisory Council", May 23, 1962 (hereby cancelled).

I. Authority

Pursuant to Reference (a), it is hereby determined to be in the public interest, in connection with the performance of duties imposed on the Department of Defense by law, to establish an Industry Advisory Council for the purpose set forth below.

II. Mission

The Mission of the Industry Advisory Council is to provide:

1. The Secretary of Defense and his principal management assistants a forum for the presentation of logistics and other general management objectives, problems and accomplishments to a representative cross-section of U.S. industry.

2. Representatives of industry a forum for discussing directly with the principal executives of the Department of Defense their suggestions and constructive criticisms of logistics and other management policies and practices, particularly insofar as they may affect industry.

3. A focal point for the review and discussion of the findings of the industry study groups which should be brought to the attention of the Secretary of Defense.

III. Membership

Members will be selected so that the Defense Industrial Base will be amply represented on the Council, but membership may also include representation from non-Defense industry, the educational community and the professions.

IV. Officers and duties

A. *Chairman*.—The Chairman of the Council shall be the Deputy Secretary of Defense and in his absence the Assistant Secretary of Defense (Installations and Logistics) shall perform the duties of the Chairman. The Chairman shall have the duties set forth in Reference (a), including but not limited to the following:

1. Preside at all Council meetings.
2. Call each meeting of the Council.
3. Approve the agenda for each meeting.
4. Select Council members.

B. *Vice Chairman*.—The Secretary of Defense shall designate one of the industry members to serve as Vice Chairman.

C. *Executive Secretary*.—The Secretary of Defense shall designate a full-time salaried officer or employee of the Department of Defense to serve as Executive Secretary of the Council. The Executive Secretary shall have the following duties:

1. Formulate a proposed agenda for all Council meetings.
2. Prepare and certify the minutes of each Council meeting.
3. Maintain continuous liaison with the industry members in order that the purpose of the Council can best be achieved.

V. Method of operation

The Council shall function in all respects in accordance with the requirements and provisions of Reference (a), and, pursuant to the provisions thereof, for the purposes of this Council summary minutes of the meetings will be kept. Meetings will be held at least semi-annually. Proposed agenda items may be submitted to the Executive Secretary by the Government personnel, in accordance with Departmental procedures, or by the industry members. Issues involved in agenda items will be thoroughly developed to facilitate orderly and profitable discussion.

VI. Cancellation

DOD Directive 5030.22, "Defense Industry Advisory Council" dated May 23, 1962 is hereby cancelled.

PAUL H. NITZE,
Deputy Secretary of Defense.

THE INDUSTRY ADVISORY COUNCIL—PURPOSE AND ACTIVITIES

The Council was originally established as the Defense Industry Advisory Council in May 1962 by Department of Defense directive in accordance with the Executive Order of the President and Department regulations governing the formation and use of Advisory Committees. As required by the Executive Order, each two years since 1962, it has been determined to be in the best interests of the Department to continue the existence of the Council. On April 24, 1968, the DOD Directive 5030.22 was reissued changing the title of the organization to Industry Advisory Council.

Establishment of the Council fulfilled a long felt need by providing the means, on an official basis, for direct and regular contact between the Secretary of Defense and his principal management assistants and knowledgeable industrial representatives with a wide range of business and industrial management experience. From an industry standpoint, the Council provides a regular forum for presentation and consideration of industry views and problems at the highest policy levels in the Department of Defense. Therefore, the Council is serving as a focal point for the review and discussion of mutual problems, presented at the initiative of either officials of the Department of Defense or Council mem-

bers from industry. It is providing a continuing and regular channel for two-way communication between the top levels of Defense management and this representative group of industrial leaders.

The current pace of technological breakthroughs and consequently the urgent need for compression of development and production cycles necessitate changes in the methods of planning, budgeting and contracting used by the Department of Defense. These same factors have an effect on industry performing Defense work.

Under such circumstances, there is a need for an understanding of the management problems currently faced or anticipated for the future by the Department of Defense at high levels in defense industry so that industry may contribute to a solution or make any necessary adjustments to meet the problems so identified. The Advisory Council was established to provide a means for helping to fill the communications gap between Defense officials and industry leaders on these problems.

Members of the Council are not, in any sense of the word, considered to be government employees. The members serve only in an advisory capacity to the Department, and have no responsibility or authority in respect to the decisions and actions of the Department. Members are carefully selected for appointment to the Council by the Secretary of Defense for their ability to provide expert opinions and advice because of their personal backgrounds in the management of certain types of industry and/or their experience in dealing with Defense and industrial relationship problems.

Topics or issues proposed for discussion with the Council by the Department of Defense are usually based on staff studies made within the Department. Council members may propose and present industry views based on studies by individuals, industrial associations, companies, or other groups, although in deliberations on all issues, it is understood that Council members will represent no one but themselves. Once an issue is fully identified, experts from the Department and industry are usually brought together in a supporting group to try to work out a solution reasonably acceptable to both the Department and industry. These supporting groups are organized as subcommittees (involving members of the Council) or study or working groups (without direct participation by Council members).

Council meetings must be held at least semiannually or more frequently as the occasion warrants. In practice, the Council has agreed upon a firm schedule of three meetings a year on the second Friday and Saturday of February, June, and October. Subcommittees and working groups of the Council meet as frequently as necessary to accomplish the tasks assigned.

DEPARTMENT OF DEFENSE INSTRUCTION

Subject: Performance Measurement for Selected Acquisitions.

- References: (a) DoD Directive 7000.1, "Resource Management Systems of the Department of Defense," August 22, 1966
 (b) DoD Directive 3200.9, "Initiation of Engineering and Operational Systems Development," July 1, 1965
 (c) Armed Services Procurement Regulation (1963 Edition)
 (d) MIL-STD-881 (to be published)

I. PURPOSE AND APPLICABILITY

This Instruction sets forth objectives and criteria and authorizes the publication of a guide, within the purview of reference (a), for the application of uniform DoD requirements for contractors' management control systems to selected Defense contracts. The provisions of this Instruction require the use of Cost/Schedule Control Systems Criteria (C/SCSC) in selected acquisitions and apply to all Military Departments and Defense Agencies (hereinafter referred to as DoD Components) which are responsible for acquisitions during engineering development, operational systems development, and production.

II. SCOPE

A. The acquisitions governed by this Instruction will be in selected contracts within programs which are estimated in the Five Year Defense Program to require (1) a total cumulative financing for Research, Development, Test and

Evaluation in excess of \$25 million or (2) cumulative production investment in excess of \$100 million. Firm fixed-price contracts will be excluded.

B. Subcontracts within applicable programs, excluding those that are firm fixed-price, will be selected for application of these criteria by mutual agreement between prime contractors and the contracting DoD Component, according to the criticality of the subcontract to the program. Coverage of certain critical subcontracts may be directed by the DoD subject to the changes article of the contracts.

III. OBJECTIVE

A. DoD contractors should be continuously alert to advances being developed in management control systems to improve their contract performance, and to serve DoD and their best interests. It is an objective of this Instruction to bring to the attention of and encourage DoD contractors to accept and install management control systems and procedures which are most effective in meeting their requirements.

B. To provide an adequate basis for responsible decision making by both contractor management and DoD Components, contractors' internal management control systems must provide data which (1) indicate work progress, (2) properly relate cost, schedule, and technical performance, (3) are valid, timely, and auditable, and (4) supply DoD managers with a practicable level of summarization.

IV. POLICY AND PROCEDURES

A. Policy

It shall be the general policy to (1) require application of the DoD criteria as stated in Enclosure 1 to programs that are within the scope of Section II above, (2) require no changes in contractors' existing management control systems except those necessary to meet the criteria, and (3) require the contractor to use data from his own management control system in reports to the Government.

B. Procedures

The procedures contained herein will not be construed as requiring the use of specific systems, or changes in accounting systems which will adversely affect the equitable distribution of costs to all contracts. To avoid the proliferation of demands on contractors for demonstrations of their management systems, the criteria outlined in Enclosure 1 shall be incorporated in a basic agreement between the DoD and the contractor wherever feasible and will apply to more than one contract. However, agreements concerning the acceptability and use of contractors' management control systems may be accomplished by the use of basic agreements, or through separate procurement contracts.

1. Basic Agreement

a. The use of a basic agreement contemplates the execution of a written instrument which includes C/SCSC and negotiated provisions which (1) reflect an understanding between the contractor and the DoD of the requirements of the DoD criteria, and (2) identify the specific system(s) which the contractor intends to use of applicable contracts with DoD Components. The basic agreement will include a written description of the system(s) validated in a demonstration review in sufficient detail to permit adequate surveillance by all interested parties. The use of a basic agreement in these circumstances is preferred where a number of separate contracts between one or more DoD Component(s) and the contractor may be entered into during the term of the basic agreement. It contemplates the delegation of authority to the cognizant DoD Component negotiating the basic agreement by all other DoD Components in order that it represent an understanding between the contractor and all prospective DoD contracting components. The basic agreements will be entered into pursuant to Section 3-410 of the Armed Services Procurement Regulation (reference (c)).

b. Action to develop a basic agreement may be initiated :

- (1) Unilaterally by the contractor ;
- (2) By a DoD Component request to the contractor ; and
- (3) By either the contractor or the DoD Component, as the result of a contractor's response to a Request for Proposal (RFP).

c. A basic agreement may be arrived at after evaluation of the contractor's management control system in the context of the criteria, within the contractor's present or proposed operating environment and not necessarily in response to an RFP. The management control system(s) identified in the basic agreement will

also be subjected to a demonstration review which may occur within the contractor's present operating environment, or in conjunction with the contractor's implementation of a separate DoD procurement contract.

2. Separate Procurement Contracts

As a result of either the requirement normally placed in an RFP or an action initiated by DoD Components, the contractor will provide a response which describes the integration of the basic subsystems to provide control of cost, schedule, and technical performance. This involves:

a. *Evaluation.*—The contracting DoD Component will conduct a design review as a part of normal procurement procedures to insure that the systems meet established criteria. When the systems have been evaluated and the contract awarded, the contracting DoD Component will notify the contractor of the results.

b. *Demonstration.*—DoD personnel will conduct an in-plant demonstration review of the contractor's management control systems. The purpose of systems demonstrations is to verify that the contractor is operating systems which meet the criteria. Upon completion of this demonstration, a written description of the system validated will be provided by the contractor in sufficient detail to permit adequate surveillance.

3. Demonstration Teams

a. The team conducting a demonstration review will ordinarily include representatives from the Army, Navy, Air Force (except where a Service requests nonparticipation due to noninvolvement), and the cognizant Defense Contract Audit Agency (DCAA) Auditor. The contracting or cognizant DoD Component will provide the team leader and will be responsible for all matters concerning the conduct of the demonstration review.

b. A detailed discussion of the team composition, tests, and guidance for the conduct of the review is contained in the Guide for Performance Measurement established under Section VI below.

4. Re-examination

a. In the event the contractor's system fails to pass the demonstration review, the cognizant DoD Component will discuss the specific shortcomings with the contractor and require the contractor to submit proposals for correcting deficiencies. Subsequent to official notification by the cognizant DoD Component of a failure, the portion(s) of the management control system that failed may be subjected to a follow-up review. Specific guidance and procedures concerning determination and resolution of failures are contained in the Guide for Performance Measurement.

b. Upon successful completion of demonstration review, contractors will not be subjected to re-examination (other than through normal surveillance), unless there are positive indications that the contractor's system no longer meets the criteria.

V. RESPONSIBILITIES

The DCAA will review the contractor's accounting system and determine the accuracy and reliability of the financial data contained in the reports prepared from the contractor's management control systems. Reviews of the technical considerations in the contractor's systems and reported data will be accomplished by the cognizant plant representative. The cognizant auditor and the plant representative will collaborate in reviewing areas of joint interest.

A. The surveillance reviews will consist of (1) recurring evaluations of the effectiveness of the contractor's policies and procedures to produce valid data consistent with the intent of this Instruction, and (2) selective tests of reported data.

B. The cognizant auditor will submit a formal report of any deficiencies that cannot be resolved with the contractor, to the contracting DoD Component(s) through the local plant representative.

VI. GUIDE

A. The office of the Assistant Secretary of Defense (Comptroller) (OASD(C)) will publish, revise as necessary, and distribute the Guide for Performance Measurement separately from this Instruction.

B. The OASD(C) will maintain surveillance over the procedures prescribed in the Guide for Performance Measurement and insure implementation and con-

tinuous operation in a uniform manner throughout the Department of Defense.

C. Until the Guide for Performance Measurement is published, application of the criteria to ongoing or proposed programs and associated reporting requirements will be subject to prior approval by the Assistant Secretary of Defense (Comptroller) (ASD(C)) or his designee for the purpose, with the concurrence of the Director of Defense Research and Engineering and the Assistant Secretary of Defense (Installations and Logistics).

VII. EFFECTIVE DATE AND IMPLEMENTATION

This Instruction is effective immediately. Two (2) copies of the proposed implementation documents will be forwarded to the ASD(C) within ninety (90) days after the date of this Instruction. Implementing instructions will not be published until thirty (30) days after their submission to ASD(C) for their review.

R. N. ANTHONY,

Assistant Secretary of Defense (Comptroller).

Enclosure.

COST/SCHEDULE CONTROL SYSTEM CRITERIA

1. GENERAL

Any system used by the contractor in planning and controlling the performance of the contract shall meet the criteria set forth in 3. below. Information which is required by the Department of Defense must be produced from the contractor's system. Data requirements of the DoD are specified in a separate data requirements list accompanying each RFP. Nothing in these criteria is intended to affect the basis on which costs are reimbursed and progress payments are made and nothing within will be construed as requiring the use of any single system, or specific method of management control or evaluation of performance. The contractor's internal systems need not be changed, provided they satisfy these criteria.

a. An element in the evaluation of proposals will be the proposer's system for planning and controlling contract performance. The proposer will fully describe the system to be used. The prospective contractor's cost/schedule control system proposal will be evaluated to determine that it meets these criteria. The prospective contractor will agree to operate such a system throughout the period of contract performance if awarded the contract. The DoD will agree to rely on the contractor's system and therefore will not impose a separate planning and control system.

b. The Cost/Schedule Control Systems Criteria (C/SCSC) must be included as a requirement in Requests for Proposals leading to contracts implementing those programs which are estimated in the Five Year Defense Program to require (1) a total cumulative financing for Research, Development, Test and Evaluation in excess of \$25 million or (2) cumulative production investment in excess of \$100 million. Firm fixed priced contracts will be excluded. When a basic agreement has been entered into between the DoD and a contractor, setting forth conditions pertaining to the contractor's control systems, the contractor's response in an RFP should cite the basic agreement and any planned substantive changes thereto and state that it will be applicable to the contract resulting from the RFP. In these circumstances this response will satisfy the C/SCSC requirement in the RFP.

2. DEFINITIONS

a. Applied direct costs

(1) The amounts recognized in the time period associated with the consumption of labor, material and other direct resources, without regard to the date of commitment or the date of payment. These amounts are to be charged to work-in-process in the time period that any one of the following takes place:

(a) When labor, material and other direct resources are actually consumed, or

(b) When material resources are received that are uniquely identified to the contract and scheduled for use either within the same accounting period or not later than the next accounting period, or

(c) When material resources, such as major components, are received that are specifically and uniquely identified to a single serially numbered end item.

(2) Under this definition, certain material costs are considered as applied when the articles are received even though temporarily stored in inventory areas so long as these costs meet the above criteria and government furnished material is excluded.

b. *Direct Costs*. See ASPR 15-202.

c. *Indirect Costs*. See ASPR 15-203.

d. *Incurred Costs*. See ASPR E-509.5.

e. *Latest Revised Estimate of Cost at Completion*. Applied direct costs, plus indirect costs allocable to the contract, plus the estimate of costs for work remaining.

f. *Management Reserve*. The algebraic difference between the contract price and the sum of all the budgeted costs.

g. *Organizational Element*. Any defined unit within the contractor's organizational structure which is responsible for accomplishing the work.

h. *Original Budget*. The budget prepared at, or near, the time the contract was signed, and consistent with the contract price.

i. *Overhead (Indirect Costs)*. See ASPR 3-701.3.

j. *Project Summary Work Breakdown Structure*. The Work Breakdown Structure for a specific defense materiel item which has been prepared by DoD Components in accordance with MIL-STD-881 by selecting (based on systems engineering during concept formulation or its equivalent) applicable elements from one or more Summary Work Breakdown Structures (see MIL-STD-881 draft).

k. *Related Resources*. The labor, materials and services required to perform work.

l. *Work Breakdown Structure*. A product-oriented family tree division of hardware, software, services and other work tasks which organizes, defines, and graphically displays the product to be produced as well as the work to be accomplished in order to achieve the specified product.

m. *Work Package*. A delineation of work required to complete a particular job. It may be established at any level with the work breakdown structure where all the following characteristics are present:

(1) It represents units of work at levels where performance is managed.

(2) It has scheduled start and completion dates and is definable in terms of scope and work and budgets (expressed in labor hours, dollars, or other meaningful units).

(3) It is measurable in the same terms as set forth in 2.m.(2) above.

(4) It is such that responsibility for performing the work is assignable to a single organizational element.

(5) Its size and duration is established to reflect the foregoing, the type of work involved, and the necessity of using relatively short spans of time to minimize the requirements to use estimates, arbitrary formulae or other less objective means of evaluating status of work in process.

(6) It is integrated with detailed engineering, manufacturing and other schedules as applicable.

n. *Work Performed*. Includes completed work packages and the completed portion of work packages begun and not yet completed.

3. CRITERIA

The contractor's system will include policies, procedures, and methods which are designed to insure that it will accomplish the following:

a. Organization

(1) Define all the authorized work and related resources to meet the requirements of the contract, using the framework of the contractor's extension of an appropriate work breakdown structure.

(2) Identify the authorized work within the following categories:

(a) Discrete work packages with a defined end result, or

(b) Level of effort or apportioned-effort work packages whose completion does not produce a definable end result.

(3) Identify the internal organizational elements and the major subcontractors responsible for accomplishing the authorized work.

(4) Identify the managerial positions responsible for controlling overhead (indirect costs).

(5) Identify overhead (indirect costs) and the methods used for its allocation.

Planning and budgeting

- (1) Describe, plan and schedule the work.
- (2) Identify physical products, milestones, technical performance goals, or other indicators that will be used to measure output.
- (3) Establish budgets for all authorized work.
- (4) To the extent the authorized work has been identified in the categories described in 3.a.(2) above, establish budgets for these categories in terms of dollars, hours or other acceptable units.
- (5) Establish overhead budgets for the total costs of each significant organizational component whose expenses will become indirect costs. Reflect in the contract budgets at the appropriate level, the amounts accumulated in overhead pools that will be allocated to the contract as indirect costs.
- (6) Identify management reserves, if used.
- (7) Provide that the contract price plus the estimated undefinitized price of authorized but unpriced changes and unpriced work is reconciled with the sum of all internal contract budgets and management reserves.
- (8) Retain the original budgets for those elements of the work breakdown structure identified as priced line items in the contract and for those elements at the lowest level of the DoD Project Summary Work Breakdown Structure as a traceable basis against which contract performance can be compared.

c. Accounting

- (1) Record applied direct costs on a basis consistent with the budgets in a formal system that is controlled by the general books of account.
- (2) Record indirect costs all or part of which will be allocated to the contract.
- (3) These formal records in (1) and (2) above should make it possible to determine unit or lot costs for priced line items.
- (4) Summarize applied direct costs and overhead allocations in the accounting records for (a) those elements of the work breakdown structure identified as priced line items in the contract, and (b) those elements at the lowest level of the DoD Project Summary Work Breakdown Structure.
- (5) Identify the bases for allocating the cost of level of effort or apportioned-effort work packages to appropriate cost accounts.
- (6) Provide a basis for auditing records of incurred costs, applied direct costs, and overhead (indirect costs).

d. Reporting

- (1) Identify on a monthly basis or more often at the discretion of the contractor in the detail needed by management for effective control, using data from, or reconcilable with, the accounting system:
 - (a) Applied direct costs for work performed and the budgeted costs for the same work.
 - (b) Actual indirect costs and budgeted indirect costs.
 - (c) Budgeted costs for work performed and budgeted costs for work scheduled.
 - (d) Significant variances resulting from the above comparisons classified in terms of labor, material, overhead, and any other appropriate elements, together with the reasons therefor.
- (2) Identify, on a monthly basis or more often at the discretion of the contractor significant differences between actual and planned schedule and actual and planned technical performance, together with the reasons therefor.
- (3) Identify managerial actions that are made necessary by the above.

e. Revisions

- (1) Estimate the effect of both authorized changes and internal replanning actions on technical performance, schedule, and cost provisions of the contract, and record the effects of authorized changes and internal replanning actions in schedules and budgets.
- (2) Reconcile original budgets for those elements of the work breakdown structure identified as priced line items in the contract, and for those elements at the lowest level of the DoD Project Summary Work Breakdown Structure, with current budgets in terms of (a) changes to the authorized work and (b) internal replanning in the detail needed by management for effective control.
- (3) Prohibit retroactive changes to records pertaining to work performed that will change previously reported amounts for applied direct costs, indirect costs, and budgets, except for normal accounting adjustments or for reasons agreed to by the contracting parties.

(4) Based on performance to date and on estimates of future conditions, develop latest revised estimates of cost at completion and reconcile these with:

- (a) Original budgets for those elements of the Work Breakdown Structure identified as priced line items in the contract;
- (b) Original budgets for those elements at the lowest level of the DoD Project Summary Work Breakdown Structure;
- (c) Current budgets;
- (d) Contract price; and
- (e) The contractor's latest statement of fund requirements reported to the Government.

DEPARTMENT OF DEFENSE INSTRUCTION

Subject: Selected acquisition reports (SAR).

References: (a) DoD Directive 7000.1, "Resource Management Systems of the Department of Defense," August 22, 1966

- (b) DoD Directive 7045.7, "Review and Approval of Changes to the Five Year Defense Program," December 22, 1967
- (c) DoD Instruction 7000.2, "Performance Measurement for Selected Acquisitions," December 22, 1967

I. PURPOSE AND APPLICABILITY

A. This Instruction standardizes the format and instructions to be followed by the Military Departments responding to requirements for summary reporting of technical, schedule, and cost information concerning selected acquisitions. These reports are designed for the use of the Secretary of Defense.

B. Selected Acquisition Reports will summarize current estimates of technical, schedule, and cost performance in comparison with the original plan and the current approved program.

II. SCOPE

The selected acquisitions on which reports may be required will be limited to those programs which are estimated in the Five Year Defense Program (FYDP) to require (1) a total cumulative financing for Research, Development, Test and Evaluation in excess of \$25 million or (2) cumulative production investment in excess of \$100 million.

III. DEFINITIONS

As used in this Instruction, the following definitions will apply.

A. *Approval for Deployment.* The decision of the Secretary of Defense which authorizes procurement of a system or item, and makes it a part of the planned force structure in the FYDP.

B. *Original Plan.* The plan under which the acquisition was approved for deployment. A Program Change Decision and Development Concept Paper normally describe the original plan.

C. *Current Approved Program.* See "approved programs," reference (b).

D. *Current Estimate.* An up-to-date (revised at least quarterly) estimate based on an assessment by the reporting Military Department.

IV. PROCEDURE

A. Pursuant to responsibilities assigned in reference (a), the Assistant Secretary of Defense (Comptroller), in coordination with the Director of Defense, Research and Engineering and the Assistant Secretaries of Defense (Installations and Logistics) and (Systems Analysis), will designate to the Military Department (1) the selected acquisition(s) to be reported (2) whether a complete or partial report is required, and (3) the due date of the initial report(s). For partial reports information on contractor costs will not be required.

B. On those selected acquisitions designated for reporting, the responsible Military Department will submit required information (see Enclosure 1) to the Assistant Secretary of Defense (Comptroller).

C. Upon notification that an acquisition has been designated for reporting, the responsible Military Department will choose and submit a list of specific milestones, characteristics, and cost groupings to the ASD(C) for inclusion in the Selected Acquisition Report (See Enclosure 1). This list will be reviewed and

approved by the ASD(C), in coordination with DDR&E, ASD(I&L) and ASD(SA).

D. The requirement for information as specified herein shall not be used as an authority to require additional data from the contractor. Information presented in this report should be based on estimates made by the Military Department and summarizations of data normally received from contractors.

V. SUBMISSIONS

A. Selected Acquisition Reports will be prepared as of the end of each calendar quarter and submitted (original and two copies) not later than forty-five (45) days after the end of the quarter.

B. This requirement is assigned Report Control Symbol DD-Comp(Q) 823.

C. The Assistant Secretary of Defense (Comptroller) will notify responsible Military Departments of terminations of specific Selected Acquisition Report requirements.

VI. EFFECTIVE DATA AND IMPLEMENTATION

This Instruction is effective immediately. Two (2) copies of all implementing documents will be forwarded to the Assistant Secretary of Defense (Comptroller) within sixty (60) days.

R. N. ANTHONY,
Assistant Secretary of Defense (Comptroller).

Enclosures.

[Enclosure 1]

INSTRUCTIONS FOR PREPARATION OF SELECTED ACQUISITION REPORTS (SAR)

I. GENERAL

The Selected Acquisition Report is designed to provide summary information from data collected through other authorized information systems concerning designated acquisitions for use by the Secretary of Defense. Selected technical, schedule, quantity, and cost information shall be provided concerning the original plan (which shall be retained for use as a baseline), current approved program, and current estimates, as specified below.

II. INSTRUCTIONS FOR SAR FORMAT (ENCLOSURE 2)

A. *Date*—Enter date SAR submitted.

B. *Program*—Enter name of the designated acquisition.

C. *Responsible Office and Phone Number*—Self explanatory.

D. *Current Report Date*—Enter the cut-off date applicable to this report.

E. *Technical*—This section includes the characteristics that in the judgment of the responsible Military Department best reflect the performance intended for the acquisition. These characteristics may include performance characteristics (e.g., range, speed, accuracy), design characteristics (e.g., weight), and/or operating characteristics (e.g., reliability, operating cost per ton-mile). As a minimum these characteristics should include the characteristics relating to decision thresholds listed in the current Development Concept Paper.

1. *Original Plan*—Enter the original intended performance for the characteristic as contained in the original plan.

2. *Current Approved Program*—Enter the current intended performance for the characteristic, reflecting any changes which have been approved by the Secretary of Defense or the Director, Defense Research and Engineering.

3. *Current Estimate (As of Date)*—Enter the performance which has been demonstrated to date or, in the judgment of the responsible Military Department, the performance which can be reasonably anticipated when the system becomes operational.

F. *Schedule*—This section will contain the key milestones identified by the responsible Military Department. Examples of some key milestones are: R&D program initiated, completion of first test unit, first test flight, first operational unit delivered, initial operational capability. As a minimum these milestones should include the milestones relating to decision thresholds listed in the current Development Concept Paper.

1. *Original Plan*—Enter the completion date for each key milestone as contained in the original plan.

2. *Current Approved Program*—Enter the current approved completion date for each key milestone.

3. *Current Estimate*—Enter the current estimate of when these milestones will be achieved.

G. *Quantity*—This section indicates the quantities of RDT&E (development and test) units and production units. (Exclude foreign sales.)

1. *Original Plan*—Enter the quantities approved in the original plan.

2. *Current Approved Program*—Enter the quantities approved in the current approved program.

3. *Units Accepted*—Enter the number of units which have been accepted to date.

H. *Program Costs*—Program cost estimates for RDT&E and production will be reported within individual cost groupings identified as deemed appropriate by the responsible Military Department. For example, production costs may be separately identified for flyaway, peculiar support, and initial spares. (Exclude foreign sales.)

1. *Original Plan at Original Quantity*—Enter the cost estimates contained in the original plan.

2. *Original Plan at Current Quantity*—Enter the cost estimates of the original plan adjusted to reflect the changes in quantity between the original plan and the current approved program. These adjustments should be based on the cost-quantity curves used in the original plan, or approximations thereof.

3. *Current Approved Program*—Enter the approved changes in cost estimates.

4. *Current Estimate*—Enter the current estimate of total program costs, as prepared by the responsible Military Department. Although contractor cost estimates may be considered, this estimate must be essentially an independent assessment of total program costs.

5. *NOTE*—Enter total RDT&E and production cost changes due to capability increases (decreases) between (1) the original plan and the current approved program and (2) the current approved program and the current estimate. Capability increases (decreases) are changes which increase (decrease) the intended effectiveness of the acquisition, using the original plan as a base line. Increases shall not include improvements required to enable the system to achieve its originally intended capability.

I. *Contractor Costs*—Contractor cost information will be included for each major contractor reporting data in consonance with reference (c) or a similar interim system. RDT&E and production contract information will be reported separately. (See reference (c) for specific definitions.)

1. *Cost to Date, Scheduled*—Enter the budgeted cost of work scheduled as of the close of the SAR reporting period. This figure will be based on the original budget plus authorized contract changes, but not including profit or fee.

2. *Cost to Date, Budgeted*—Enter budgeted cost of work performed as of the close of the SAR reporting period. This figure will be based on the original budget plus authorized contract changes, but not including profit or fee.

3. *Cost to Date, Actual*—Enter, for work performed, the sum of applied direct costs and indirect costs. Profit or fee earned to date will not be included.

4. *Price at Completion, Budgeted*—Enter the budgeted cost at completion to the government based on the original budget plus authorized contract changes. This figure will include profit or fee. It should be equal to the current contract price plus the estimated price of authorized but unpriced changes. No estimated overrun will be included.

5. *Price at Completion, Estimated*—Enter latest revised estimate of cost at completion to the government. This figure will include estimated overrun and estimated profit or fee.

III. INSTRUCTIONS FOR SUPPORTING INFORMATION FORMAT (ENCLOSURE 3)

A. *Current Report Date*—Enter current report date of SAR this information supports.

B. *Program*—Enter name of SAR designated acquisition.

C. *Technical Variance Analysis*—Explain, in summary form, the significant variances between the original plan, current approved program, and current estimates for the technical characteristics presented on the SAR format.

D. *Schedule Variance Analysis*—Explain, in summary form, the significant variances between the original plan, current approved program, and current estimates for the schedule milestones presented on the SAR format.

E. *Program Cost Variance Analysis*—Explain any significant variance between the cost estimates in the original plan, current approved program, and current estimate in terms of:

1. *Capability Increase (Decreases)*—This explanation should include a list of items included in the capability increases (decreases) described in the SAR format.

2. *Contractor Cost Increases (Decreases)*—This explanation should include contractor overruns (underruns) and other contractor cost increases (decreases).

3. *Items Added (Deleted)*—This explanation should include items other than capability increases (decreases) which have been added to (deleted from) the program since (a) the original plan or (b) the current approved program. Government-furnished equipment not in the original plan should be included in this category.

4. *Other Cost Increases (Decreases)*—This explanation should include all significant changes in cost estimates not covered by paragraphs III.E. 1, 2. and 3. above.

F. *Contractor cost variance analysis*

1. *Cost to Date Categories*—Explain any significant variance between scheduled, budgeted and actual costs to date by major contractor, separately for RDT&E and for production.

2. *Cost at Completion Categories*—Explain any significant variance between budgeted and estimated cost at completion by contractor, separately for RDT&E and for production.

G. The official documents used to describe the original plan shall be referenced in the initial SAR submission.

H. Cost-quantity curves for the original plan and for each current approved program shall be submitted on a one-time basis.

[Enclosure 2]

Date _____ 7000.3(Encl 2)
Feb. 23, '68SELECTED ACQUISITION REPORT
PROGRAM _____Responsible Office _____
Phone Number _____

Current Report Date _____

| | <u>Original Plan (Date)</u> | <u>Current Approved Program (Date)</u> | <u>Current Estimate (As of Date)</u> |
|--|-------------------------------------|--|--|
|--|-------------------------------------|--|--|

TECHNICAL

- 1.
- 2.
- 3.
- 4.
- 5.

SCHEDULE

- 1.
- 2.
- 3.
- 4.
- 5.

QUANTITYUnits Accepted

RDT&E

Production

| | <u>Original Plan</u> | | <u>Current</u> | <u>Current</u> |
|--------------------------------|----------------------|------------------|-----------------|-----------------|
| <u>PROGRAM COSTS (\$ Mil.)</u> | <u>@ Original</u> | <u>@ Current</u> | <u>Approved</u> | <u>Estimate</u> |
| | <u>Quantity</u> | <u>Quantity</u> | <u>Program</u> | <u>Estimate</u> |

RDT&E

Production

1.

2.

3.

Total

Total Program

NOTE: Capability increases (decreases in the current approved program are \$_____ for RDT&E and \$_____ for Production, and in the current estimate \$_____ for RDT&E and \$_____ for Production.

| <u>CONTRACTOR COSTS (\$ Mil.)</u> | <u>Cost to Date (as of _____)</u> | | | <u>Price at Completion</u> | |
|-----------------------------------|-----------------------------------|-----------------|---------------|----------------------------|------------------|
| | <u>Scheduled</u> | <u>Budgeted</u> | <u>Actual</u> | <u>Budgeted</u> | <u>Estimated</u> |

RDT&E

1.

2.

Production

1.

2.

3.

[Enclosure 3]

Current Report Date _____

SUPPORTING INFORMATION
PROGRAM _____

- A. Technical Variance Analysis

- B. Schedule Variance Analysis

- C. Program Cost Variance Analysis
 - 1. Capability Increases (Decreases)

 - 2. Contractor Cost Increases (Decreases)

 - 3. Items Added (Deleted)

 - 4. Other Cost Increases (Decreases)

- D. Contractor Cost Variance Analysis
 - 1. Schedule Variance to Date (Schedule versus Budgeted)
 - a. RDT&E

 - b. Production

 - 2. Cost Variance to Date (Budgeted versus Actual)
 - a. RDT&E

 - b. Production

 - 3. Cost Variance at Completion (Budgeted versus Estimated)
 - a. RDT&E

 - b. Production

(As many additional pages as necessary may be used.)

DESCRIPTION OF MAJOR WEAPON SYSTEMS

SYSTEMS IN CONTRACT DEFINITION

SSN-688, submarine, nuclear attack (hi-speed)

Its mission is to destroy enemy ships, primarily submarines.

DD 963 class (formerly DX) ship

Its mission is to operate offensively, in the presence of an air, surface, or sub-surface threat with strike, anti-submarine or amphibious forces; and to provide protection to underway replenishment groups, and military or mercantile convoys against surface or subsurface threats.

S-3A, advanced carrier based ASW air weapon system

Its mission is to provide a carrier based Anti-Submarine Warfare (ASW) weapon system that will be effective against the projected submarine threat of 1975 and beyond.

AWACS 411L, airborne warning and control system

AWACS is an Air Defense Command and Tactical Air Command system. It is a survivable warning and control environment for Air Defense. In addition, it would offer quick reaction command, control and communications for global deployment to any limited war theatre.

F-15, advanced tactical fighter

The F-15 is an advanced tactical fighter being developed for the Air Superiority Mission. It will replace the F-4E in the mid-seventies. It is a twin engine, single crew, fixed sweep aircraft. It will be characterized by high thrust to weight and low wing loading for maximum turnability acceleration and agility. It will weigh 40,000 pounds or less and use a radar missile, short range missile and an internal 25 mm. gun.

DXGN, nuclear-powered missile destroyer

Its mission is to operate offensively, in the presence of an air, surface, or sub-surface threat: independently or with nuclear or conventional strike forces, and to provide protection to these forces and other naval forces or convoys against air, surface, or sub-surface threats.

SYSTEMS IN FULL SCALE DEVELOPMENT

Lance XMGM-52A, missile system

LANCE is an economical, lightweight, highly mobile system, designed to give general fire support to infantry, armored, mechanized, and airborne divisions. The system is comprised of four major components. The Missile, Lightweight Launcher, Self-Propelled Launcher and Transporter-Loader. The basic vehicle, which is transformed into a self-propelled launcher by mounting the lightweight launcher in its cargo area, is also the basic vehicle for the transporter-loader.

Safeguard, ballistic missile defense system

The SAFEGUARD Ballistic Missile Defense (BMD) System is to provide protection of the nation's offensive missile capability. The system is comprised of SPRINT missiles, SPARTAN missiles, Perimeter Acquisition Radars, Missile Site Radars, and supporting facilities.

CVAN-69, carrier, attack aircraft, nuclear

Its mission is to support and operate aircraft, to engage in attacks on targets afloat and ashore which threaten our control of the sea, and to engage in sustained operations in support of other forces.

POSEIDON UGM-73A, fleet ballistic missile system

Its mission is to develop and deploy a flexible sea-based Fleet Ballistic Missile weapon system to provide a highly invulnerable offensive weapon as a primary deterrent to enemy initiation of surprise nuclear attack, capable of inevitable retaliation against specified targets. POSEIDON is a two-stage solid propellant missile with improved accuracy, larger payload than POLARIS and with multiple independent re-entry vehicles.

Sparrow (AIM 7F), guided missile air-to-air

Its mission is the destruction of airborne targets in all weather from all aspects; also incorporates Home-on-Jam capabilities.

Walleye II, guided weapon, air-to-surface short range

WALLEYE is an air-to-surface TV guided glide weapon. Its mission is to passively home on and destroy tactical land targets and ships visually acquired and identified from the launching aircraft before weapon release. An automatic tracking television system in the weapon provides guidance and frees the pilot of any control responsibility after launch. Weapon size and weight are compatible with light attack and fighter aircraft.

F-14A, airplane, fighter, all weather

The F-14A is planned as a high performance fighter aircraft capable of performing air-to-air combat and limited air-to-surface attack missions. It may be a two-man variable geometry, supersonic carrier based aircraft.

Torpedo MK 48 MOD-O, torpedo, wire-guided

The Torpedo MK 48 Weapon System is being developed to provide the Fleet with a modern torpedo. The MK 48 Torpedo is a long range homing weapon which can be wire-guided during that portion of its run prior to acoustic acquisition of its target. The MK 48 primary mission is ASW: a high kill probability against all submarines in the 1970 decade.

Torpedo MK 48 MOD-1, wire-guided, non-nuclear

The Torpedo MK 48 Weapon System is being developed to provide the Fleet with a modern torpedo having a non-nuclear warhead. The MK 48 Torpedo is a long range homing weapon which can be wire-guided during that portion of its run prior to acoustic acquisition of its target. The MK 48 primary mission is ASW: a high kill probability against all submarines in the 1970 decade.

Condor AGM-53A, guided missile, air-to-surface

Provides an air-to-surface stand-off delivery capability for delivering a high-explosive warhead.

SRAM AGM-69A, Short Range Attack Missile

The Short Range Attack Missile (SRAM) AGM-69A is an air launched air-to-surface missile designed to maintain our high confidence of successfully attacking targets defended by sophisticated defense systems. To accomplish this objective, the SRAM system will present to a defender a threat that is significantly different from the ballistic re-entry vehicle threat. The SRAM will be carried on B-52G/H and FB-111.

Maverick AGM-65A, Guided Rocket

The MAVERICK will be an air-to-ground automatic television guided, rocket boosted tactical missile to be carried on the F-4D/E and A-7D worldwide to kill hard, small, fixed or moving targets.

Phoenix (AIM-54), Guided Missile, Air-to-Air

The PHOENIX Missile System is comprised of a long-range air-borne missile control system (AMCS) with multiple target handling capabilities, and long range missiles. The mission is to kill multiple air targets. Missiles will be carried aboard the F-14A. Near simultaneous launch is possible against targets in all weather, heavy jamming environment.

SYSTEMS IN PRODUCTION

Sheridan M551, Armored Reconnaissance/Airborne Assault Vehicle

A light-weight, full-tracked vehicle, fabricated from aluminum and steel armor, used as the main reconnaissance vehicle for armor, infantry and airborne operations and combined arms teams not employing the main battle tank. It has inherent swimming and airdrop capability, increased fire power, greater tactical and strategic mobility and capability for longer sustained action. Greatly improved hit and kill probability are obtained through the use of a 152mm Gun/Launcher which fires, without adaption devices, either conventional ammunition or the Shillelagh missile at the option of the commander.

Shillelagh MGM & MTM-51C, Missile System

Self-propelled direct line-of-sight anti-tank guided missile adaptable to the Armored Reconnaissance/Airborne Assault Vehicle M60A1E2 and MBT-70. The missile is guided along the gunner's line-of-sight by use of an infrared tracking and command link.

CVAN-68, Carrier, Attack Aircraft, Nuclear

To support and operate aircraft, to engage in attacks on targets afloat and ashore which threaten our control of the sea, and to engage in sustained operations in support of other forces.

Sparrow (AIM 7E), Guided Missile, Air-to-Air

Its mission is the destruction of airborne targets in all weather from all aspects; also incorporates Home-on-Jam capabilities.

P-3C Orion, Patrol Airplane

Primary mission is anti-submarine warfare; to detect, classify, localize and destroy high-performance submarines (of the 1968-1980 period) in areas where enemy air opposition is not expected; long range barrier patrols, convoy escort, hold down, hunter-killer operations and area search in all weather conditions; and to act as in-flight area coordinator at a scene of action. Secondary mission is aerial mining. The P-3 is a land-based, turboprop powered (4 engines) patrol plane.

A-7E Corsair II, Airplane Attack Visual

The A-7 is a land/carrier-based subsonic, medium range, visual, light attack aircraft carrying tactical nuclear weapons and practically all types of conventional ordnance in the Navy's inventory while performing close tactical air support, interdiction of air superiority missions. The A-7 provides a substantial increase in radius and load carrying capability over the A-4 which it replaces.

Minuteman II/III, LGM-30F/G, Guided Missile Surface Attack, Silo Launched

The mission of the MINUTEMAN Weapon System is to destroy those targets designated by the Single Integrated Operation Plan in accordance with the National Strategic Target List. Targetable range is frp, 2000n.m. to 7500n.m. MINUTEMAN missiles will be hardened and dispersed in remote areas to survive attack by the enemy and retain a capability to perform the assigned mission.

*F-111, fighter-reconnaissance aircraft-bomber**Tactical Fighter*

The F-111A is an advanced tactical fighter, combat tested in 1968. It has unsurpassed all-weather tactical capability with both nuclear and conventional weapons. The F-111 is unique in its all-weather long range attack capability and has secondary capabilities in close air support, counter-air and other tactical missions.

Reconnaissance Aircraft

RF-111D is a tactical reconnaissance weapon system which will support air and surface forces in both general and limited wars under all weather conditions. It will provide photographic, radar, and infrared sensor reconnaissance in support of Army and Tactical Air operations. Ferry range will permit basing the RF-111D in CONUS with a non-stop capability overseas during periods of international tension.

Strategic Bomber

Medium range strategic bomber. Performs high and low altitude penetration and attack missions against surface targets. Carries nuclear bombs and Short Range Attack Missiles (SRAM) or conventional free-fall weapons. The FB-111A is a two engine, two place, side-by-side seating arrangement aircraft. Significant features include a variable sweep wing short take-off and landing capability, forward looking and terrain following radars, and inertial navigation capability.

C-5A Galaxy, cargo/transport aircraft

The C-5A will provide a fast reaction capability to airlift combat or support units world-wide under general and limited war and peacetime conditions. It will be capable of air-dropping troops and equipment. The C-5A was conceived to match material mobility with manpower mobility. It will have four turbofan engines separately mounted under a 25 degree swept wing, fuselage mounted landing gear, truckbed height cargo compartment that has a straight through loading/unloading capability and a "T" shape empennage.

A-7D Corsair II tactical attack aircraft

Single engine, attack fighter to deliver conventional weapons under reduced visual conditions during the 1970-77 time period. To be used by TAC and PACAF for close air support with a secondary role of interdiction where air superiority exists.

LHA Ship, general purpose assault

To transport and land troops and their essential combat equipment and supplies by means of embarked helicopters, amphibious craft and amphibious vehicles, in amphibious assault.

Chairman PROXMIRE. Our next witness is Mr. Ernest Fitzgerald, Deputy for Management Systems, Department of the Air Force.

Mr. Fitzgerald, an industrial engineer by education and experience, was employed with manufacturing companies doing defense and other Government business from 1951 through 1957. From 1957 to 1965, he was management consultant for both the defense industry and the Department of Defense. He was appointed to his present position in 1965.

Mr. Fitzgerald, we are very happy to have you. I have read your statement. It is a fine statement. You may begin when you are ready?

STATEMENT OF A. E. FITZGERALD, DEPUTY FOR MANAGEMENT SYSTEMS, OFFICE OF THE ASSISTANT SECRETARY OF THE AIR FORCE (FINANCIAL MANAGEMENT)

Mr. FITZGERALD. Thank you very much, Mr. Chairman.

PROBLEMS AND OPPORTUNITIES IN CONTROLLING MAJOR WEAPONS ACQUISITION COSTS

Mr. Chairman, members of the subcommittee, ladies and gentlemen, it is a privilege to appear before you again. I am flattered by being asked to discuss so broad a subject as "the Military Budget and National Economic Priorities." In an effort to make a meaningful contribution to your hearings on this subject, I would like to restrict the scope of my remarks to a somewhat narrower area. Specifically, I would like to discuss problems and opportunities in controlling major systems acquisition costs. "Major systems" in the Air Force would be such things as the F-111, including the Mark II avionics, the Minuteman, the short-range attack missile (SRAM), and the C-5A. I have restricted my remarks to this field of acquisition because of my belief, based on personal observations and experience, that these major programs and the contractors who assist us in their development and production present a special class of acquisition problems. In my opinion, the Government is much more solicitous of the contractor's welfare in its business dealings with giant systems contractors than with smaller suppliers. Partly for this reason, I believe that there is enormous cost reduction potential in the major programs.

I also wish to point out that my observations apply primarily to Air Force programs, which represent my most recent experience.

In my appearance before this subcommittee on November 13, 1968, I briefly discussed cost control systems on our major weapons programs. In this testimony, I pointed out that, in my view, clearly understood management objectives or goals are necessary as a background for successful cost control systems application. In other words,

the top management must present the cost problem to be solved. This is much more important in the Government than in private business, where the discipline of the profit and loss statement helps point up such problems. I then stated that the control systems themselves should consist as a minimum of:

1. Standards of cost performance;
2. Procedures for reporting of actual performance to be compared with actual standards;
3. Analyses of results reported to Government and industry managers; and
4. Provision for corrective action as the need is indicated.

Today, I would like to expand on several aspects of this list of requirements for effectiveness, but reversing the order somewhat. I would like to discuss: First, provisions for corrective action; second, standards of cost performance especially the so-called "should cost" type of cost standard; and third, the overall management objectives and importance to achievement of improved levels of weapons cost. Following this discussion, I would like to submit my appraisal of current acquisition practices and their broad effects. Finally, I shall present my assessment of opportunities for improvement.

The subject of corrective actions for acquisition cost problems is a very controversial subject. In common with many other such subjects, the terms employed mean different things to different people. In general most of the weapons acquisition community calls problems created by excessive or increased costs "funding problems." Funding problems are manifest when requirements for money exceed the supply on the program. In general, one of three solutions to this imbalance is recommended and usually accepted:

1. Add money to the program,
2. Cut back the program by eliminating portions of it, or
3. "Stretch" the program, that is, do the planned work over a longer period of time.

In the 3 years and 9 months I have worked in the Pentagon, I have never heard a program manager propose cost reduction as a solution to a "funding problem." Practically speaking—

Chairman PROXMIRE. Would you repeat that statement.

Mr. FITZGERALD. In the years I have worked in the Pentagon I have never heard a program manager propose cost reductions as a solution to a funding problem.

Chairman PROXMIRE. And you worked in the Pentagon what period?

Mr. FITZGERALD. Almost 4 years.

Chairman PROXMIRE. And you have been working with these people during that period consistently?

Mr. FITZGERALD. Consistently until last November, Mr. Chairman.

Practically speaking, it is not a recognized alternative. With rare exceptions this has been true even when the cost of the items in the program had escalated wildly and avoidable inefficiencies were well documented. It should be noted that regardless of initial level of costs or of increases in the cost of items in the program, a "funding problem" does not exist if money is available to pay the bill. Therefore, I conclude that the first difficulty is recognition and admission of the existence of cost problems. Even when the possibility of excessive contractor cost is suggested, corrective action possibilities are viewed as

being extremely limited. In my earlier testimony, I listed several possibilities—

- Contractual incentives and constraints;
- Catalytic actions by the Government aimed at stimulating contractor actions;
- Unilateral Government actions, such as disallowance of excessive costs or contractual direction to “cure” cost problems, and finally; and
- Contract termination.

Only the extremes of this spectrum of available action are widely acknowledged as appropriate. That is, we are usually told by our procurement and program management people that we must depend completely on contractual restraints or cancel the program. Unfortunately, contractual constraints have proved ineffective in the major programs. I believe this ineffectiveness is a result of the fact that contracts with major suppliers tend to adapt to the financial needs of those contractors. In the C5A program, this adaptive process is expected to take place largely through application of the new well-known repricing formula. In other programs, such as the Minuteman, the adaptive process takes the form of contract changes. In at least one program, SRAM, we have both. I do not intend to imply here that the total content of contract changes is so-called get-well money. The changes usually have a core of necessity. However, each contract change—hundreds a year on the Minuteman program—offers an opportunity to add extra cost to offset past, present or expected financial difficulties. In any event, the practical effect is indisputable. Despite so-called high-risk contracting, I know of no instance of a large contractor losing money on a major weapons system prime contract. One way or another, the adaptive process has covered the contractors' costs.

The real tragedy of this phenomenon is that the Department of Defense has in recent years placed almost complete dependence for cost control on contractual constraints. Contract pricing, negotiation and administration, never strong functions, have been allowed to deteriorate even further in the expectation that the new types of contracts would take care of any problems which might arise. With failure of the new “magic” contracts, we have been left nearly bankrupt in operative constraints on cost growth. Other corrective action alternatives available to us are subject to strong and emotional objections. In particular, catalytic actions by the Government are anathema to the entire contracting community, despite the demonstrated efficacy of the approach.

Prior to 1965, I was personally involved in a number of situations in which catalytic action by the Government resulted in dramatic improvement of cost levels in contractor operations. Broadly speaking, these actions consist of two phases:

1. A gathering of facts by the Government or its agents pinpointing opportunities for cost savings in contractor operations.
2. Capture of identified improvement potential.

The first step, gathering facts, requires skillful people experienced in cost troubleshooting activities. The second step, capture of improvement potential is, of course, dependent on the quality of work done in the factfinding phase, and subsequently may take a variety of forms.

In my experience, the preferred outcome of the catalytic action is adoption of the fact finding team's analysis by the contractor as his own, and use of the outside stimulation by contractor management people to correct shortcomings without further involvement of the Government.

In instances in which the contractor managements could not be persuaded to make improvements on their own, the factfinding team's results could be and were on occasion employed as the basis for the Government's "should cost" position in the next contract negotiation.

As indicated in my earlier testimony, we recognize three broad types of standards of cost performance in cost control work in the Pentagon. The differences in these standards are basically in the underlying estimating methods. "Probable cost estimates are by far the most widely used. These estimates project program or contract costs based on experience on the same or similar programs without considering the possibility that the bases for projection may be inflated by ineffective performance. "Should cost" estimates attempt to project costs attainable by reducing inefficiency and waste. Cost performance standards based on negotiated contract costs are the third category I mentioned previously. I won't discuss these further today.

For many years the Department of Defense has worked hard at developing better methods of estimating probable costs of weapon systems. The major goals of this effort are commendable. Better estimates of probable cost sharpen comparisons of the relative cost effectiveness of competing weapons systems, and for this reason systems analysis has strongly supported efforts to improve estimates of probable cost. A side benefit of better probable cost estimates is that, in theory, the "buy in" estimate can be detected early in a program's life cycle. It was hoped that this feature could help defeat the so-called "come on" method of budgeting long practiced by the military departments. Under the "come on" method, it is alleged that the military would gain approval of new programs with overly optimistic or deliberately misstated estimates, then steadily expand budgets for the programs by adding improvements or by attributing increases to inexorable economic process and the inherent difficulties of advancing the frontiers of science.

Better estimates of probable cost can undoubtedly help in the initial evaluations of weapon systems. However, over-dependence on the probable cost estimating techniques has had a bad effect in other areas. To begin with, since the techniques used do not recognize inefficiencies in the bases used for projections, the approach tends to build excess costs into future estimates. For example, the cost estimates for the new generation of fighter aircraft, the F-14 and F-15, are heavily influenced by cost experience on the F-111, which is highly suspect to say the least. Compounding this fault is a corollary assumption that eventual costs are more or less preordained, and are effected little if at all by subsequent management actions.

A good cost estimate is one which comes true, regardless of how fat it is. Conversely, a program whose cost increases is usually said to have been victimized by a bad cost estimate. The C-5A is a case in point here. The interdependence of cost estimating and ongoing management is not recognized.

The acquisition community has adopted the probable cost estimating techniques with enthusiasm for negotiating costs of new contracts and changes. It is indeed a more comfortable mode of operation. It allows negotiations to be conducted in gentlemanly manner which helps Government-industry relations no end. The only people who suffer are the taxpayers, who are generally ignorant of the process and consequently do not complain.

In the heyday of large-scale development of improved techniques for probable cost estimates, it was hoped that the development of more credible—fatter—cost estimates would help eliminate embarrassing cost increases or overruns by allowing for unidentified contingencies at the outset. Unfortunately, the acquisition community geared up to spend the entire amounts—contingency provisions and all—in routine month-by-month operations. Initial contract costs for new programs were, in effect, based on costs of initial contracts plus changes and overruns for earlier analogous programs. Definition of contractual work was not significantly improved. Therefore, when changes were made in the new contracts, the old pattern of cost growth resumed on the inflated bases. We were thus caught up in a vicious cycle of self-fulfilling estimate increases.

It is clear to me, and it has been demonstrated, that the harsh light of competent "should cost" analyses can identify vast amounts of fat in the big programs, and that either tougher contracting or catalytic actions can recapture huge sums. In the activities I was involved in prior to 1965, I worked mostly in the evaluation of numbers of people required to do given amounts of work. Though results varied widely, evaluation of large defense contractors' operations generally showed the following:

- Overhead and support people staffed 40 percent above the level needed for work at hand. Moreover, the real necessity for much of the work was doubtful.
 - Factory staffing 60 percent more than required for effective operations.
 - Engineering overstaffing of at least 50 percent for necessary work.
- It should be noted that only engineering sections substantial active projects were examined. Many engineering organizations are maintained for long periods with few if any legitimate direct assignments.

Or as a former associate of mine used to say, they would defy measurement by doing absolutely nothing.

In a number of cases, cost reductions proportional to the overstaffing were achieved, either through reduction of staffing or absorption of additional work. Some of these improvements showed up in reduced contract costs. Some were local or lasted only until an infusion of fresh contract money, but nevertheless convinced me of the attainability of dramatically lower costs on major programs.

I should point out that the results just cited were achieved in the operations of what I consider to be some of the better contractors. Based on the broader view I have since 1965, other contractors appear to be somewhat less efficient on the whole. Moreover, the effectiveness of cost management in major contractor plants has deteriorated.

With this background, coupled with the clamor for new weapons systems, it would seem that the climate for corrective actions would be

ideal. However, as mentioned previously, the catalytic approach and "should cost" pricing are the objects of strong opposition. Opposition to these approaches from the contractor segment of the acquisition community is, I think, normal and expected. At least in the short run, application of "should cost" pricing and catalytic actions to improve ongoing cost control would tend to reduce sales and probably profits of major contractors.

However, even stronger opposition comes from the Government segment of the acquisition community. This is particularly disturbing to me, and bears on my third major topic, management objectives in cost control.

Opposition from the Government segment of the acquisition community to "should cost" pricing and challenging assessments of ongoing programs is more determined, more emotional, more vitriolic, and more effective than that from the contractor segment. Far and away the most effective opposition tactic has been isolation, neutralization, or removal from the acquisition business of proponents of "should cost" pricing and ongoing status assessment. Proponents of those measures have been subjected to the most vicious of personal attacks, including aspersions on their patriotism.

I have heard responsible Government managers oppose "should cost" pricing by rationalizing contractor inefficiency as a good thing—creating more employment, keeping the large contractors financially healthy, and the like. This group, which I call the "social goals" faction, have exerted a powerful influence on defense acquisition in recent years. The argument that we must allow excessive costs in order to maintain capability—keep contractors in business—is also heard often.

The political potency of the large contractors and their supporters in all branches of the Government is often cited as an obstacle to improvement. I have personally observed the effectiveness of the large industry associations such as AIA (Aerospace Industry Associations) and CODSIA (Council of Defense and Space Industry Associations) in opposing measures beneficial to the taxpayers. Most major changes in the acquisition process are cleared in advance with these contractor associations. The Industry Advisory Council (IAC), a joint Department of Defense/contractor group, is also a strong force in opposing changes not beneficial to the acquisition community. Conversely, changes beneficial to major contractors such as the increases in progress payment or reimbursement percentage breeze through the IAC.

Given the overall climate and the level of opposition to cost reducing measures, reinforced by occasional examples of personal disaster visited on economy proponents, it is not surprising that most working level Government acquisition managers shy away from tough cost control actions. The most successful Government project managers take a detached view of all financial matters once they make sure they have enough money to cover their contractor's requirements.

The environment I have described is hardly conducive to motivating major contractors to do the hard things necessary to run efficient operations. Without effective penalties for poor performance, I can honestly think of no valid business reasons why the major contractor community should extend themselves to improve their cost performance on Government contracts, so long as they are assured of our continued patronage. Despite evidence of vast increases in discretionary expenses, shocking

inefficiencies and unnecessary activities, I do not know of a single effective program underway to capture the cost improvement potential in these areas today. It is easy to get broad but nonspecific commitments to improved efficiency, but the hard means of attainment are resisted.

I do not intend to suggest that the subject of why we have excessive acquisition costs is a simple one or that there is a single easy remedy. However, I do believe the permissive or, at best, indifferent environment of past years has been the prime factor in erosion of the buying power of the defense dollar.

Taken together, I believe the broader effects of loose acquisition practices on major programs make up one of our most severe national problems. Some of these effects are:

1. *Inflation and high taxes.*—The contribution of waste in major acquisitions to inflation and higher taxes is probably the most obvious of its adverse effects. Not only are the expenditures themselves mostly nonproductive in a purely economic sense, but also higher contractor prices condition buyers to view continuing upward trends as inevitable. For example, the runaway contractor overhead rates, plummeting labor efficiency and sharply increasing average pay of the ballistic missile contractors during the early 1960's—a period of relative price stability—were the precursors of our present inflation. The higher prices caused by degraded performance spread throughout the major acquisition community, encouraged by the permissive climate for cost growth. Smaller suppliers were forced to follow suit to remain competitive for employees, services, and material. This situation compounded the effect of increases in volume of procurements after 1965. General inflation followed, and higher taxes, including the surtax, were imposed to pay the bills.

2. *Limitations on military hardware and services.*—During periods of stringent budget limitations, high and ever increasing costs limit available and planned military hardware and services. It is puzzling that the strongest opposition to improved cost control measures comes from some of the most verbally hawkish elements of the acquisition community. It is also strange to find that these same verbally hawkish elements are strong supporters of the theory that defense inefficiency is necessary to the attainment of social goals, and that they often rationalize excessive costs on the grounds of maintaining capability. As something of a hawk myself, albeit a parsimonious one, I find these arguments fascinatingly illogical. Even if the Government desired to spend a given amount of defense money to maintain capability, to employ the disadvantaged or whatever, I see no reason we should not try to get full value in return. This is particularly true in periods when it is argued that we need more or newer defense hardware.

3. *Poor product quality.*—Product quality is inevitably affected adversely by the poor management and worker discipline encouraged by loose acquisition policies. In some contractor operations, workloads are so low that workers do not maintain concentration on their widely spaced essential activities. Workmanship suffers greatly under these conditions. In all the major weapon systems I am familiar with, those which experienced severe technical and quality problems were affected to some degree by this underlying cause.

4. *Impact on international trade.*—General domestic inflation is often cited as a growing problem in maintaining a favorable trade balance. A more persistent and possible irreversible problem which may be obvious at present only to industrial specialists in the effect of undermanning acquisition cost management practices on our Nation's management and work habits. The poor management and work habits typical of the larger defense plants rapidly infect entire communities. There is a growing body of opinion which asserts that this problem is one of the root causes of a national productivity problem which threatens our competitive position in world markets and hence, our balance of trade. Until recently, American management and labor were so efficient compared to foreign competitors that they could be paid considerably more than their foreign counterparts and still compete successfully in world markets. There are increasingly fewer market areas where our margin of effectiveness is sufficient to offset differentials in rates of pay.

5. *Failure to achieve "social goals."*—It is ironic that even with the strong position enjoyed by the social goals faction in the defense acquisition community, avowed social goals are not being achieved. The reason for this is quite simple. Most defense acquisition activities are very poor vehicles for employing those who could not otherwise be employed in a healthy economy. Some time ago, this fact was recognized, and an effort was made by the Department of Defense to encourage defense contractors to hire low-skilled and poorly motivated employees from among the hard-core unemployed. Authority was granted to pay up to a 33-percent price premium for materials and services supplied by the disadvantaged. Armed services procurement regulations' requirements and restrictions in the Defense Appropriations Act were bypassed by transferring defense funds to the Small Business Administration (SBA) for subsequent contracting by SBA. The SBA is not bound by armed services procurement regulations or restrictions in the Defense Appropriations Act. Even with all this activity, the hard-core unemployed remain largely unemployed. Furthermore, those few who have been employed have, for the most part, been introduced to an undemanding, subsidized type of industrial activity which will equip them very poorly for the competitive world. I believe we should do much more to help the disadvantaged to become more productive citizens and thereby have a better life. We should make sure they have a fair chance to fill legitimate, necessary jobs in the defense industry. However, it is quite clear that extra-cost employment of the disadvantaged could be brought about much more efficiently outside the defense establishment. The specialized nature of the defense business, coupled with inefficient management now prevalent in the industry results in huge Government administrative and contractor overhead costs which must be paid in order to employ the disadvantaged. These expenses could be much less if extra-cost programs to employ the disadvantaged were assigned to agencies other than the Defense Department. I believe employment of the disadvantaged in economically productive activities would be more beneficial to both the national economy and the disadvantaged. Finally, a significant excuse for inefficiency would be removed.

6. *Failure to "maintain capability."*—At many contractor facilities where the Government has spent vast sums of money to maintain

capability, it appears that the opposite result has been achieved. Often these organizations have been sustained in near idleness for so long as to impair seriously their ability to become effective producers. The effect on these companies is as tragically demoralizing and debilitating as the effect of prolonged welfare payments to a healthy family. Worst of all from the standpoint of organizational potential, most of the best producers among the staffs of the maintained companies have long since departed. Top people, particularly creative ones, simply will not tolerate the deadly, stagnant atmosphere of near-idleness and make work if opportunities for challenge and growth exist elsewhere. The atrophy of major industrial suppliers could have disastrous consequences should the time come when national survival depends upon our ability to outproduce any other nation.

7. *Breakdown of trust in Government.*—By far the most disturbing implication of continued drift in defense cost control policy is the danger of losing the trust and faith placed in the Government by the American people. Until quite recently, defense waste and its causes were seldom discussed publicly. However, as the procurement community has grown larger and less efficient, it has also become more visible to the grassroots taxpayer. Since my difficulties in the Pentagon were publicized, I have heard from literally hundreds of private citizens who expressed their own conviction, usually based on personal experience, that there is enormous waste in defense acquisition. These citizens generally have difficulty putting a dollar price on their own particular horror stories, and often have difficulty detecting and explaining the causes. However, they are convinced of the avoidability of waste, and object to the increased tax burden to pay for it. There is another group of people who feel even more strongly than the average taxpayer group that the American public is being milked. These are the professional management people who have attempted to correct defense cost abuses and have suffered personal reverses as a result. All these people deeply resent being told in official pronouncements that all is well, and that the ever-increasing defense money requirements are solely the result of the necessity to counter "threats" or of inexorable economic processes. They know better. An increasing number of people believe that a prime purpose of defense expenditures is to enrich the so-called military-industrial complex. This belief is fed by obvious waste, frank admissions of protecting supplier interests at the taxpayers' expense and delays in corrective actions by the Government. In these circumstances, we might reasonably ask how long we can expect the annual recurrence of the miracle of April 15, in which millions of our citizens give up sizable portions of their bank accounts with minimum protest. I am told by friends from abroad that this phenomenon is almost unique in the free world, and that foreign governments view it with awe and envy. It is by no means certain that our heavily burdened taxpayers will continue to provide the still-enormous sums for the necessary portions of the defense budget if the taint of waste is not removed. Moreover, oratory and superficial, isolated demonstrations of toughness will not suffice. Hard-nosed corrective action on a broad scale is needed. More than in any other area of Government, I believe that stewardship of the defense appropriation should be above reproach. At present, it is not.

Although I have painted a gloomy picture, and, to me, a somewhat frightening one, I have included the word "opportunities" in the title of my statement for a reason which I believe bears on the subject of the military budget and national economic priorities. The existence of excessive acquisition costs is unquestionably a problem for us today, and has, by reason of its long-standing nature, contributed heavily to our present financial difficulties. However, the possibility of capture of savings potential represented by the excessive costs is an exciting prospect. It presents a genuine opportunity to find money to meet other requirements at minimum risk to our security. I believe better management could reduce the present cost of major acquisitions by several billion dollars without degradation of product quality or delivery schedules. The money thus made available could be used for reinvestment in new weapons, for reduction of taxes, for applications to other Government programs, or combinations of the three. Therefore, I believe it imperative that we start to work immediately to pinpoint and capture the savings potential. Capture of this savings potential will not be easy, and will not be accomplished overnight. As I have indicated previously, there is now very strong opposition to this process. There is opposition even to gathering of facts which would help to pinpoint the exact amount of savings potential. This opposition will have to be overcome or circumvented.

In recognition of the difficulties to be overcome, I offer some suggestions to enhance the possibility of success of the proposed cost reduction drive.

1. *Establish management objectives for reducing financial requirements.*—These objectives should constitute firm cost reduction goals expressed in dollars by fiscal year, and should include unit cost reduction goals for all major programs. It is my belief that this could be done most expeditiously by the top management of the Department of Defense. It could, of course, be accomplished wholly or in part directly by the Congress through the appropriation process. However, given the right intent and determination, the Department of Defense could probably make deeper cuts with less danger of jeopardizing vital programs.

2. *Hold back the difference between currently approved dollars and management objective dollars for each program.*—This difference, in effect a management reserve for each program, should be retained at as high a level as possible in the defense organization. I have observed that any moneys allocated to field organizations tend to be spent regardless of need. A major step in conveying the seriousness of management intent and determination is to reduce funds available to the field.

3. *Evaluate, reward and punish Government acquisition managers based on the degree to which they attain management cost objectives.*—At present, I see no personal advantage for defense program managers in reducing or recommending reductions of expenditures for their programs. I have mentioned earlier that I believe the same motivations apply to most major contractors. I have concluded that Government program managers and the major contractors with whom they deal have a community of interest in obtaining all the money they can for their programs. This situation can be changed only by top management action.

4. *Penalize contractors who do not fulfill contractual obligations.*—The current adaptive nature of major weapons contracts must be changed if contractual controls are to be effective. Although I have concentrated on the cost aspects of major acquisitions, major contracts are equally adaptable in the technical areas. Degradation of performance should not be accepted without penalty. Granting of “get well” contract changes (cynically called “contract nourishment” in the trade) should be ended. The contractor experience list (CEL) should be used more freely than at present. This list records poor contractor performance, and is disseminated to buying offices for their consideration in awarding new contracts. At present, large contractors are seldom placed on the list regardless of how poorly they perform. Another worthwhile sanction, a more severe one but again seldom invoked against large contractors, is to remove the offending contractor from the list of qualified bidders.

5. *Increase competition.*—The number of companies invited to bid on initial contracts for major programs should be increased and should include contractors outside the traditional “families” of suppliers. Furthermore, special attention should be given to developing and exploiting second sources of supply and to changing sources in ongoing programs. At present, contractors who win the initial awards are by and large “locked in” for many years to come.

6. *Reorient and improve management control systems.*—As I testified last November, I believe an orderly and complete body of management systems is essential to effective control of costs of major acquisitions. I believe that skillfully-applied “should cost” procedures and systems for incisive assessment of on-going programs can help save billions of dollars. However, I also believe that overdependence on techniques or procedures will result only in the further proliferation of management systems, many of which will be window dressing designed to enhance the “management image” of the military departments without producing hard results. In a recent inventory of management systems now available for Department of Defense imposition on contractors, the Department identified 680 formal systems. I believe that is a somewhat larger number than Mr. Shillito mentioned. In spite of this large body of management systems, our formal reporting systems do not tell us objectively where we stand on any major program despite literally hundreds of pounds of monthly reports on some programs. We cannot determine objectively how much work has been done, what the planned cost for the work was, or the amount of overrun or underrun on work done so far. Nowhere can we find in the formal reports any indication of what the items we are buying should cost. Worst of all, there is no formal requirement or provision for corrective actions in existing cost control systems. Without such provisions, the most elaborate of management systems can do little except convey the bad news. In general, I endorse the management systems recommendations of this subcommittee contained in the “Report on the Economics of Military Procurement of May 1969.” However, applying these systems in the absence of well understood and qualified top management cost reduction goals may produce little except additional, sterile overhead expense. This is particularly true of the application of “should cost” techniques. Lacking proper motivation, droves of cost analysts using these techniques can march wood-

only through the most wasteful operations and then announce that they see no evidence of inefficiency.

7. *Avoid delays in beginning corrective actions.*—A tried and true bureaucratic device for delaying corrective actions is to establish a committee to study the problem. As an example, the problem of runaway increases in major contractor overhead expenses has been recognized since 1962. To my knowledge, three major studies, each lasting approximately 2 years, have been undertaken by the Department of Defense. All agreed that we have a problem and that something ought to be done about it. The matter is now in the hands of the previously mentioned IAC who will ponder the problem and discuss it every 6 months. Meanwhile, overhead increases march on. I am not against study commissions as such, but they should not be accepted as substitutes for needed action.

8. *Establish a corps of professional major acquisition managers.*—At present, I do not believe we have a healthy buyer-seller relationship between major Government acquisition offices and their large contractors. Instead, a community of interests prevails, particularly with respect to the problem of obtaining money. If any of the advantages of a free market are to accrue to major acquisition management, this condition must be changed. However, I believe that creation of a healthy buyer-seller relationship involving business adversary situations on a broad scale would overtax the ability of our present group of managers. We simply do not have enough good, tough, well-motivated managers on the Government's side. In addition to problems of intent and environment discussed earlier, management of the acquisition business by the military has created its own problems. We have many fine, dedicated officers in the business, of course, but their handicaps are legion. In most cases, much of their adult life must be devoted to the more purely military aspects of their profession, which are becoming increasingly complex. They are also faced with the necessary up-or-out policy of the services, which results in many capable officers being forced to retire during their most productive years. Between these two limitations on their acquisition career span, most officers simply do not have the time to become as skilled in business as their contractor counterparts. Moreover, the up-or-out policy throws many officers into the civilian job market at a time when their family expenses are typically at a peak. Therefore, many consider their impending need for employment in their business dealings with contractors, which often takes off some of the edge. For these and many other reasons, the proposed professional management corps should be predominantly civilian, but should draw on military officers for advice on needed characteristics of the things they are buying. This is a complex proposal, too much so for full explanation here, but I believe the suggested professional corps is necessary to fully exploit the other suggestions I have made. As for cost of the proposal, I believe the fully professional group could operate effectively with less than half the number of people now assigned to the acquisition management functions. These savings would be offset to some extent by higher salaries in the professional group.

SUMMARY

In summary, the savings potential in major weapons programs is enormous and can be captured. The primary requirements for success

in capturing the savings potential are desire and determination, and I am hopeful that the new administration in the Pentagon has these qualities in full measure. I am also hopeful that the Congress, with its awareness of Defense acquisition problems and opportunities newly sharpened, will support the hard measures necessary for success in the improvement efforts. The opposition to cost reduction and control in major weapons acquisition is rich, smart, influential, and deeply entrenched. They will not be easily overcome or won over. However, the potential benefits to the country demand that the task of eliminating waste in the big programs be undertaken immediately, whatever the obstacles.

Based on past actions, I believe this subcommittee understands both the potential and the problems. I also believe you realize how badly those who are working on these problems within the acquisition community need your help. It is my hope that your continued efforts will help create a climate which will enable defense managers to work for genuine cost reduction in the major military acquisition programs without undue fear of financial retribution, loss of status or social sanctions. If such a climate can be created, I can assure you that you will unplug a reservoir of pent-up desire to improve among the professionals in all segments of the military acquisition business. This, in turn, will guarantee the long-range success of your efforts despite any possible temporary setbacks.

Chairman PROXMIRE. Mr. Fitzgerald, thank you for what is really an excellent statement in every respect. It is interesting that you observe the permissive atmosphere that you now have in the Defense Department, in the relationship between the Defense Department and the Defense contractors, as well as the pressure, the political pressure which you cited and documented so well.

It seems to me here you directly contradict the testimony of the previous witness. In fact, it is as if you were talking about two entirely different countries or Departments of Defense.

For example, Mr. Shillito tells us that we have to be concerned about optimism. And then he goes on to say :

We expect to improve the existing management system in a way that will enable us to identify problem areas sufficiently in advance to permit corrective action.

You indicate that there is not much hope in this area when you say :

The real tragedy of this phenomenon is that the Department of Defense has in recent years placed almost complete dependence for cost control on contractual constraints. Contract pricing, negotiation and administration, never strong functions, have been allowed to deteriorate even further in the expectation that the new types of contracts would take care of any problems that might arise. Without failure of the new "magic" contracts and so forth.

I think that this is a very incisive criticism and I am happy that I was able to read your statement at the same time I read Mr. Shillito's and to recommend to him that he look at your recommendations, which I think are also helpful.

I would like to ask you first briefly about those recommendations.

You suggest two which are right at the heart of it. One is, No. 3, where you say :

Evaluate, reward and punish government acquisition managers based on the degree to which they attain management cost objectives.

Is this really a realistic approach that we can take? Are we likely to lose these people on the basis of the pay that they get, the opportunity that they have outside? Can you maintain the kind of professional competence which you call for and still crack down when they make mistakes?

Mr. FITZGERALD. I believe that we would possibly lose some of those that we now have. On the other hand, I believe that we would attract to the major weapons acquisition business, a different and more professional type of person than we have now.

When I mention "professional" I probably should explain myself. The people we have now are professional in that they have taken money for what they are doing, and have therefore lost their amateur status. But in my opinion they do not always have what I consider to be the hallmark of the professional, that is, an overriding concern for the public welfare, or the general welfare.

Chairman PROXMIRE. You have to completely reverse the present attitude, which you said you have concluded is, the Government program manager and the contractor have the same view; they want to get as much money for their program as they can.

Mr. FITZGERALD. Of course; that is perfectly obvious.

Chairman PROXMIRE. You say it will take top management action in order to correct it.

Mr. FITZGERALD. Right.

Chairman PROXMIRE. Precisely how?

Mr. FITZGERALD. I think the first step is to set these goals for the people in the subordinate organizations, to tell them that on a certain program where we had previously expected \$1 million this year, we now have \$700 million and we want to buy the same program. This is our goal. We will help you do it, if you need help.

Chairman PROXMIRE. And they are rewarded, promoted, and so forth, on the basis of their ability to get results?

Mr. FITZGERALD. Right. Which is precisely what you have in a private business situation.

Chairman PROXMIRE. Now, how about the fourth recommendation: "Penalize contractors who do not fulfill contractual obligations."

This committee has persistently asked the witnesses about that. One of the realistic defenses which you hear is, that you just put them out of business, if you did this to Lockheed, for example, that they would go under and you would lose a potential supplier.

Mr. FITZGERALD. I am first of all not convinced that that is the case. I think Mr. Houghton testified that he wasn't going out of business, that he expects to lose little money, or perhaps even make a little, if he can work hard enough.

Chairman PROXMIRE. He will make it.

Mr. FITZGERALD. I have great confidence in Mr. Houghton's ability. I believe he will. But I think if we are going to keep anything resembling the free market motivations in the defense business, that inevitably someone must bite the dust. If no one ever does, contractors simply are not motivated to work as hard as they would in a free market situation.

Now, perhaps it is naive to think that we can achieve free market conditions in the major acquisitions. But I think that we can certainly gain some of the benefits that accrue, by doing the things that I

suggested. And furthermore, I think that we just must try before giving up on the free market motivations. This view may be colored by my personal inclinations, but I see nothing to be lost. It wouldn't cost us anything to do the things that I suggested.

Chairman PROXMIRE. Many have praised the C-5A as an excellent plane, regardless of its cost. They contend at least you are getting a fine product and it is maintaining its standards. It seems strange, in spite of the terrific squeeze on cost, that all reports seem to argue, that the quality has been fully maintained. Do you subscribe to that as one who is very familiar with the C-5A and have worked on it, have the standards been altered in any way?

Mr. FITZGERALD. Mr. Chairman, as one who was very familiar with the program—I haven't really had any close contact with the C-5A since last November, but I have attempted to keep track of where the program stood—I am not certain on the point of requirements, quality and so on. I have heard the program slip attributed to a number of factors. I believe the first one was a shortage of parts, in turn caused by the overloading of the defense industry.

Chairman PROXMIRE. My question is, are we buying as good or better plane as we thought we were buying, when the plane was originally authorized.

Mr. FITZGERALD. I have heard that there have been some relaxations of requirements.

Chairman PROXMIRE. Can you document that at all?

Mr. FITZGERALD. Can I document it?

Chairman PROXMIRE. Relaxation of standards.

Mr. FITZGERALD. I can try. I don't have the documentation now.

Chairman PROXMIRE. I wish you would.

Mr. FITZGERALD. There are quite a large number of contract changes now outstanding. I don't know the nature of all of them.

Chairman PROXMIRE. As you know, the Air Force spokesman attributed a great portion of the C-5A overrun to inflation, namely, \$500 million. Do you have any opinion on how much inflation is attributable to the overrun?

Mr. FITZGERALD. The studies that I have seen would indicate that the contribution of abnormal economic escalation, that is, escalation over and above what was already included in the contracts, was much smaller than that. The contracts themselves, as you know, include projections for increases in labor and material costs.

Chairman PROXMIRE. Are these official Air Force studies?

Mr. FITZGERALD. The one I saw was, yes, sir.

Chairman PROXMIRE. It shows much smaller than \$500 million?

Mr. FITZGERALD. Yes, sir.

Chairman PROXMIRE. Did you notice how much?

Mr. FITZGERALD. I believe the total was about \$204 million. I will try to remember the breakdown. I believe that for R.D.T. & E. plus run A, Lockheed's abnormal escalation was \$82 million.

General Electric's figure for that same phase was \$14 million.

For the second run, run B, I believe the figures were \$87 million for Lockheed, and \$21 million for General Electric.

If my arithmetic is right, that should add up to \$96 million on R.D.T. & E. plus run A, and \$108 million on run B, getting back to my initial figure of \$204 million. I believe that is correct.

I understand that subsequent studies have been made but that was the one I was familiar with earlier.

Chairman PROXMIRE. Yesterday we heard from a witness that there was an enormous overrun on the Minuteman II program. Can you affirm the amount of overrun which was said to have gone from \$3.2 billion to \$7 billion?

Mr. FITZGERALD. I am not certain just what the Minuteman II program is at this point. I know that sounds like an evasive answer, but I don't intend for it to be. The designations "Minuteman I" and "Minuteman II," and "Minuteman III" are somewhat arbitrary, and were afterthoughts in the conduct of the program. The Minuteman II, for example, was a new term to those of us working on the program. We got a letter from the Pentagon saying "Re-estimate Minuteman II". We didn't know what Minuteman II was. It was the Wing 6 missile. The items which distinguished the now so-called Minuteman III from Minuteman II are primarily the reentry system, which is the so-called MIRV with its post boost control system, and the improved third stage motor. Those two projects were initiated under Minuteman II. So, taken together, I think the testimony yesterday was correct, the current estimate for Minuteman II and III are approximately \$9.2 billion.

Again, it may not be all the estimate, because this carries us only through, I believe, fiscal 1974. The Minuteman program will continue beyond that.

So I would say that, depending on how you describe Minuteman II, the estimates in the newspapers this morning could be much larger. It all depends on our definition of what is included in Minuteman II. With the total figure of \$9 billion—\$9.2 billion is about right.

Chairman PROXMIRE. My time is up. I will have a couple of brief questions later.

Senator Jordan?

Senator JORDAN. Thank you, Mr. Chairman.

Mr. Fitzgerald, this is one of the finest statements that we have had before this committee.

I think you put your finger directly on it when you said in your statement that the ineffectiveness of cost control procedures have been a result of the fact that contracts with major suppliers tend to adapt to the financial need of those contractors.

Which one of McNamara's laws is this?

Mr. FITZGERALD. I am afraid that this one was in existence long before Mr. McNamara's time, Senator.

Senator JORDAN. Well, apparently it hasn't been corrected, then.

Mr. FITZGERALD. No, sir.

Senator JORDAN. And it is due to the adaptive process that you discussed, which is comprised of several factors like the repricing formulas, like the contract changes to provide the "get well money" that is made available to the contractor.

Now that there are some assurances that defense appropriations will receive increased scrutiny by the Congress, and that committees and subcommittees such as this one are focusing attention on the total size of the defense budget and especially on waste in defense procurement, do you think this will have a salutary effect in changing the attitude of the DOD personnel who supervise these contracts.

Mr. FITZGERALD. Yes, sir; I certainly do—depending on the nature of the scrutiny, and whether or not the Congress will demand that they improve the performance, and I believe confidently they will.

Senator JORDAN. I was interested in your statement that prior to 1963 you worked mostly in evaluating the number of people required to do given amounts of work. Among the principal defense contractors you found overhead and support people staffed 40 percent above the level needed for the work at hand, and you found that factory staffing was 60 percent more than required for effective operations, and you found in the end an overstaffing of about 50 percent. Why is it, would you say, Mr. Fitzgerald, that defense contractors generally overstaff at all levels? Do you think this overstaffing directly contributes to inefficiency as workers become less attentive to the quality of the work?

Mr. FITZGERALD. Yes, I do. I think there are many reasons why they do this. First of all, there is no reason why they shouldn't if they are a very large defense contractor. In the second place, with what has come to be called cost-based pricing, the larger you build your cost base the more profit you can make. And finally, I think a factor which is very often not recognized, or if it is recognized, is not discussed, is the sales benefit to a very large contractor of having perhaps a hundred thousand employees. This is a potent political argument for keeping business in plants of this kind.

Senator JORDAN. What special recommendation would you make to employment penalties on contractors who use this device for increasing, running up the cost of the contract?

Mr. FITZGERALD. Well, I think the penalties that have been mentioned before, that I mentioned, of just letting them lose some money once in a while, of putting them on the CEL, the contractors' experience list, or even removing large contractors from the bidders' list on occasion, would be in order. I think there are some other things which I would not consider penalties to contractors. The stimulation that I mentioned before, "should cost pricing and catalytic action," I think is, in the long run, beneficial to these big businesses. We have had a few tell us so, particularly those who also had substantial amounts of commercial business which was affected by the poor work habits and management practices in their defense business.

I would not consider those penalties, although they might have seemed a little harsh when applied.

Senator JORDAN. There has got to be some way of bringing that in line with need. We have had testimony from others here that in some countries of Europe a considerably fewer number of people are involved with apparently greater efficiency. It seems like the more people you have in some of these jobs the poorer results you achieve.

Mr. FITZGERALD. There is no question about this, Senator. A homely example would be digging a well. I think you can remember the old hand-dug wells. I would guess that perhaps two men could profitably work at the job, but if you get more than one man down in the hole you have some problems of being able to work. And of course, if you have five or six, it becomes impossible.

Senator JORDAN. That is a pretty good illustration.

You stated that the Department of Defense has been an inefficient contributor to the reduction of hard-core unemployment, and essentially because they use highly skilled people in most of their jobs. Do

you believe that the pursuit of social goals by the Department of Defense usually interferes with its primary responsibility as a cost effective procurement agency?

Mr. FITZGERALD. I think the social goals argument is a rationalization. I think it is used as an excuse for not pursuing the hard measures we need to get efficiency and low cost. However, I do not think that extra cost social goals programs have a place in the Defense Department. I haven't seen any reason at all why social goals should not be pursued in the course of normal activities. But the extra cost employment of the disadvantaged in the Defense Department probably costs two or three times as much as similar employment would cost outside the Department. The very large contractor overhead expenses which have to be added and our own administrative expenses which go unnoticed in our accounting system have to be considered. So I think that you would find that the number of dollars which finally filter down to the disadvantaged would be much smaller through defense channels than through others.

Senator JORDAN. I was interested in your comment that you believe that better management could reduce the present cost of major acquisitions by several billions of dollars without degradation of the products or delivery time. By how much do you think we could reduce the defense budget of the United States without compromising our military security?

Mr. FITZGERALD. On an overall basis I am really not qualified to judge. But in the area that I discussed, that is, the operations of the major contractors which, for purposes of tying it down a little bit, I would describe as perhaps the 30 largest contractors, I would guess as much as \$5 billion.

Senator JORDAN. As much as \$5 billion.

Mr. FITZGERALD. Yes, sir.

Senator JORDAN. Without doing violence to your military security?

Mr. FITZGERALD. Not at all.

Senator JORDAN. Would it be possible to break that down in categories? Would you care to do that for the record, or can you do it off the top of your head?

Mr. FITZGERALD. Well, it is possible. But in order to pinpoint them, if you want to say how much can you take out of procurements now going to Lockheed or to North American or to Boeing, or whoever, it is a rather enormous job. And I should say this, that there is no royal road to doing this. It is not easy. I could give you an estimate, and I have done so based on my past experience. But if we are really serious about capturing these results, we have got to get in and pinpoint specifically where the inefficiencies are in a way that will convince the contractor managements that the improvements are attainable. Just the flat statement that it can be done wouldn't do much good.

The point that I made earlier is that the very identification of these inefficiencies is resisted, for understandable reasons, by the contractors, and for reasons which I don't fully understand by the defense segment of the acquisition community. I know some of the reasons, though not all.

Senator JORDAN. Just one short question. Admiral Rickover testified that if we had a uniform accounting system we could probably save \$2 billion. And you talk about some 680 different formal manage-

ment systems. Would some kind of uniformity in that bring about some savings?

Mr. FITZGERALD. Yes, sir; I think it would. And this is one area where we are working, I think, reasonably hard right now. The 680 formal identified systems are a hodgepodge that has grown up over the last 30 years, I suppose. There is a tendency to invent a new system, particularly a reporting system, each time you have a problem, and to never do away with it. And these systems overlap one another and duplicate to some extent other systems, and still don't give us the information we need to manage our programs more effectively. So we could save some money by cutting those out. I am not certain that it would be a major amount of money, or that we could recapture it through contract prices. But it would certainly help streamline our operations.

Now, as for Admiral Rickover's suggestions, uniform accounting standards, I could visualize such a set of standards which would obviate the need of a dozen or so of the 680 systems we have. So there would be a great savings if we could get such a set of standards—which I would differentiate from a uniform accounting system which I wouldn't support at all.

Senator JORDAN. I agree. Thank you.

Chairman PROXMIRE. Congressman Moorhead?

Representative MOORHEAD. Thank you, Mr. Chairman.

I want to associate myself with the remarks of my colleagues on the committee in commending you for this excellent statement, Mr. Fitzgerald.

Mr. Fitzgerald, you say that you know of no instance of a large contractor losing money on a major weapons system prime contract.

Mr. Moot was before this subcommittee and testified on the C-5A that the Government with the exception of certain Lockheed items, had no obligation to proceed further with exercising the option of run B. If we do not purchase run B or any part thereof, would this be an exception—in other words, would Lockheed then lose money?

Mr. FITZGERALD. I suspect Lockheed would lose some money if we didn't buy any airplanes at all in run B.

Representative MOORHEAD. Mr. Fitzgerald, do you know whether, and if so when, Secretary McNamara was informed about the cost overruns in the C-5A, and do you know whether he was ever given any inaccurate information about the cost overruns in the C-5A?

Mr. FITZGERALD. I believe that Mr. McNamara, or at least the Office of the Secretary of Defense, the Comptroller, was informed of the possibility of this problem, and given some substantive information in early 1967. I am not absolutely certain of that. But according to a letter which I saw for the first time in newspapers, he was apparently given some inaccurate information in the fall of 1967, but he was cautioned that it was inaccurate, and he was given the then best estimate of the cost analysts in his organization.

Representative MOORHEAD. Let me see if I understand you. In a letter he was given inaccurate information and told that was inaccurate, or was he given—

Mr. FITZGERALD. According to the newspaper accounts he got a letter from the Air Force Chief of Staff stating that the cost increase would be a certain amount, which I have forgotten at the moment, and

was cautioned by his Comptroller that this amount would be much greater in another letter which commented on the Chief of Staff's letter.

Representative MOORHEAD. He was given one figure by the Chief of Staff—

Mr. FITZGERALD. And another by the Comptroller of the Department of Defense.

Representative MOORHEAD. And another by the Comptroller saying that it would be much larger than the Chief of Staff told him?

Mr. FITZGERALD. Yes.

Representative MOORHEAD. Mr. Fitzgerald, in your testimony you talk about the contractors that are maintained by the Defense Department, like kept women or something like that.

Mr. FITZGERALD. I didn't mean it that way.

Representative MOORHEAD. Can you give us some examples of this situation?

Mr. FITZGERALD. I can't give you an example of a contractor who is totally maintained; that is, who has no business at all. My point here was that this is often used as an excuse not to reduce contract prices, which have, as I said before, a core of necessity, and tend to inflate the contract prices in many, many situations. I wouldn't want to single out any one, because there are probably 20 or 30 locations of contractor plants that would fit in this category, that to some degree are maintained; that is, the Government is knowingly allowing them to charge higher prices in order to keep their personnel or their plants open.

Representative MOORHEAD. You have stated that you know of no instance where a large contractor lost money. Did you have any evidence of an attitude within the Defense Department that no large contractor should be allowed to use money?

Mr. FITZGERALD. I have heard the same attitude expressed that Mr. Rule testified to; yes, sir.

Representative MOORHEAD. You referred to the catalytic action that the Government could take. Would an example of this be the kind of job that Mr. Rule did in the Pratt & Whitney F-111 case?

Mr. FITZGERALD. Yes, I believe that is a good example.

Representative MOORHEAD. I think it would be helpful if you would describe either that one or a similar one that you may know about. What kind of catalytic action do you mean? How do you bring "should costs" that you have referred to, to bear on the problem?

Mr. FITZGERALD. The "should cost" analysis is the process through which you identify the opportunity to make the improvement. And then the second part of it, the catalytic action to get the contractor to do something about it, could take a variety of forms. In the case of Mr. Rule's study, there were actually two "should cost" studies, one made by a consulting firm which was not believed by the Government, or by the Navy at least. Mr. Rule was asked to check the findings of this study, and he verified them. They were accurate. The opportunities were there to save money. So he took a rather unusual approach in his catalytic action. I would have to say that the most effective thing he did was to publicize the results of his findings, put them into the newspapers. And I think this brought considerable pressure on the contractor. It was a very difficult situation, much more

difficult than most of them I have been involved in. I have never used that approach myself in catalytic actions. But it was very effective for Mr. Rule. It enabled him to have, I think, meaningful discussions with the contractor's top management people on the things that ought to be done to improve their operations and reduce costs. Mr. Baird, who was formerly the Under Secretary of the Navy, said that he thought this was probably the best thing that ever happened to this particular company, although it was an unpleasant experience. And I agree with him. I think it will do a lot of good in the long run, because they have a substantial amount of commercial business, as you know.

Representative MOORHEAD. Isn't it true that the company has expressed gratitude in recent weeks?

Mr. FITZGERALD. I have heard that.

Representative MOORHEAD. In your testimony you talked about the impact on international trade. As I gather, your thinking is, that if large corporations in defense work are allowed to become sloppy in their management techniques, and their efficiency and cost, and so forth, that this tends to go over to other companies in the neighborhood, because they have to deal with their employees and their officers, and if one is tough and hard and the other soft and easy, the tendency will be to copy the soft and easy one, and this makes us less competitive in world markets. Is that the theory, Mr. Fitzgerald?

Mr. FITZGERALD. Yes, sir. I think that is human nature. There is nothing very profound about it. I think that most large companies who have both a consumer manufacturing business and a defense business understand this very well, and make an attempt to separate the consumer manufacturing from the defense both geographically and in an accounting sense as far as possible. This may be quite successful within one company. But the infection of working habits takes place in a community. So the community that has a lot of consumer manufacturing which is suddenly confronted with a giant defense company, employing thousands of people at higher rates of pay, and paying them to do less work, frequently finds it is in trouble.

Representative MOORHEAD. Mr. Fitzgerald, you talked about occasional examples of personal disaster visited on economy proponents. Would you care to give us any examples of that?

Mr. FITZGERALD. Well, I could give quite a number of them, although I am quite sure that they would all be described as coincidences. Without naming names—I think it would do nothing but hurt people further. I can think of two auditors—and these were all within the last few years—who questioned an increase of perhaps 600 percent in their contractors' selling expense with more or less constant volume who were summarily transferred.

One of my associates on the early review of the C-5A program was an Air Force officer, and he was found to have unique qualifications to be the Air Attaché in Addis Ababa, Ethiopia. And there is just a whole string of them; you could go on and on. I don't see any real benefit in naming the individuals, particularly those still in the service. It wouldn't help. But yes, it happens frequently—always coincidental. I don't know of any case in which it has been said that because you discovered a 600-percent increase in the contractor's selling expense you are being transferred. I don't think that happens. But the

series of coincidences is all too clear, particularly the ones such as where the man was discovered to have unique qualifications for the Addis Ababa assignment.

Chairman PROXMIRE. If the Congressman would yield, I would say particularly when the Pentagon somehow discovered that their computers made an error in one computer case.

Representative MOORHEAD. Mr. Chairman, I think Mr. Fitzgerald's testimony is particularly important here in our job of trying to balance priorities, because he has testified that there is this buy in or, as Mr. Schultze said, it is overoptimism of the military and the defense contractor which is taken care of by the "adaptive process," and it seems to me that we have seen this cost growth, whether you call it overrun or what, and if you balance the priorities of curing the pollution in Lake Erie against the cost of a weapons system, you just know you have got to put in an additional factor from that weapons system, because the experience has shown that it happens in almost every case. And the only thing we can do, it seems to me, is crack down on the adaptive process until we get to a situation where this overoptimism will be corrected, and we will be given accurate figures so that we can balance the domestic program against the military program. And I think Mr. Fitzgerald's testimony has been right on point with this.

Thank you, Mr. Chairman. There is a quorum call over in the other body.

Chairman PROXMIRE. I want to ask you to do this, Mr. Fitzgerald. You are a most unusual witness, as you know. You did more in alerting the Congress and the country on the problem of excessive waste in the military and overruns by your testimony before this committee last November than anybody has done. In this connection, because of your experience and because of your ability, I wish you would return before this committee on Friday morning when we have the head of the GAO, the General Accounting Office, Mr. Staats, who will appear, and then we would like to have you. I understand, or at least we have received information, that the program estimates for the SHRAM missile has doubled in the space of the past year, from \$300 to \$600 million. I wish when you return on Friday you would obtain figures on this and supply them to the subcommittee at that time.

Also I understand that you have had some responsibility in the past with the Mark II Avionics program. And we wish you would tell us if you have done anything in reaction to the attitude of pursuing social goals in an inefficient way on that program. If you have taken the necessary steps in the form of a written letter or memorandum to your superior, then I wish you would provide this subcommittee with copies of these documents.

And finally, we also heard yesterday of the existence of a "should cost" study of the Mark II of the Air Force Systems Command in December of 1967. We would like you to provide that if you can for the subcommittee.

Mr. FITZGERALD. Right; I will do that.

Chairman PROXMIRE. Yes; December 1967.

Mr. FITZGERALD. Right, I will do that.

Chairman PROXMIRE. And again I want to thank you very much for a superlative job.

The committee will stand in recess until 2 o'clock this afternoon, when we will hear from former Secretary of State Dean Acheson.

(Whereupon, at 12:55 p.m., the committee recessed to reconvene at 2 p.m. of the same day.)

AFTERNOON SESSION

Chairman PROXMIRE. The subcommittee will come to order.

This afternoon we welcome former Secretary of State Dean Acheson to the Subcommittee on Economy in Government.

Mr. Acheson has had enormous experience in the field of international relations and he understands fully the extent and implications of our international commitments.

As we have learned throughout these hearings, effective congressional control of military spending requires that the tie between our international commitments and the budgetary consequences be fully explored.

Mr. Acheson is highly qualified to appraise for us the value of military expenditures for our international commitments in the light of other pressing national priorities.

Mr. Acheson has had a distinguished career as a lawyer and as a statesman. He graduated from Yale University and received his law degree from Harvard.

In 1933 he was Under Secretary of the Treasury, after which he joined the law firm of Covington & Burling. During World War II he was again employed by the Government serving as Assistant Secretary of State from 1941 to 1945, Under Secretary of State from 1945 to 1947 and Secretary of State from 1949 to 1953.

Since 1953 he has been a member of the law firm of Covington & Burling. In recent months Mr. Acheson has been working to maintain a prudent defense policy in active support of the anti-ballistic-missile proposal. Because of his deep and longstanding concern with the Nation's military posture and capability, I am very pleased he is able to appear before our subcommittee.

I welcome you, Mr. Acheson, and you may proceed in any way that you see fit.

We are honored to have you before us.

STATEMENT OF DEAN ACHESON, FORMER SECRETARY OF STATE

Mr. ACHESON. Thank you, Chairman Proxmire.

Before beginning, I should like to make clear to all the members of the subcommittee what is clear to you, sir, and that I am here only because your persistence exceeded my resistance. When you kindly invited me, I put up a game fight to be excused, both on the grounds that I had nothing really to contribute to your onerous tasks, and also because I was trying to get a book into print. It would be improper for me to make a plug for my own book at this point, but you will all hear about it and I hope you will read it. [Laughter.]

Chairman PROXMIRE. If you care to give us the title, we will be interested.

Mr. ACHESON. I am going to have enough trouble with you without telling the title. [Laughter.]

The title is taken from an observation of a king of Spain who ruled from 1250 to about 1285. He was Alfonso X, often called Alfonso the Learned. He was heard to observe once, "Had I been present at the Creation, I would have had a few useful hints for the better ordering of the universe." And the title of my book is "Present at the Creation"—a modest title, and implying what you obviously see it implies.

Thank you for bringing that out, Senator. [Laughter.]

When you asked me to come, I had hoped to be excused and made a struggle to that end. And then I remembered the wise advice of a very distinguished man, Edmund Burke, who observed that not the least among the arts of statesmanship is to grant graciously that which you can no longer withhold. So not being able to stay away, I came with as little fuss as possible.

You told me, Senator Proxmire, that you thought my views would be somewhat different from those hitherto expressed before this subcommittee. You may remember that some years ago Joe Alsop, who is an old friend, said that my views on affairs might be described by a line from Coleridge's *Kubla Khan*, "Ancestral voices prophecying war."

I have taken a rather grimmer view of the world around us than many who have appeared before you, and I shall probably continue to do so today.

I would like to make four points. The first one is that in the more than 70 years during which I have been dimly conscious of the world around me, I have been strongly impressed that the Congress throughout this entire time has underspent rather than overspent on the defense of the United States.

Second, during this time the Congress and the people of the United States have been greatly distracted from considering the real problems they have to face by witch hunts and clichés, all of which have taken their minds off the point.

Third, the old world which many of us still consider normal has completely disappeared.

In former times we could count on time and distance as safety factors. That situation has vanished, probably forever. The development has not been due to some correctible error of judgment and practice on our part. The determining factors are the disintegration of the Europe-centered world, the establishment of a great power base for revolutionary purposes with universal ambitions, and the dynamism of technology. From here on, as far ahead as one can imagine, the Nation will continuously be in the front line, and coping with adversary forces will be an unrelenting requirement. The war in Europe and the war in Asia have utterly destroyed the great empires upon which the 19th-century world order and all its precepts and all its ideas were founded. They have gone entirely—every one. And out of it have emerged two of the great powers confronting one another with diametrically opposed ideas, ambitions, influences, and purposes. The possibility of compromise is only that referred to by Mr. Churchill when he spoke of a balance of terror which makes possible coexistence.

This is the basis on which we live. It is a vast mistake to believe that it is anything else.

The fourth point which I wish to make to you today is that as we

add to maintain, and protect our power, we do not in any way diminish the possibility of an agreement with the Soviet Union. In fact, we strengthen it. By power I mean that combination of population, resources, technology, and will, which enables a people to have an impact beyond its own boundaries. That is what I mean by power.

The idea that the Soviet Union will negotiate with us in the sense in which we use that term is quite untrue. I am a Connecticut Yankee and my conception of negotiation is a David Harum type of negotiation and deal. You have a horse and I want to buy it. We are both trying to accomplish a common result. You wish to get as much out of me as you can. I wish to pay as little as possible. Somewhere between those two desires we have a negotiation and make a deal and perhaps I get the horse. That is not the Russian conception at all. The Russian conception of negotiation is the carrying on of war by other means. It is the converse of Clausewitz, who talked about war or carrying on diplomacy by other means.

Therefore, as we strengthen ourselves, we bring about that calculation of forces by the Russians which induces them to make a deal. They are not moved by argument, nor by exhortation, nor by considerations of morality. They are moved only when their calculations lead them to believe that it is more advantageous to make a deal than not to do so.

I do not claim to have had more experience than any other American in negotiating with the Russians. Obviously, my old and dear friend, Averell Harriman, has had more than I have, and some others have, too. But I am no slouch in this field. I have had a good deal, and my experience has been that negotiating with the Russians is not a delicate or difficult art at all. Sir William Hayter has said that it is like putting a coin in an old-fashioned penny-in-the-slot machine. Sometimes you got what you wanted, but usually not. Sometimes you got nothing at all. It helped from time to time to shake the machine and sometimes to kick it, but it never helped to argue with it.

This has been my experience in negotiating with the Russians, as I shall exemplify if you wish me to in these hearings.

It is the duty of the Congress, of course, to appropriate the funds of the United States for the constitutional purposes which are enjoined upon you in the Constitution.

It is the duty of the President to be your constitutional adviser in the matter and to recommend to you what he believes is good for the Nation. While his is a recommendation only, it is an important one, a recommendation which one disregards at one's peril, and in doing so assumes responsibility which requires very careful thought. But it is your prerogative, your duty, your right, and therefore I am addressing myself to the problem which confronts you now.

Let me go back to point one and talk a little bit about the fact that the Congress has steadily underspent for the defense of the United States. I see no basis for the notion that we tend to overdo the military aspects. To the contrary, the Nation has repeatedly neglected to provide a military basis to match its policy or to cope with aggressive forces. We tried unilateral arms reduction in the interwar period. We got Pearl Harbor. We reverted to habit after World War II. We got the Korean war. With respect to military power, I do not share the worries of those who discern and deplore dangers of too much.

We had a temporary advantage in ratios of available military resources at the time of the Cuban missile crisis. Some would have called it a redundancy. That margin was not a surplus. It provided the basis on which President Kennedy was able to bring off an acceptable outcome.

Among almost my earliest memories—I should think when I was probably 6 or 7 years old—were the discussions which went on in our house in Middletown, Conn., about the shocking state of our Armed Forces in the war with Spain. It was not that there was much doubt or difficulty about the military engagements. It was not that our armaments were all pretty primitive and too few, but that we had practically no medical corps in the Army at all. The whole conception and provision for sanitation was almost nonexistent. And the very heavy toll of deaths which we had in that war came from the gross neglect of the health of the troops which we had brought into the field.

I think perhaps Congressman Bolling has heard, as I have heard, from Cordell Hull what it was like to be in the Army during the Spanish War. It put quite a strain on Cordell Hull's Tennessee vocabulary to give his opinion of those who had provided for the care of the Army.

General Marshall used to drill into me the vast importance of maintaining a mean of preparedness in armaments at all times and not to raise it to terrific heights during times of trouble and then scrap the whole thing and go down to almost zero between crisis. We have always been unprepared for conflict. Our wars as a result have lasted too long. The casualties have been too high.

Many of you will remember our situation in 1914 to 1917. During that time the chances of our being drawn into the European war were tremendously high. As a bookmaker, one would have given odds that we would have become entangled in that war before it would be over, and yet we took almost no steps to prepare for it. After that we allowed what we had done to sink into disuse.

From 1933 to 1941 it was pretty clear that there was going to be trouble in Europe and that we were going to be drawn into it. Yet again the Government of the United States did all too little to prepare for trouble. The President, as well as the Congress, was at fault for this neglect. What little was done amounted to virtually nothing when measured against the requirements imposed by the war which overtook us.

Developments not only in Europe but also in the Pacific area, as you will recall, converged to bring on that war, and so I am going to shift the focus of my recollections to that latter area.

I have a great respect for the late Charles Evans Hughes, both as an Associate Justice of the Supreme Court and as Chief Justice of the United States. I think his reputation in the judicial field far outshines his record as Secretary of State. It was in 1922, at the time of his guidance of the State Department, that the United States led the way in bringing about a set of interlocked treaties focusing on limitation of naval armaments and on strategic stabilization in the Pacific. I shall not recall all their intricacies. Taken as a whole, they were, I believe, the most improvident treaties entered into by the United States in its long history. By their effect, the Northwest Pacific was turned over to Japanese domination. The United States yielded the right to fortify any of the islands under its control in the Western

Pacific. We ended up in a position where we were utterly powerless to do anything about Japanese aggression in the northern part of the Western Pacific. Our improvidence regarding defense matters, more than anything else in my estimation, led the Japanese to their fateful calculation that an attack on Pearl Harbor would pay off in an irreversible victory.

Such strength as the United States commanded was preponderantly in the naval arm. The bulk of our naval strength was in the Pacific. It was concentrated in and around Pearl Harbor in expectation that, in that position, the fleet would deter any Japanese move southward to the Strait of Malacca and thence into the Indian Ocean. In the Japanese estimate, Germany then was on the verge of inflicting a determinative defeat on the Soviet Union, whereupon Britain would be in such extremity that she would have to submit on whatever terms the Germans would grant. Germany would be triumphant in Europe, and her aggrandized potential in the Atlantic would place the United States in great danger. Germany, in this estimate, would also be in position to push her dominion eastward over a vast expanse.

The Japanese expected, by doing in the U.S. fleet at Pearl Harbor, to make this country helpless to move against the Axis in either direction. The Japanese then would be left free not only to clean up in China but also to establish an impregnable position in the Malay Barrier and, moving beyond it, to carry their dominion into the Indian Ocean area, rather than letting Germany become the sole heir to that area.

The calculation proved wrong in several particulars, but we should never forget how important a factor the meagerness of our preparations was in inviting danger or how close a call we had in the months following Pearl Harbor.

In retrospect we can see how a measure of luck helped us through that war. One element of luck was the extreme stupidity of the Germans in attacking the Soviet Union. That action was difficult to understand. It was a case of overweening ambition and excessive confidence induced by earlier successes. A more realistic strategy on the Germans' part might have had results much worse for us.

A second item of luck for us was the Germans' vast folly in declaring war on the United States after Pearl Harbor. That really brought all our Nation together, unified into a colossal effort that enabled us to turn our power, as it developed, first on the German position in Europe and then against Japan to end that war victoriously in both theaters. The Germans could easily have left us to divert all our strength against the Japanese, thus giving themselves plenty of time and opportunity to clean up on Europe without the possibility of any intervention from us, but they did not.

The third lucky break was the development of the nuclear weapon.

Such a revolutionary change in the nature of warfare does not happen very often.

I refer again to our neglect of forces in the period leading up to war—one of the circumstances which led the Japanese into their great miscalculation. We found ourselves with scant margins for strategic choices. With conditions as they were, the decision to make the primary military effort against the Germans was the best that could be done, but it resulted in a vast disadvantage to us in the Asian theater. By the time we were able to turn our attention to Asia, it was too late

to do very much in building up Chiang Kai-shek into a viable force on the Asian continent.

After 1945 we proceeded with a unilateral disarmament. Our conventional forces practically disappeared. We made probably the most unique offer in human history, to negotiate with the Russians, the British, the French and all the leading states in the UN about the international control of this great new force, atomic energy. I myself worked on the plan which we laid before the UN and all the time it seemed to me that the chances were almost nil that the Russians would join in any such negotiation. Our intelligence was clear that they were already at work on a weapon of their own. Any knowledge of the Russian temperament would have led anyone to believe that they would not rest upon international agreements, but they would insist that they must have a power equal to the power of the strongest nation in the world.

However, we went ahead, both disarming and negotiating, until when I became Secretary of State the budget for defense for the fiscal year 1951 was \$14.5 billion. This I may say terrified me, then the President and finally the Secretary of Defense. We had two working parties set to work in which the task of both chairmanships fell to me. One was a State-Defense organization which reviewed the entire foreign policy and military policy of the United States. Its work resulted in a national security paper called NSC No. 68 which is still classified and which has laid the foundation of both our foreign and military policy ever since.

The second dealt with the question of what to do about a hydrogen bomb. Scientific opinion was divided. Some believed that the hydrogen atom could be split and that a hydrogen weapon of much greater force than the atom bomb could be made. Others said it was impossible.

Almost everything that was said in the discussion which followed has been said about the ABM before committees of Congress in recent hearings. Hardly a new idea has been brought out to any of you. The same curious transformations happen now as happened then. The scientists to a large extent ceased to be scientists and tried to dis-curse as moralists and political scientists. They talked then about the wickedness of going forward to find out whether one could make an even more terrible weapon than the atom bomb.

Then, as now, laymen could have no scientific opinion whether the weapon could be made or not. It was futile for me to try to understand that aspect of the problem. I listened to one scientist in favor of it; he seemed persuasive. Then I would listen to one against it, and he also seemed persuasive. I knew nothing about the basic physical considerations involved. We knew, however, that the Russians were going forward with work along these lines. It seemed absolute folly for us to deny ourselves knowledge of this sort when the Russians were developing such knowledge and to forgo capacity to produce in this field, dreadful as it might be, thus permitting the Russians to have a monopoly of that capacity.

It came about that eventually, in November of 1952, we had a test of a thermonuclear device. Less than a year later the Russians announced and then tested a fully developed hydrogen bomb. They were ahead of us in weapon development, not behind us. Any idea that our venture into this field was what had stimulated the Russians to enter

it was substantially refuted. It was not until March 1954, that we produced a hydrogen bomb.

After 1946 we continued our own disarming, as I said. The result was the war in Korea, which was again the obvious result of a calculation that we could not and would not undertake to oppose a move in so remote an area even though it was an area over which we were at the very time exercising responsibility. Korea gave the recommendations of NSC No. 68 life and importance and led the Congress to support a great rearmament of the United States. It also quickened our efforts on the thermonuclear weapon.

I have mentioned this long sequence of events to show that every time we relax our efforts in the defense field, we regret it, and that by increasing our efforts and maintaining a solid and prudent stance, we do not discourage or impair negotiation with anybody.

One of our failings as a people I think is a preoccupation with witches. For some among us it is hard to get accustomed to the new circumstances. The temptation is to take the old situation as normal, to regard the huge expense and unremitting danger as aberrant, and to blame malign or heedless forces within our own establishment. Identify them, expose their machinations, cut down their powers, and lo the difficulties will be abated. So goes the argument, in a succession of faddish versions.

A version in vogue in the 1930's cast the munitions industry as the malefactor. A few overzealous weapon merchants were supposed to have woven an evil spell over the Nation. In the fifties, a handful of faithless persons at the center of policymaking were supposed to have manipulated the world to disparage our interests and undercut our security. The current substitute for serious thought is a cliché about a military-industrial complex. Our involvements abroad, alleged to impede great strides in domestic improvement, are portrayed as something put over on a gullible nation by an excess of professional zeal at the Pentagon coupled with overactive entrepreneurship in industry.

In the 1920's and 1930's we had two witches—bankers and munition makers as malfactors. Mr. Nye took care of the munition makers by passing legislation which made it almost impossible to help the Allies in the early part of the Second World War. And you remember the outstanding episode in getting control of the bankers was when somebody put a midget on Mr. J. P. Morgan's lap and had him photographed at a congressional hearing. That was the mood of reformist activity of those days.

After the Second World War we had the contribution of the first Senator McCarthy in running down internal subversive groups of Communists in the State Department.

In 1969 the witch has changed and is now the military-industrial complex. This I find the strangest one of all. As most of the other witches were not known certainly to be Communists, I cannot imagine that anybody on this committee could take seriously the thought that such great people as General Marshall or Joe Collins or Hoyt Vandenberg or General Bradley or Adm. Forrest Sherman or Adm. Allen Kirk would be engaged in a conspiracy to waste the funds and money of the United States uselessly. And today their counterparts are equal-

ly incapable of such action. I should hope that that foolish cliché will be dropped for good.

What I decry is the effort to portray marginal problems as centrally important. It was probably a good idea to regulate the munitions industry in the 1930's. It was folly to try to put American strategy into a straitjacket in the Neutrality Acts. Tighter security regulations were in order in the 1950's. What was reprehensible was the attempt to exploit the situation as a lever for overthrowing due process and subverting our pattern of constitutional authority. Intensified rigor in congressional review of defense appropriations may well be appropriate now. What I wish to warn against is any effort to use the attendant issues as an excuse for tampering with defense and foreign policies which rise from external necessities and are vital to national existence.

Coming to my third point, the power of the United States alone blocks the Sino-Soviet ambitions in this world. They may fall out between themselves, they may have difficulties, they may fight with one another in a minor way, but on one matter they are completely and wholly agreed. The United States is the enemy.

It is our power which stands in the way of their ambitions and they have no doubt about that at all. We, as I said earlier, are alone at this pinnacle of power. There is an idea which has been given some currency by Mr. Walter Lippmann that it is our commitments which have outrun our capabilities. This is exactly backward. Our capabilities are attempts to get aid in carrying out our responsibilities. Commitments have not created the difficulty. The difficulty is created by the outside world.

For example, the NATO Treaty seeks to hold together the countries in Europe which, if held together, would deny their resources to the Soviet Union and make some of our problems more manageable.

If they are not held together, if they are not under an umbrella of the United States, they can very easily be put under Soviet direction, and then our difficulties would be very great.

The same thing is true with the major treaties in the Pacific. Not all treaties are sensible. I thought that the Dulles treaties in the Far East and in the Middle East were a mistake. I thought there we did not need to have any commitment of any kind and we could draw no strength from them at all. I was much more in favor of having treaties among the Asian countries with the rest of us backing up the ones who got into trouble if they did get into trouble. But the moment we, Britain, and others got into Cento and SEATO, it seemed to me that we alienated rather than encouraged support. However, this is a matter of no major importance here.

As I said before, the dominating fact is that our power alone can protect the amplitude of the free world which makes our free life possible. In isolation, in a fortress America, we could not have the kind of a country we have. We simply could not. And it is to our advantage, it is essential to our survival, that there should be a spacious area of freedom in the world.

It is in this setting that you approach your great task of deciding whether or not you think it wise as a priority matter to allot the resources necessary to go forward with the President's recommendation about the ABM.

How would one sensibly go about performing this duty? As I said a moment ago, when I had to perform in connection with the H-bomb, I did my best to understand the technical arguments which were going on, but I felt that really that was not my province. These matters had been discussed and recommendation had been made by people who were charged with knowing more about them than I know or understand. It seemed to me that in making the choice one had to choose between the responsibility one took by going forward and the responsibility one took by standing still. I felt in the case of the thermonuclear bomb, with what I knew about the world, that the proper responsibility for me to take was to say go forward. Let us know as much about thermonuclear phenomena as anybody in the world. Let us take the chance of avoiding the necessary and finding ourselves in a very dangerous predicament.

So it seemed to me that the simpler part of my duty was to accept the recommendation and go forward with it.

If you analyze the problem further, you must have in mind the size of it. A great deal of talk by opponents of this proposal, both in the Armed Services Committee, the Foreign Relations Committee, and your committee, gives one the impression that this is a vast program of such tremendous dimensions that it really forces a choice between a constructive domestic program and this. That just is not true at all. It is not remotely true. The dimensions of this problem have been exaggerated out of all sense of reality. It just is not that sort of a problem.

The Washington Post sometime ago published an interesting little chart which gave the spending by the United States on nondefense and defense from 1965, which is the real start of the Vietnamese war. One sees from it that nondefense spending has not only increased but has continued to be substantially ahead of defense spending. For instance, the budget for the current fiscal year, nondefense is \$106 billion and for defense is \$80 billion. As I look at the world, those magnitudes do not seem a disproportionate allocation of our resources. The part of the defense budget involved in the ABM program is \$8 billion over a period of 5 years. If you add in the research and development costs, you get \$11 billion. That is not a vast bet.

Suppose the expenditure is not made, and suppose the choice turns out wrong. The consequences could be disastrous.

Turn the proposition around. Say to yourself that, to be on the safe side, we had better go ahead. Then suppose that the proponents of the ABM turn out to be wrong and that this weapon will not do all that they say it will do. Has anything disastrous happened? Have you wrecked the United States? Have you ruined the internal economy? Certainly not. What you may well have discovered is that the other side is not doing any better than we. Therefore, the danger is not so great as the military thought it would be.

The bets seem to me wholly different in kind and quality. The responsibilities seem to be wholly different. To reject ABM may mean terrible trouble. To go ahead with it cannot mean terrible trouble. It may indeed bring great assurance. If you lose the whole investment, it is not a very serious loss.

Will going ahead minimize the chances of having a negotiation with the Russians? I can assure you that this is not so. Not because I set my-

self up as the wisest man in the world but because a good deal of experience has led me to believe what I started out by saying. The Russian conception of negotiation is based on what they call the calculation of forces.

Let me illustrate this by two experiences. The first one is the blockade of Berlin. The Russians began the blockade of Berlin to frustrate the attempt of the Allies to reconstruct Europe. What we were all trying to do was, first of all, to restore physically through the Marshall plan our allies and a defeated Germany and, having done that, to create some kind of a government capable of governing Germany which would cease to be a menace to its neighbors.

What the Russians decided was that they were going to keep Germany divided. They would rather have complete control of East Germany than partial control of all Germany. So they started a series of actions against our actions, which finally led to the blockade of Berlin.

At this point there were several discussions as to what should be done. A lot of people said, "We have the nuclear weapon and can use it to frighten the Russians." Only a few of us knew how few were the nuclear weapons we had. They were not a frightening number.

Furthermore, the only way we could then use these weapons was to drop them from aircraft. And the Russians were in Germany, and we were likely to do more damage to Germany than we would to the Russians. So this did not seem to be a wise response.

What did we do? We undertook a counterblockade. That is, we isolated East Germany from Europe and the West. As time went on, that measure hurt the Russians a great deal more than their blockade was hurting us, particularly when we got the airlift going and it turned out to be such a signal success. The Russians did not wish to push the situation to a military confrontation because we had not only a few nuclear weapons, which would have been unhappy for them at home, but also some local forces which would have been difficult for them to deal with on the ground.

Time went on through 1948. Early in 1949, shortly after I became Secretary, a newspaperman asked Stalin some questions, which he answered. It seemed to me and my colleagues odd that Stalin would answer these questions because they were not of immediate importance and they did not say much that had not been said before. But in discussing them we decided this looked like a signal that the Russians were ready to quit if they could make a deal.

I got Phil Jessup, who was then at the United Nations, to see Malik and say that he had been interested in Stalin's answers to these questions and wondered whether there was anything more behind them than met the eye. Malik said, "Of course, well, I don't know. I haven't got the faintest idea." Phil said, "If you hear anything, let me know, will you?" He said, "Sure."

Two or 3 weeks later Malik passed Jessup in the hall and said, "Oh, by the way, in answer to your question, there is a good deal more behind that than meets the eye." Phil said, "Fine, and would you want to tell me what it is?" Malik said, "You didn't ask me that before. I will try to find out again."

We had a secret negotiation known only to Jessup, Chip Bohlen, myself, and the President. Nobody else. Nobody telephoned. Nobody telegraphed. Nobody wrote. Everybody got on an airplane or a train

and went back and forth to New York. This was done at the U.N. Finally, Malik said to Phil Jessup, "I have word that we will call off the blockade if you call off the counterblockade, call off the creation of a West German State, and call a meeting of foreign ministers." We said that the first two could be a deal. We said we would not call off forming a West German State because that could not be achieved until the autumn anyway. It was then only spring. We would go ahead and have a meeting of foreign ministers as soon as the blockade was lifted. If we could solve the whole German problem, we would not go ahead. If we could not, we would go ahead with West Germany.

After a great deal of groaning and grunting the Russians agreed to the deal. This is what I was referring to when I quoted Sir William Hayter. There is nothing delicate about dealing with Moscow. You don't have to wear dark glasses and rubbers and creep around, you know.

The other matter was the ending of the Korean war. After MacArthur's unwise attempt to go to the Yalu River against his instructions, and our defeat in Korea, we thought of various things to do next. It seemed to us that we were drifting more and more into a really major confrontation which might involve the Russians in the Far East. We had finally stabilized the Korean front, and dismissed General MacArthur. General Ridgway had created the Kansas line and this was holding strongly against all attempts by the Chinese to break it, but there were possibilities that the Russian air force might intervene, or they might land some troops. If this happened then we were in for it as this would be World War III. We wanted to be sure that everybody understood everybody else's attitude. I suggested to George Kennan that he write a note to Malik and say that he would like to come up and have a chat, not having seen him for a long time; and Malik suggested Kennan meet him at his place on Long Island.

So he did. Kennan pointed out the way things were going, we were on a collision course, which we did not desire. They would be crazy to desire it because it would be a Chinese gain and not a Russian gain if it came off. But inevitably, if matters were pushed to the point of an attack, we would all end up in war. And we warned them that this had an end which they had better think over.

The answer came back, that we quite misunderstood them. They did not want to push hostilities and believed that there should be an armistice. Malik made a public speech and presented this view on a U.N. radio program.

We had an awful time with the Chinese and the North Koreans after that for 2 years, but the Russian part of it was very very simple. It was just a matter putting to them a proposition which they could take or leave. They took it. They did what they could, and they stepped out.

The idea has been expressed that if we take the step proposed here, it is going to make negotiations much more difficult. It is not going to make it any more difficult. Any negotiation will be difficult to start with. All the problems are very difficult. They are not made any more difficult by adding to our defense.

I doubt emphatically that some great transformation of relations with the Soviet Union is about to move us from an era of confrontation to a phase of negotiations. We have been negotiating with the Soviet Union all along. We shall be involved in confrontation into an

indeterminate future. The two go hand in hand in the Soviet view, and perforce we must see the matter in that perspective. The Soviet Union will come into agreement with us only in the measure that it discerns advantage in doing so and detriment in doing otherwise. I certainly do not oppose such negotiations. I am merely warning against the notion that the Soviet Union is on the verge of a conversion to tractability and accommodation.

This ABM proposal is a defensive action. The Russians realize that quite as well as the free world or anybody else does. They are working on it themselves. They are deeply into it. They know what it will do, and their whole purpose is to take out an incoming weapon. They may use it to take out a weapon before it is incoming, in which case it becomes an offensive weapon, but they know that what we are proposing is to meet what they might send against us.

This does not raise any problems with them. They are not children. They are not frightened. They are not easily scared. And if ABM works out and if it is, as I believe it has been testified before, either to your committee or another, that this operation as proposed can protect the Minutemen as they exist, and if the Russian attempt is increased, the defense can be increased at a lower cost than the offense. It does not add to the problem. It simplifies the problem.

I have come, Mr. Chairman, at your urging, to give you what wisdom I have summed up in these four points. If I had the responsibility, which is laid upon you, I would accept the recommendation of my constitutional adviser and go forward with it, confident that if it turns out to be good advice, we have greatly benefited the country. If it turns out to be unworkable, we at least shall know it is unworkable and we shall know also that what the other fellow is doing is unworkable, we will have a parity of knowledge and we will not have wasted the Nation's resources in finding out.

Thank you very much.

Chairman PROXMIER. Thank you, Mr. Acheson, for a most interesting exposition and for a review of recent history that is extremely enlightening, especially in view of your position.

Mr. Acheson, you are one of the few people who say we are under-spending militarily, we are not spending enough. We have, as I understand it, 31½ million men in the Armed Forces, which is the largest armed force, I am told, any nation has by a considerable amount. We are told we have 400 major bases around the world, that we have 2,000 installations overseas.

How big must we be and how much more must we spend?

Mr. ACHESON. Senator, I really have not the faintest idea how we should redeploy our forces. I have not the slightest doubt that there can be considerable redeployment of forces with the end, which we hope will not be too far distant, of the Vietnamese war.

At the present time, our reserves are deplorably weak, and should we have trouble in other parts of the world, we would find ourselves very short.

I cannot tell you what bases we should have, what bases we should give up. We have some bases which I was very much opposed to in the beginning. I do not think it does much good to talk about them. These were very largely, I will say, the ones in Spain. I thought this was a waste of time and a mistake, but we went ahead and did it. There was

one base, the naval one, I think, which had some use. The others I rate very low. But I don't know enough. I cannot tell you what we should scrap and what we should not scrap.

So far as our forces in Europe are concerned, I am very deeply persuaded that these are essential to the stability of the world, and I am deeply persuaded that greater effort on the part of our European allies is essential, too. The \$64 question is how you bring that about. I have some ideas about it, but I find it does less good to advertise them than it does to keep them to myself.

Chairman PROXMIRE. You say they are essential, and you say our Reserves are weak and inadequate. And then when you say we are underspending militarily, you would contend that we should increase our Reserves, presumably increase the 3½ million people we have in the Armed Forces with the Reserve component rather than with additional bases or with additional manpower at our bases, save in the European situation where I presume you might consider increasing our commitment; is that correct?

Mr. ACHESON. What I said is that we have consistently over my lifetime underspent, and I have told you when, why, how, and what the consequences were. The present argument now is that we are again spending too much. I say we are spending too little—go ahead and try out this ABM. I would do other things to strengthen those that can help us.

Chairman PROXMIRE. There has never been a time in your lifetime—or in American history, to the best of my knowledge—when we have spent as large a proportion of our resources as we are investing now in military—nonwar areas, that is—I leave aside the Vietnam situation; that's a special situation. Leave aside \$25 billion or so there, and the half a million men.

Disregarding that, the non-Vietnam sector is absorbing more of our—in absolute terms, far more than ever before; isn't that correct? I mean, you compare this, for example, with a \$14 billion military operation right after World War II, which you said was appallingly small. I would agree; I think you are absolutely correct. But is it really comparable to the kind of military force that we have now?

Isn't it consistent to say, in other words, that we might pare the military force today and in retrospect we should have perhaps increased the military force in 1948 or 1949?

Mr. ACHESON. I would think it was entirely comparable if, as you say, we leave out the expense of the Vietnamese war, which in itself is about \$27 billion. We are getting our expenditures down to somewhere in the neighborhood of \$52 billion for our Military Establishment—the whole thing. And that is not disproportionate to the dangers with which the United States is faced. It does absolutely no good, Senator Proxmire, to say in our past we should have done something different. In our past we were children living under the protection of parents. We now are grandparents. There is no protection. There is no hiding place for us; we are out in front.

Chairman PROXMIRE. Representatives of the Defense Department told us a few days ago that after Vietnam they anticipated that our military commitment would be in the neighborhood of \$80 billion, with Vietnam out of the way, and they agreed that it could easily go higher than that, perhaps to \$90 billion. So that the comparison of

that with a \$14 billion expenditure, even allowing for inflation, allowing for the higher cost and allowing for the advance in technology, it seems to me we have a great deal more military force now.

And furthermore, I would like to ask you this: This committee, and, to the best of my knowledge, no member of this committee, has taken a position that we should reduce the potency of our Armed Forces. In general, we have issued a report saying that we feel that there is a waste, and we have indicated exactly where we think that waste is and where we think we can economize and do a better job. We feel, some of us, that we could save \$5 to \$10 billion.

Yesterday, Barry Goldwater, who certainly is no dove, testified that in his view we could cut back \$2.5 billion immediately, and \$5 billion over a somewhat longer period than a year in our Armed Forces. So it seemed to me this could be consistent with meeting our commitments, and I would like to ask you if you would criticize that view?

Mr. ACHESON. It is almost impossible for a person in my position either to approve or criticize a generalization. Lincoln talked about pernicious generalizations. I think that what you have just issued is one of those.

To say somebody says after this war is over we ought to have \$80 billion, or we will still have \$80 billion, what do I think about it, I cannot tell you what I think about it. If I saw what he was going to spend the money on and why they wanted it, I would have a view. I can well understand why there might be that need.

Chairman PROXMIRE. Well, let me ask you this: Tuesday, former Budget Director Charles Schultze made an analysis of the influence of the MIRV's and ABM on the arms race and its impact on defense expenditures.

He said that viewed from the Soviet Union, the United States appears to be acquiring a first-strike capability in going ahead with the MIRV's. He pointed out that we ourselves announced our intention to build a "thin" ABM in response to the 200 Soviet SS-9 missiles which may be expanded and MIRVed into 800 to 1,000 hard target war heads. The implication is that the Soviets will similarly react to the MIRVing of our ICBM's.

Now, both Carl Kaysen and William Kaufmann agreed with the Schultze analysis, although Malcolm Hoag appeared to disagree. Mr. Kaufmann pointed out that the appearance of building a first-strike capability may be created not by MIRV's independently but by a combination of MIRV's, and the ABM, and various antisubmarine warfare techniques which we are also going ahead with.

I wonder if you would comment on Mr. Schultze's analysis and the additional factor introduced by Mr. Kaufmann.

Mr. ACHESON. Well, I should think that it is completely wrong. I do not believe any such conclusion as this could or would be drawn in Moscow as he says there. What it would appear to me to be clear to the Russians is that they are proposing an instrument which can without any protection on our side go a long way to eliminating our second-strike capability, and opposition to that is not trying to create a first-strike capability. It is a defensive maneuver to keep open all the possibilities, all the options that we may need in case of attack.

I think a lot of foolishness has been cast around by talking about who is trying to get first strike and who is trying to get second strike

by people who do not understand what they mean by either of those phrases, and therefore I would not pay much attention to this.

Chairman PROXMIRE. What you are saying, then, is that the Russians would not react with a notion that we are interested in a first strike; they would assume that we weren't. It is perfectly logical, however, on the basis of your support for ABM, which many others support, that you think that they may initiate a first strike; is that correct?

Mr. ACHESON. That is not what I said at all.

Chairman PROXMIRE. No, no; I did not say you did. I just asked you whether you viewed this as a sensible position or not.

Mr. ACHESON. No, I do not. I do not believe that proposition at all. I should think the Russians will see, as anyone ought to see, that in this step we are taking an initial step to maintain and protect the Minuteman. That seems to me to be a purely defensive operation, and I do not think they consider it otherwise.

Senator JORDAN. How would you define the present intention of the Soviet Union? Is it one of global conquest, or is it one of a willingness to accommodate to economic competition without conquests?

Mr. ACHESON. This is one of the debates which we used to carry on in the State Department year after year—what is the intention of the Soviet Union?

As I remember, we came to some general conclusions from these hours of discussion. One was that the Soviet Union has many intentions, not one intention. These intentions have several priorities. The central, the heart, the inner intention of all is to protect the regime in every way. That never changes, and they will never compromise upon that. That affects many things that they do. I think this probably explains Czechoslovakia more than anything. I think that they have seen the grave inroads which any contact with the free world and free diplomacy and free economy has upon their satellites and their own people, and they are determined to prevent this from happening. If they have to invade all the satellites to do it, they will do that. If they have to take more serious action, they will do that.

But the central purpose is that the regime shall stay.

Beyond that, there is also another intention which has been in existence since the very beginning of the Communist organization, and that is probing weaknesses on the outside. Wherever there are weaknesses, probe. Do not get in so deep that you might involve yourself in irredeemable trouble. But if there is give, push it until the give stops. We find good examples of this in Cuba and in their various actions in the East European satellites, in Indonesia, and places of that sort.

The Moscovite state has been an expanding one since the 12th century. The Communist Party is continuing the expansion at the present time.

Senator JORDAN. Do you detect any softening in the Soviet attitude in recent months?

A witness before this subcommittee suggested that because there were no armaments in the May Day Parade, perhaps this is a change of attitude.

Mr. ACHESON. This I think is ridiculous, utterly ridiculous. I am a didactic man, and I am being didactic now. I really have not patience with that sort of report. It just is not so.

Senator JORDAN. It would seem very difficult for me to equate it with the conquest of Czechoslovakia.

Mr. ACHESON. It would. It would be impossible.

Senator JORDAN. Do you see any growth of sentiment in the Soviet Union that would develop into an effective opposition to the great arms spending program they have brought about by the lack of consumer goods for the people of that country and the tremendous demand that must be building up for consumer goods instead of armaments?

Mr. ACHESON. I am really not currently informed on Soviet conditions, but I had thought that the demand for consumer goods was being met to a much larger extent than before. I may be wrong about that, but that was my impression. I cannot see any possibility of revolt in the Soviet Union, or popular pressure changing the government's attitude.

Senator JORDAN. I believe you said that every time we relax our defense efforts, we live to regret it.

Do you believe that at the present time we are relaxing our effort to a dangerous degree, or are we on the verge of doing so?

Mr. ACHESON. No; I do not think we are relaxing them to a dangerous degree now, but in the violence of the attack on the ABM, the mobilization of so much emotion behind it, the apparent unlimited quantity of both liberal enthusiasm and money which is behind it, it seems to me that this is more than a disagreement with the technical development in the nuclear field. It is a disagreement with the entire policy and a desire to change it in favor of a more relaxed attitude toward the Soviet Union.

Senator JORDAN. Even if the ABM doesn't work, do you regard it as a good investment at this time for the security of America?

Mr. ACHESON. Well, when you say the ABM doesn't work—

Senator JORDAN. Well, I say even if it doesn't work, assuming it doesn't work.

Mr. ACHESON. All right. But what I am talking about is the phrase "doesn't work."

Senator JORDAN. Yes.

Mr. ACHESON. Now, let us analyze a little bit what you mean by that.

Senator JORDAN. All right.

Mr. ACHESON. We do not mean that it will not perform its function.

Senator JORDAN. That's right.

Mr. ACHESON. We do not mean that. Nobody says that.

Senator JORDAN. No.

Mr. ACHESON. What people do say is that you can saturate the ABM and that it may cost less to saturate it than to prevent it being saturated.

This is debatable and I think that the supporters have the better side of that debate. But even assuming that you can saturate it, and if the Russians proceed to go ahead and do that, what you have gained is that they have spent a vast amount of their own effort on one option and have left us the others that we have instead of developing all of them as we should develop all of ours.

But what one wishes to do is, to keep as many possibilities open as possible and not put all one's eggs in one basket. If the Russians are led to spend so much on an attempt to overcome one of our options, that

they weaken their others, that is a gain. It is not so good as being able to stop it all together, but it is a gain.

Senator JORDAN. It will have served its purpose if it operates as a deterrent.

Mr. ACHESON. It would serve its purpose—you mean the Russian purpose?

Senator JORDAN. Yes; it would have served its purpose so far as the United States is concerned if it deters Russian aggression.

Mr. ACHESON. Yes; it would. Yes; exactly.

Senator JORDAN. Thank you.

Chairman PROXMIRE. Senator Sparkman?

Senator SPARKMAN. Mr. Secretary, I have enjoyed your testimony very much. It sounds a great deal like old times——

Mr. ACHESON. It does.

Senator SPARKMAN. When you really had some troubled times.

Mr. ACHESON. We did.

Senator SPARKMAN. If I understand correctly, what you are saying to us is, that we must at all cost maintain the strength that is necessary to withstand the forces that would come against us.

Mr. ACHESON. Yes, sir.

Senator SPARKMAN. And that is all you are arguing for.

Mr. ACHESON. That is what I am arguing for.

Senator SPARKMAN. You are not trying to say where we should close bases, or the number of men we should have here or there or elsewhere, but simply that the principle must be maintained of keeping up our guard.

Mr. ACHESON. That is correct. I am not informed enough to go beyond this.

Senator SPARKMAN. And you are not opposed to conferences or negotiations with Russia or anybody else seeking to solve the problems.

Mr. ACHESON. No; I am not opposed to them. I am cynically convinced they won't get very far as long as I do not have to go to the conferences, I do not care if somebody else does.

Senator SPARKMAN. Well, you have been to a good many of them.

Mr. ACHESON. I certainly have.

Senator SPARKMAN. I have seen you handle some of them.

Mr. ACHESON. I have done my duty.

Senator SPARKMAN. I remember the Japanese Treaty Conference in San Francisco, of which you were the chairman. Do you remember that?

Mr. ACHESON. Oh, I do, indeed, sir. That was the one where the Pole—do you remember when the Pole got up there?

Senator SPARKMAN. Yes.

Mr. ACHESON. I told him to take his seat, and he said he would not take his seat.

Senator SPARKMAN. Yes.

Mr. ACHESON. And I said, we'll have to have the sergeant at arms do something about this. And we discovered we did not have any sergeant at arms. So I said, "Well, if you won't go to your seat, I will give myself the pleasure of escorting you to it." So he went and sat down.

Senator SPARKMAN. Well, I believe some of them walked back in.

Mr. ACHESON. Yes; they did indeed.

Senator SPARKMAN. Mr. Secretary, although this has nothing to do with the problem before us, I have often thought of the fact that the Japanese Peace Treaty Conference was the first activity or event that was transferred by television across the continent of the United States.

Mr. ACHESON. It was, indeed. That was the first time that those towers had been put in operation.

Senator SPARKMAN. Yes.

Mr. ACHESON. And what happened in San Francisco was seen in New York for the first time.

Senator SPARKMAN. And in Washington, D.C.

Mr. ACHESON. District of Columbia, and all down the coast.

Senator SPARKMAN. I mention that simply—you say you do not want to hold any of these conferences. I know you have held a great many of them.

Mr. ACHESON. Yes.

Mr. SPARKMAN. And I remember some of your debates in the U.N. with Vishinsky and Malik and, of course, other times with Mr. Gromyko.

Mr. ACHESON. Yes.

Senator SPARKMAN. So you have met them all, haven't you?

Mr. ACHESON. I have met them all.

Senator SPARKMAN. You have had experience so that you feel that you know what you are talking about.

Mr. ACHESON. I have met them all, and I have no great desire to meet any more. I would not want to flatter this committee, but I would much rather appear before a Senate or House committee than I would meet Russians.

Senator SPARKMAN. I want you to know that I was rather closely connected with your activities back during those days. I was at that time, as you recall, the chairman of the Far East Subcommittee of the Foreign Relations Committee.

Mr. ACHESON. Yes.

Senator SPARKMAN. And I have a great respect for your views at all times on matters pertaining to our international relations and what we have to do in order to handle them properly. And I appreciate your making the presentation that you did here today.

That is all, Mr. Chairman.

Mr. ACHESON. Thank you very much.

Chairman PROXMIRE. Mr. Bolling?

Representative BOLLING. Mr. Chairman, I thank you for your courtesy.

Mr. Secretary, I am not a member of this particular subcommittee, but I came especially, because you are the witness. And it is almost impossible for me not to make a self-serving remark in being here. It has been my pleasure in the slightly over 20 years I have served in the House of Representatives to have had the privilege of defending you against the conservatives and the liberals, and I consider it one of the great accomplishments of my 20 years' service. I am delighted that you are here. I am delighted that our chairman persuaded you to come, because of all the people that I have listened to over the 20 years—and I have had the privilege to listen to a great many—you are, more than any other, able to get to the point.

I believe that President Roosevelt talked of Mr. Hopkins, or maybe it was Churchill who spoke of Mr. Hopkins as "Mr. Heart of the Matter." But in any event, it seems to me that in the foreign affairs field, you get to the point. And this business about how much money we are spending on defense, it seems to me, is not the point. The point is: Does this Nation have the capability and the resources to provide the power necessary to live in this world?

And I think the reason that you refused to talk about the details of money is that you are interested in power, which is what I am concerned about.

I had exactly the same experience that you did in a different place immediately after World War II. I feel just as you do that we invited the invasion of South Korea by the North Koreans by what we did to weaken our military posture. And I could not be more encouraged to know that once again I find myself in total agreement with you. It gives me great reassurance.

Now, with regard to the specifics of a whole series of weapons systems, it seems to me that while your instinct is right that the attack on the ABM may have a more significant real objective than a simple attack on one weapons system, there is justification for people to be particularly critical of the Congress in its overseeing of military appropriations and expenditures. And I think that what the Congress will do, hopefully, is not to make the mistake of the Congresses of the 1930's or the Congresses of the 1920's or even the Congress before the War of 1812, each of which eliminated the power necessary for the United States to maintain its position in the world. I hope that this 91st Congress will see to it that instead of having the fever chart that General Marshall used to describe as what our defense posture was akin to—a great fever chart that would go very high and come down very low—that this Congress will have the wisdom to see to it that it recognizes the necessity of having efficiency in military expenditures as in all other expenditures and looks at power, not expenditures; because if we look at the expenditures of today at the level of \$80 billion, they are substantially lower as a percentage of the gross national product than the expenditures during the Korean war. And it seems to me that an absolute statement as to what is an expenditure ceiling misses the point entirely; and that is something that you never do. You always look at power and reality and not money as a substitute.

I have no questions. I am just delighted that you are here.

Mr. ACHESON. Thank you. Thank you, Mr. Bolling.

Chairman PROXMIER. You, along with Mr. Nitse and Professor Wolstetter, have been involved in a committee effort in support of the ABM system. In a letter which your committee sent out to possible members, you state, and I quote, "Some part of our defense budget might safely be reduced." In your judgment, Mr. Acheson, what part, what are the areas of the defense budget to which you would look first if that budget were to be cut?

Mr. ACHESON. I have no idea, Senator. I signed that letter in the belief that having been in virtual charge of one of the great departments for 7 years, I know darned well that any departmental appropriation can be cut. If it could not be cut, then somebody ought to be fired. You usually have enough fat in there to take care of unexpected disasters.

At the expense of getting myself put in jail, I remember—Mr. Bolling will remember, too—that when James Richards was chairman of the Foreign Affairs Committee of the House, he got into great trouble in South Carolina because we had given help to the Yugoslavs when they had their break with Stalin, and Dick Richards had supported us in this. A young lad ran against him in the primary and very nearly beat him on the ground that they had not had a new post office since McKinley, and here was their Congressman going around helping some people called Yugoslavs. And this was an outrageous situation.

So he came to me and said, "I've got to fight you." So I said, "Good, that's fine. That's all right with me. What will we fight about?"

And he said, "I want to cut your appropriation." And I said, "Would you like to cut it to the bone?" And he said, "Absolutely; right to the bone."

So I said, "What would you think was to the bone?" "Oh," he said, "a hundred million dollars." "Well," I said, "that's pretty close to it all right; but I'll tell you what we will do. You cut it and we will see what we can do about it."

So he made a big speech, and, by golly, you fellows did cut it, and everybody said, isn't that awful? And I didn't tell Mr. Truman, but we had raised the ammunition reserve of NATO by 10 days, and that had added a hundred million dollars to the budget which we promptly took out. So I am aware that there is in every departmental budget what I call reserve for contingencies. And I am sure that there are things that you can do about it. I do not know where they are. I thought that was a gracious confession that we were openminded.

Chairman PROXMIRE. Well, now let's go a little further than this, because I think that Mr. Bolling is absolutely right. There is a difference in the views of the Congress now and of this committee now and what was the view in the 1920's and 1930's and before. There is no disposition that I know of to cut back our military force significantly. We have had a few witnesses—Senator Fulbright among them; we also had Professor Galbraith, and Professor Boulding, and Carl Kaysen—who did question whether we should have a potentiality to meet the so-called two-plus war situation; that is, two major wars and a minor war simultaneously. But with that exception—and that I think you would agree is a relatively modest criticism—with that exception, all the witnesses and, as far as I know, the members of the committee, agree that we have to have a military force strong enough to meet any threat, including two simultaneous major wars.

Now, with that in mind, let me say this, too. We have had overwhelming testimony before this subcommittee that expenditures for major weapons systems cost two to three times the estimates; they are delivered several years later than promised; that more often than not they fail even to come close to meeting their technical capabilities that have been assigned to them. Some of this, it seems to me, may cause the public to lose faith and confidence in our basic defense. Many of us believe that this country could be strengthened by changing the situation and we could get the same defense for less money, or more defense for the same money.

Wouldn't we be stronger if we pursued this vigorously? I agree with Mr. Bolling, but we do have to make the decisions on dollars. We can't make them on the basis of generalities about power. We have to

make a decision that we are going to have to, we are going to vote for a budget of \$79 billion, \$80 billion, or we are going to vote to cut it back to \$74 billion or \$70 billion.

Would you agree, perhaps once again to tie in this generalization which you rejected a little earlier, would you agree that it is perfectly consistent and proper for us if we are convinced that we can have the adequate power at the same time to vote for a military budget that is \$5 or \$10 billion less?

Mr. ACHESON. Well, obviously, Mr. Chairman, if, on the basis of proper advice, you believe that you can reduce any budget, it is your duty to do so obviously. I think so far as Ken Galbraith is concerned, he is the greatest humorist in the world. I think he writes the funniest books I have read. They are very good. But his contributions such as taking over all firms who have more than three-quarters of their work with the Government and running them like the Post Office seems to me to be an idea right out of the Harvard revolution. I cannot imagine a more stupid idea than that. But it is typical; it is typical of this kind of thing.

I do not think that any sensible American ought to lose faith in the Government because at the end of a 3- or 4-year program the cost is higher than it was when it started. This happens to every man who builds a house. There isn't a thing you can do with these rising prices that are going on now that does not cost more than you estimate.

What makes you lose faith is not this but the pursuit of the witches that I was talking about earlier. It is silly ideas such as all contractors are crooks and that all generals go into their employ as soon as they retire. This is what makes people lose faith. It was the McCarthy method of attacking the person rather than his ideas, which is undesirable, and that is what I talked about earlier. So surely if you find something that you believe is unnecessary, reduce it. But you better be prepared to take responsibility for what you do.

Chairman PROXMIRE. Let me ask you about a specific area of possible difficulty.

How do you appraise the intentions and the attitudes of the Soviet Union and the problems with which they are currently confronted with respect to the current power relationships in the Indian Ocean area? Do you feel that they are likely to try to alter that power relationship? There has been a great deal of discussion as to whether or not we need to have the kind of forces out there. One of the arguments, I presume, in favor of having the attack aircraft carriers which have been criticized very roundly as being obsolete and unnecessary is that areas remote as that require aircraft carriers.

Mr. ACHESON. Well, I take the most serious views of the intentions of the Soviet Union in the Eastern Mediterranean and the Indian Ocean, and I should make a quiet bet with someone that it won't be long before you find the Soviet Union financing the reopening of the Suez Canal, and this will be no good for us. The Soviet Union is very much interested in the power position in the Indian Ocean.

Chairman PROXMIRE. You have outlined the history of what you believe was America's unpreparedness, I think, vividly and convincingly, but isn't there another tradition among nations, the tradition of over-preparedness, perhaps not an American habit but a tradition among nations that has led to militarism and emotional and national disaster?

General Shoup has recently spoken out about this. Does that concern you at all, the possibility of overpreparedness in the arms race?

Mr. ACHESON. I think we were all worried about the attitude of Germany before the two wars. We thought that both the Kaiser and Hitler were preparing for an aggressive operation and so was General Tojo, the Japanese warlord. And this concerned me very deeply, all of us, I am sure—and you, too. One can spot the preparation for aggression without too much trouble. I would not think this country has ever been in that position, or is in it now, or is likely to be in it.

Chairman PROXMIRE. Well, I would certainly agree that there are differences on the basis of our history, but so much depends on the way we view this Communist threat. It is necessary to strike a balance.

At any rate, let me take one more look at the Soviet Union.

We often hear of the hawk-dove controversies which exist in the United States. Many people argue, tell us that such a hawk-dove dichotomy exists in the Soviet Union. You have indicated that in that kind of a dictatorship no revolution is likely and that the government's determination of its policy is to a considerable extent independent of the views of the people. But how do you appraise the internal power relationship in the Soviet Union? Do you think that that will affect the future aggressive tendencies and the future military buildups, or do you feel that this is a state which is going to be dedicated to aggression as long as it continues to exist in its present political form?

Mr. ACHESON. I should disclaim any qualification to be a Kremlinologist in this area. I should think it almost impossible that there can be any major opposition to any major program of the party in the Soviet Union. It just could not be tolerated.

Chairman PROXMIRE. You see, what I have in mind is not major opposition in the sense that we have a revolt, political revolt, in this country so often. I was thinking of major opposition in terms of judgment, the kind of difference you have seen even in Red China, a difference between those who feel that the long-term power of the country will be enhanced with a greater investment in education, a greater investment in capital investment, a lesser investment temporarily in weapons, and so forth. This kind of a conflict, which is quite different than ours, can still have a very important effect of the kind of arms threat we can find in the next 10 or 20 years.

Mr. ACHESON. I am a little confused as to what you are asking me. I have no doubt that there among the intellectuals in the Soviet Union, which would be a small and comparatively nonpowerful group, you will find people who have a disagreement with the general trend of Soviet policy. I am sure that there are many who think along the line of Count Tolstoy and his followers. I do not believe they are an important element in Soviet life.

I think you also find a submerged conflict between classes in the Soviet Union. I think classes have developed far more than we are generally aware of in this country, and that the managerial people are living much better than they used to under the stern Communist doctrine, that their incomes are greatly disproportionate from the workers and that their interests are different; they want a different kind of a future from some of the less favored classes.

All of that is true, which means that it would be absurd to say that there have been no changes in the Soviet Union since 1917; there have

been changes, but they are not changes which in my lifetime or yours are going to profoundly affect or materially affect the sort of policy decisions which will be made.

Chairman PROXMIRE. Senator Jordan?

Senator JORDAN. Mr. Secretary, I would be interested in your evaluation of the seriousness of the Sino-Soviet conflict. Is it just a border struggle, or is it likely to escalate into something much greater?

Mr. ACHESON. I think that it is not merely a border difference. I think there are very profound differences between them. Unfortunately, I do not think that helps us much, because they are agreed on one thing, and that is that we are the enemy. One of them would like to cut our throats and the other would like to shoot us. But aside from that happy choice, I do not think it makes too much difference.

The particular border matter to which you referred is a very, very old, and longstanding dispute between Imperial Russia and Imperial China. The argument about that particular area goes back since before Columbus.

This, I think, is only a symptom and not a cause. There are more basic differences in the conception of the Communist state between the two countries; that is, there are differences within China which are different from the major views within Russia. Russian communism operates on the basis of the apparatus and the party and is a disciplined, a highly disciplined, operation. Mao's attitude as distinct from the party's attitude is a more nihilistic one. Mao deprecates the bureaucracy. He thinks it is bad for the country and all evil comes out of the bureaucracy. And this whole business about let a hundred flowers blossom, well, he did not like the blossoming when they started to blossom. But it is just a sort of nihilistic view—let everybody go his own way as long as he does not interfere with other Communists. It is a philosophical conflict which does not really mean that there is going to be any political conflict, but there is a difference.

Senator JORDAN. But they are both dedicated to being our eternal enemy, so this should not make any difference in the military priorities we set up in this country, the fact that this conflict is—

Mr. ACHESON. I do not think it makes any difference at all.

Senator JORDAN. Then I have one more question, if I may go back to Safeguard ABM. Some of the critics of Safeguard predict that its installation would be provocative and that it would stimulate a new round in the nuclear arms race. How do you answer that criticism?

Mr. ACHESON. It depends how you view this thing. The essential object of the ABM Safeguard operation is to disarm a weapon that the other fellow has. This is inherently different from adding to offensive weapons, which you have.

Senator JORDAN. Yes.

Mr. ACHESON. If I were a Russian looking at this and I heard an argument saying what we should do is to have Safeguard here so it will disarm the incoming Russian weapon, and if they build more weapons we will build more ABM's, I would feel different about that than I would toward a proposal which has been made several times before various committees that we do not try to Safeguard these but fire everything we have at the first radar sign of trouble. This, I think, comes about as close to madness as one can come. If I were a Russian, it would scare me to death, because this gives you no time to think. It

really gives the President no time even to read a report that he gets from radar operators. It puts the control of policy in the hands of technicians. This, I think, would be really disastrous policy.

Several Members of Congress in one House or the other have gotten this proposal off. The ABM proposal in the United States viewed from the Russian attitude is not one more aggressive round. It just is not.

Senator JORDAN. I think you have already said that you did not think that it would have the effect of keeping them away from the bargaining table any longer than they would otherwise choose.

Mr. ACHESON. That is exactly what I said.

Senator JORDAN. Yes.

Mr. ACHESON. Whether they will come to the bargaining table depends on whether they think it is a good idea from their point of view.

Senator JORDAN. Whether it is to their advantage to come.

Mr. ACHESON. That is right. I do not see any signs that they think it is yet.

Senator JORDAN. Thank you, sir.

Chairman PROXMIRE. Mr. Bolling?

Representative BOLLING. Mr. Secretary, before you were Secretary of State, you were for some time an Assistant Secretary of State for Congressional Relations, and you were, as the record indicates, very successful in that role. In fact, you have written perceptively about Congress.

I believe that one of the confusions that exists on the Hill is something that you would understand very well.

In the 90th, the last Congress, at least the majority of it, found itself forced to admit that it could not cut appropriations in detail, and then proceeded to enact a broad gage overall cut in expenditures.

Now, I believe and I suspect that you would approve—and I am going to ask you if you would approve—a situation wherein the Congress increased its policymaking function in responding to Executive recommendations. For example, I have contended in writing that our Armed Services Committees have unfortunately become committees on military real estate and not military policy.

Mr. ACHESON. Yes.

Representative BOLLING. And the consequence has been that we have not as a policymaking institution given proper supervision to military policy and military expenditures. I am not one of those who believes that the Executive is allwise. I think the Congress has a role to play. And I am sure that you would approve heartily any increase in the effort of Congress to see to it that military policy was made more wisely. Surely that would result in the more efficient use of public resources. You would have no objection to that kind of an approach; is that correct?

Mr. ACHESON. That is correct. And, you know, we all thought in 1946 at the time the Congress adopted the La Follette-Monroney Reorganization Act of getting a congressional budget that would have this effect, that the Congress would then look at the totality of the economy and what it could take out through taxation for loans, or whatever it wanted to do for all governmental purposes and then decide what to do with that. Thus, you would have a better control over expenditures than you do by appropriating in a spotty way

and taxing in a spotty way and leaving the budget almost entirely to the Executive.

But it did not work, and I suppose it is contrary to the practices of the Congress. I do not know why it did not work out, but it did not.

Representative BOLLING. I do not propose to go into that. But I think that one of the things that may hopefully come out over this current uproar of one weapons system, which you have made clear is a relatively insignificant factor in terms of the money expenditure and a matter of perhaps great consequence in terms of the total power and relationship in the world, is not a return to isolationism or a return to the experience of the past where in fact Congress has been too much of a rubberstamp to Executive military proposals. The Congress agreed to nearly all the mistakes that the Executive has been able to make, and I won't enumerate them but they have been many. And I think every Executive that I can think of has made at least one. We need a system which, taking a better account of the power relationships inside the Congress than the La Follette-Monroney Act really did, sees to it that the Congress assumes the responsibility for setting, as does the Executive, its national priorities. And that is really what all this fuss is about, but I think we get very much diverted. And that is something I think you would most heartily approve of.

Mr. ACHESON. Yes, that is right.

Chairman PROXMIRE. I would like to ask you, Mr. Secretary, in a statement which you prepared but then did not use, but you have presented it to the committee, you made a more detailed statement, wherein you say, and I quote: "We are not about to move from an era of confrontation to a case of negotiation. We have been negotiating with the Soviet Union all along."

Now, this seems to disagree directly with the rhetoric of the President of the United States. The President of the United States, as you recall, at the Republican Convention and I think since then has indicated that one of the purposes of his administration is to move from confrontation to negotiation. Would you disagree with the assertion of Mr. Nixon that we have engaged in confrontation with the Soviet Union, not negotiation?

Mr. ACHESON. Senator, nothing would give me greater pain than to find myself at odds with the rhetoric of any distinguished person, particularly the President. The way you state it, it seems as though I am in opposition.

Chairman PROXMIRE. Well, how can I take it otherwise? You say, "We are not about to move from an era of confrontation to a phase of negotiation."

Mr. ACHESON. I am prepared to admit that you may have a point. That does not mean that I support his proposal any the less vigorously. I think it was another Republican candidate who spoke about campaign oratory as not being a really good guide to future policy, and I may find myself in disagreement with him, too. Some of my own oratory I have lived to regret, I may say, but no often.

Chairman PROXMIRE. Are you telling us, then, that negotiation goes hand in hand with a strong military posture, and to the extent that our military posture is strong and is respected we will be able to negotiate more effectively—and if a strong military posture is construed as confrontation, so be it?

Mr. ACHESON. I should think that is fair. You may remember a phrase which I coined when I was Secretary which was "Negotiating from Strength."

Chairman PROXMIRE. I did not realize that was your phrase. Yes, indeed.

Mr. ACHESON. Oh, you do me an injustice. It is not copyrighted, but it was mine.

CHAIRMAN PROXMIRE. You seem to criticize the SEATO Pact.

You did not expressly, but you said you were concerned about some of the Dulles treaties, including those in Asia. I would like your appraisal of how the SEATO Treaty looks. This is especially pertinent in light of the experience of the United States in the last few years in Southeast Asia.

Do you think that that experience is grounds for reconsidering from the ground up our commitments in that area?

Mr. ACHESON. We used to say about Foster Dulles that he had "treaty-itis"; he thought he could deal with any nation by having a treaty. The SEATO Treaty embraces an odd combination of countries. I thought it was a mistake to get the United States and some European countries and some Far Eastern countries all mixed up together in a security treaty.

When we went over the Japanese Peace Treaty, I thought Mr. Dulles and I had fought this out. The original idea in the Japanese Treaty was to have a treaty of all the people who had been at war with Japan. But the more we went over it the more it became clear that this would not work; and therefore we broke this down into a series of treaties. Everybody who had been at war with Japan was asked to join a treaty which made peace, so that instead of being at war they were then at peace. The treaty said that Japan renounced any claim to sovereignty over certain territories which it had, but we did not attempt to say to whom those territories would go because we could not get any general agreement on that. One is Formosa. The others were the islands to the north that went to Russia, et cetera. All we did, in the main treaty, was to require the Japanese to give up sovereignty in various areas. In the second place, there should be no reparations. This was a vast step ahead. But the Japanese were required to enter into separate agreements with the victims of their warmaking power by which they would repair damages and replace property if the raw materials were provided for them by the victim. They said they would not go to war and would give up militarism.

We entered into another treaty with Japan by which we acquired certain military bases and certain rights and they undertook certain responsibilities. We entered into a treaty with the Philippines by which we agreed to protect the Philippines. We entered into a treaty with Australia and New Zealand by which we undertook certain mutual responsibilities. We got a series of treaties which enabled us to clean up the war without trying to put everything into one, as some nations would not agree to some things that were in the other treaties. The Southeast Asia business, I thought, was sort of mixing up of apples and oranges and horses and cats and dogs and everything.

What seemed necessary to me in Southeast Asia was for the countries of Southeast Asia themselves to enter into a treaty by which they would agree to respect one another. If the Formosan Chinese would

agree to that, probably the Communist Chinese would not. But this was a matter which was much better left to the Filipinos and the nations of Southeast Asia, the Indians, and others. Then we could have what we really needed no treaty for at all, and that was for everybody who was with us to say we will help anybody who gets jumped out there by the Communist Chinese.

Chairman PROXMIRE. You see, what I have in mind is the present situation, how we should regard those commitments now.

Mr. ACHESON. I do not know. I am confused by SEATO. I have never liked it. I was sure it was going to get us into trouble, which it did. And I thought both that and CENTO were foolish operations. I think the less said about them the better in my judgment. You cannot repeal them. They may just disappear after a while.

Chairman PROXMIRE. Congressman Conable?

Representative CONABLE. Thank you, Mr. Chairman.

I regretted having to leave, sir; I have enjoyed your presentation a great deal.

When Senator Fulbright was before this subcommittee, he made one statement about which I questioned him, referring to certain military capacities that the United States might be seeking in the future. He said if we have these capacities, we will be tempted to use them.

Now, he denied on cross-examination that he was, in fact, urging the basing of future policy on an incapacity to respond to what our national interest might be at that time. But it did give rise to several thoughts in my mind that I would like to ask you about.

You seem to view the world as essentially bipolar still. Henry Kissinger in his essays on foreign policy seems to indicate that we are moving toward a multipolar world.

Under certain circumstances, a lack of capacity can stimulate a greater contribution by our allies, as, for instance, I assume the decision to return some troops from Vietnam is primarily to encourage on the part of the South Vietnamese an added effort. If you view the world as bipolar, it is perhaps unrealistic to expect that your allies are going to make a great deal of effort in contributing to collective security. Many Americans would like to think that we were moving into a multipolar world and that our allies would have notice that we were no longer to be relied on for everything, and, therefore, that they would have to make a greater effort themselves.

I wonder if you would comment on that, sir.

Mr. ACHESON. Well, I would comment on it by saying that whoever invented the doctrine you just expressed, whether it was Senator Fulbright or you, is mixed up. It is one thing to talk about a bipolar world. It is another thing to talk about whether smaller countries make efforts or not.

When I talk about a bipolar situation, I mean there are two great powers and only two, and it is foolish to believe anything else. General de Gaulle tried to make out there was something else, and that he was it. It turned out he wasn't it; and he is now in Ireland with the rest of the myths of history. He was trying to create a combination in Europe which would be another great power. This is not likely to happen. The great trouble in Europe—at one time we hoped that it would occur, but he has set it back for a long way—the elements of power as I gave them a little while ago are population, resources, technology, and will.

Papoleon said the moral, when he meant morale is to the physical as three-to-one—will is as important as all these other things put together. And there is no common will in Europe. It would take a long time—we hoped that through the Common Market and all of these things Europe would tend to become more of an entity. There is no evidence that much progress has been made.

From the point of view I was talking about, there are two powers which from the point of view of impact upon one another and upon the rest of the world are unique, and they are the Soviet Union and the United States.

There are a lot of other powers which are not run by anybody. We do not run them. We do not run Europe. There are some powers in Asia who wish for more independence. But this does not mean that they are powers. This does not mean that they can accomplish anything if they run afoul of one of the big ones. It would be very desirable if they could find some way of consolidating their interests. I would be all for any kind of an integration of Europe, whether it begins informally or formally. It would be highly desirable if some of the nations of Africa could have more of a common view. And therefore by trying to make a difference between what Henry Kissinger is talking about and what I am, because one of us uses the phrase bipolar and somebody uses multipolar, I think, is wrong.

What Henry Kissinger is getting at is that since the economic recovery of most of the world, neither the Soviet Union nor the United States can dictate to free peoples. We cannot, and we do not try to, and we should not try to. We do not want to.

Representative CONABLE. Henry also says, of course, that true collective security is based on a community of interests, and I would like to add—he does not say this, but I think it is likely to be a community of fear. Now, how can we expect great contributions to collective security by our allies as long as we have a “great-by-God” American Army standing between them and any potential danger?

Please, I am not advocating a position of weakness, but I am asking this question because it is a question that is constantly asked a Representative by his constituents—why should we be the only great power in the world to protect all these people who could not care less about their own defense? One of the reasons they don't care is that they feel they can rely on us. I raise this question because I think it generates some of the internal pressures that are evidenced perhaps even in this hearing today.

Mr. ACHESON. You are getting at the heart of one of the most perplexing problems. There is an international youth movement, and these new countries are just as difficult and just as unreasonable and ought to be spanked just as much as our young people. Our youth are too affluent. They could not care less about being educated or being disciplined or getting a job or anything. They are just sitting on top of the world and “to hell with trouble.” That is a bad situation, and among many of the young countries, there is exactly the same thing.

It is true that there was much greater cohesion in Europe when 30 or 40 Russian divisions were ready to move overnight and we only had two or three on the Continent. It is also true that for a month after the invasion of Czechoslovakia everybody in Europe behaved

pretty well. Then they began to forget—"Why this is just Czechoslovakia. This won't go any further. In the meantime, the United States has got to hold an umbrella over us so everything is all right."

The troublesome fact is that we do have to hold an umbrella over them. We are like parents of troublesome children; you cannot guillotine your own children, although you often would like to. You just cannot. You have got to put up with them. And you would much rather have your own children on your side than on the side of some gang, or in jail most of the time.

If we were so alienated from Western Europe that it fell under Soviet control, as I said earlier, our problems would be unmanageable. Representative CONABLE. Perhaps their would, too.

Mr. ACHESON. Of course they would, but it would be too late for them to worry about it.

Representative CONABLE. I am referring to the Soviets.

Mr. ACHESON. Yes. Well, this might be except that they would do it the way Hitler did it. You see, even Napoleon was not able to organize Europe the way Hitler did it, and Hitler did it just by shooting those people who got troublesome, and the Russians would do the same thing without any compunction. If the Russians organized 190 million Western Europeans, highly technically educated people with considerable resources, and made them really working ants for the Soviet Empire, that would be a pretty serious addition to the other side.

We want them to be with us. We want them to make the necessary effort to make it possible for them to be with us. This is hard to do. I have been called back to the Government three times to try to devise new ways: First of all, before France left NATO; then after France left, and recently again. What can you do with our NATO allies to make them see that they cannot have the protection of the United States without making efforts both to increase their contribution to the whole and to make possible the things that they ask us to do?

For instance, they ask us to keep a quarter of a million troops in Europe. This is not a hardship for us to do until we have to provide the foreign exchange of those troops and the families to live. Then it becomes impossible. The Breton Woods agreements which were made for commerce, were not designed to support military exchange arrangements. They just were not designed for that, and we cannot do it. So we have a lot of makeshift agreements by which Germans purchase arms or one thing and another.

Second, they want us to receive a lot of imports from Europe, and we should. I am all in favor of these policies. I am all in favor of foreign trade. I am in favor of imports as well as exports. But you cannot take a lot of imports, pay a lot of dollars to support troops, and also make American capital available in the world without going broke. You cannot do it. It just will not work under the rules we have.

But it could be made to work. There is no reason why there could not be a new arrangement between the Europeans, and include the Japanese and some others and ourselves, by which you had two monetary systems: one for dealing with troops, the other for dealing with commerce.

In all of those respects, you are quite right that it would be very helpful to find some way of bringing home to the Europeans the

necessity of their doing something about it. One is tempted to say, "Well, you do this or we will pull the troops home." But threats do not make free people do things. They will say, "All right, take your troops home." That is the last thing we want to do, because then Europe is exposed to all kinds of dangers which we cannot deal with. We want military, commercial, monetary arrangements which are all interwoven together so that there can be a real Western Atlantic alliance, and this is just as hard as it can be.

Representative CONABLE. I think my time is up.

Chairman PROXMIRE. You go ahead. We are all through. We waited for you.

Representative CONABLE. Thank you so much.

I also was somewhat amused by your reference to the military-industrial complex as one of the current cliches. I wonder if you feel also that the statement that security is not exclusively a matter of military strength isn't fast becoming a cliché also. We seem to have heard a good deal about the different types of security here in this committee.

Mr. ACHESON. Yes; yes, all of this is true.

Representative CONABLE. I have no further questions.

Chairman PROXMIRE. Well, thank you very, very much, Mr. Acheson. You have been not only most enlightening and helpful, you have been very entertaining and amusing, and we want to thank you so much for coming before us and giving us more than 2 hours of your wisdom. There may be some of us who disagree on some points, but I think we all have to agree that you are as competent and able a witness as we have had appear before our committee, and we have had some very good ones.

Mr. ACHESON. Thank you, Senator, very much. I appreciate what you said.

Chairman PROXMIRE. The subcommittee will stand in recess until tomorrow when we will hear Director Robert Mayo, Bureau of the Budget, and Chairman Paul McCracken of the Council of Economic Advisers.

(Whereupon, at 4:25 p.m., the subcommittee adjourned, to reconvene Thursday, June 12, 1969.)

THE MILITARY BUDGET AND NATIONAL ECONOMIC PRIORITIES

THURSDAY, JUNE 12, 1969

CONGRESS OF THE UNITED STATES,
SUBCOMMITTEE ON ECONOMY IN GOVERNMENT,
OF THE JOINT ECONOMIC COMMITTEE.

Washington, D.C.

The Subcommittee on Economy in Government met, pursuant to adjournment, at 10:25 a.m., in room G-308 (auditorium), New Senate Office Building, Hon. William Proxmire (chairman of the subcommittee) presiding.

Present: Senators Proxmire and Jordan, and Representative Moorhead.

Also present: John R. Stark, executive director; Richard F. Kaufman and Robert H. Haveman, economists; and Douglas C. Frechtling, minority economist.

Chairman PROXMIRE. The subcommittee will come to order.

We are delighted to have you gentlemen here. I know how you have been under pressure. You have had to appear at the White House this morning with congressional leaders on the surtax, a very important meeting. And we are delighted that you have come even though you are unavoidably late.

Today we welcome Budget Director Mayo and Chairman of the Council of Economic Advisers Paul McCracken.

Robert P. Mayo was named as Director Designate of the Bureau of the Budget on December 11, 1968, and was sworn into office by President Nixon with the Cabinet on January 22, 1969.

From 1960 to his appointment as Budget Director, Mr. Mayo was vice president of the Continental Illinois National Bank & Trust Co. of Chicago.

Prior to that, he was a career executive in the Federal Government service, in the Office of the Secretary of the Treasury, from 1941 to 1960. During this period, Mr. Mayo rose from economic analyst to Assistant to the Secretary of the Treasury for Debt Management.

In 1967, Mr. Mayo served as Staff Director of the President's Commission on Budget Concepts.

He received his AB degree from the University of Washington in 1937, graduating magna cum laude.

In 1938, from the same university, he received his masters' degree in business administration.

He is accompanied by Dr. James Schlesinger and Mr. Maurice Mann, Directors of the Bureau of the Budget.

Paul W. McCracken received his bachelor of arts from William Penn College, his master of arts from Harvard, and his doctor of philosophy from Harvard.

He is Edmund Ezra Day, university professor of business administration, University of Michigan.

From 1965 to 1959 he was on leave from the University of Michigan as a member of the Council of Economic Advisers.

He returned to the University of Michigan in 1959.

He was appointed Chairman of the Council of Economic Advisers in January 1969.

He is a member of the American Economic Association, the American Financial Association, the American Statistical Association, and the Royal Economic Society.

He has been a member of various task forces and Presidential commissions.

Gentlemen, we are very happy to have you before us. You are both extraordinarily competent men. And you may proceed in your own way with your statements, and then other Members will be here later, and we will question you on the statements.

Mr. Mayo, would you care to lead off?

Mr. MAYO. We can do it either way, Mr. Chairman.

Chairman PROXMIRE. Whatever you prefer—Mr. McCracken?

Mr. MAYO. We thought perhaps, Mr. Chairman, that leading from the broadest allocation of resources in an economic sense to the budget process might be a logical way to do it. We can do it either way, however.

Chairman PROXMIRE. Very good. In that case, Mr. McCracken, why don't you go ahead?

STATEMENT OF HON. PAUL W. McCRACKEN, CHAIRMAN, COUNCIL OF ECONOMIC ADVISERS

Mr. McCracken. Thank you very much, Mr. Chairman.

We are delighted, of course, to be here for this hearing today.

My statement, I think, is a little too long to read in its entirety. I would like to summarize rather quickly, roughly the first half of the statement.

I have discussed in the first part of my statement here some of the key issues related to the problem of national defense and economic stability.

The basic point that I wanted to make in this first part of the statement was simply that given the levels of defense spending we have, there is no particular peculiar or unique problem which this poses, that the level of defense spending we have can be handled in terms of overall economic policy with the right mix of monetary and fiscal policy.

Now, this does not gainsay the fact that a sharp change in the rate of spending may for a time pose problems either way. We have seen this in the last 3 or 4 years, of course.

And conversely, if there is a substantial reduction, there may be transitional problems that we could go into later on if there is interest in them. Indeed, the administration is now involved in a substantial study of this aspect of the problem.

There are other questions about the extent to which the defense program absorbs a substantial amount of our manpower, particularly of our highly trained manpower. It is true that about a fifth of all engineers and roughly one-tenth of all scientists seem to be involved in the defense program. But here again this is a fairly complex matter.

The second aspect of the relationship of defense expenditures to economic policy that I have discussed in the statement here has to do with what might be called the balance-of-payments cost. I believe the Assistant Secretary of Defense in testimony earlier talked about this. It is possible to make an estimate in the pro forma sense as to what the balance-of-payments cost of our defense program is. The estimate for fiscal 1968 was \$4.5 billion. It was \$4.2 billion for 1967. There are some offsets, however; for instance, defense receipts from abroad. And this reduces the figures to \$3.3 and \$2.4 billion, respectively.

I should point out, however—as I do in my prepared statement—that this does not completely answer this question. There are indirect effects both ways which would have to be taken into account. First of all, to the extent that our defense program places additional foreign exchange into the hands of other nations, this may result in an increment of additional exports for us which would serve as a partial offset. And on the other hand, to the extent that increment of defense expenditures produces a higher level of business activity, it may itself indirectly be responsible for an increment of import, which enlarges the cost still further.

I would like to spend most of my time here on this national priorities question, which I think is the issue of specific concern to the subcommittee this morning.

To raise the question of expenditures for national security as a question of national priorities does imply two things.

First, it implies that at the margin expenditures for national security do make a contribution to the national security. If that is not the case no problem of priorities arises. If national security expenditures do not add to the national security there is no need to go through the exercise of comparing the value of those expenditures with the value of expenditures for other purposes. Such national security expenditures should, of course, be eliminated.

Second, it implies that achievement of the national security objective is not an "all or nothing" proposition. It implies that there is no figure for national security expenditures at which we get total security and below which we get zero security. If there were such a figure we would presumably choose to spend that amount, and neither more nor less. The problem of priorities arises in a practical sense because national security is a matter of degree. We can have more or less of it by spending more or less on it. Therefore, we have to decide whether more of it is worth what it costs—meaning the sacrifice of other objectives that would be necessary to obtain it.

This is a question that should be answered at the highest level of Government—by the President and the Congress. That is to say, it is not a question that can be answered by technicians. The addition to national security that would result from expenditure of another billion dollars on defense, cannot be measured in terms permitting direct comparison with the benefits that would result from spending the billion dollars in some other direction.

Is the national benefit from a billion dollars of defense spending greater or smaller, than spending that amount on additional private consumption, or allocating those resources for investment expenditures or programs for some nondefense public program? There just is no easy arithmetic or scientific way to arrive at that kind of calculation. In the end we simply have to rely on the judgment of the proper officials.

Now, these decisions must not only be made by the responsible elected officials, but at least in a formal sense they are made by these officials. And it is for this reason I would like to spend just a little time outlining the structure.

The President determines the administration's recommendations on the size and composition of the Defense budget, on budgets for all other Federal programs, including Federal assistance to States and localities, and on the level and character of taxes. Congress approves, rejects or revises these proposals and adds others of its own. All of these decisions reflect implicitly or explicitly an appraisal of the value of expenditures for national defense, compared with the value of expenditures for other purposes.

But of course this is not sufficient. We want these decisions to be made by the responsible officials not only in the formal sense that they sign certain pieces of paper or vote on certain resolutions, but also in the real sense that they choose freely among the available alternatives in full understanding of the implications of these choices. The basic decisions should not be preempted by officials who, however dedicated, have special responsibilities and interests which prevent them from objectively weighing the full range of national goals. The responsible officials should have before them all the important eligible options, and objective or at least competing evaluations of the consequences of different choices. They should recognize, of course, that a choice of more of one thing means also a choice of less of something else.

This administration is making strenuous efforts to improve decision-making procedures in the executive branch. I should like to describe the current procedures, especially in their new aspects, as seen from the vantage point of the Council of Economic Advisers. I will then turn to a summary description of the problem of national priorities confronting the country for the next few years. The Bureau of the Budget has a central role both in the decisionmaking process, and the Director of the Bureau will discuss these questions himself.

The whole procedure which I shall discuss, is aimed at improving the ability of the President to make the basic decisions on priorities. Many other people and several organizations participate in the process, but they participate as proposers, claimants, or analysts, not as decisionmakers.

The President has three main high-level organizations through which he obtains different perspectives on the problem of national priorities. They are the National Security Council, the Urban Affairs Council, and the Cabinet Committee on Economic Policy. The National Security Council was established by legislation in 1947. The other two bodies were created by President Nixon through Executive orders soon after he took office.

The statutory members of the National Security Council are the President, the Vice President, the Secretary of State, Secretary of Defense, and the Director of the Office of Emergency Preparedness. In addition, other officials including the Secretary of the Treasury, the Director of the Bureau of the Budget, and the Chairman of the Council of Economic Advisers attend NSC meetings when appropriate.

The NSC system has a number of functions, but we are concerned here only with its role in the development of the national defense program. This role is to consider with the President and advise him about alternative national defense strategies, alternate programs that would be needed to carry them out, and the costs of these alternative programs, not only in dollars, but also in other national objectives that would be sacrificed in the execution of the defense programs.

The National Security Council system is operated so that the Council and the President are not presented an agreed program for ratification by the President, but rather with realistic alternative strategies and programs to implement the strategies and programs.

The NSC does not consider only the national security benefits of alternative strategies; it also considers their costs.

The NSC considers not only the dollar costs of alternative national strategies; but also the costs in other objectives that may be less adequately served if more is spent on defense.

The Urban Affairs Council was established by President Nixon in recognition of the high priority which must now be given to what is loosely called the urban problem. I say that this is loosely called the problem, because the complex of poverty, injustice, squalor, and hostility which constitutes the urban problem is also found outside urban areas, as the Council recognizes. The Council is chaired by the President and includes the Vice President, the Secretaries of Agriculture, Commerce, Labor, Health, Education, and Welfare, and Housing and Urban Development, and Transportation, the Attorney General, the Director of the Office of Economic Opportunity, the Chairman of the Council of Economic Advisers, and the Assistant to the President for Urban Affairs.

The Urban Affairs Council serves as an instrument for assisting the President in developing programs in the field of its concern and evaluating them in relation to other objectives. The participation of the Bureau of the Budget, the Counselor to the President, the Council of Economic Advisers, and the Treasury helps to assure that the claims of objectives other than urban problems are represented in the Council's deliberations.

The Cabinet Committee on Economic Policy was established by President Nixon to assist in the consideration of economic problems of Government-wide significance. Unlike the other two bodies described above, it does not concentrate on Federal programs in particular areas. Rather it is concerned with the requirements for growth and efficiency of the economy, upon which the satisfaction of many national objectives depends, and with the longrun allocation of the national output among the broadest categories of uses, private as well as public insofar as that is influenced by Federal policy. The Cabinet Committee on Economic Policy is chaired by the President and includes the Secretaries of the Treasury, Agriculture, Commerce, and Labor, the Counselor to the President, the Director of the Bureau of the Budget, the

Deputy Under Secretary of State for Economic Affairs, the Assistant to the President for Urban Affairs, and the Chairman of the Council of Economic Advisers, who also coordinates the work of this committee. Representatives, I might add, to the National Security Council and the Executive Office agencies often also sit in, and participate.

There are now two closely related major studies underway designed to assist the President in making longrun basic decisions about national priorities, including the appropriate level and character of the national defense program. One of these is being done in the National Security Council system and focuses on possible alternative strategies and defense programs for the next 5 years. The other is being done under the direction of the Cabinet Committee on Economic Policy, as part of its post-Vietnam planning, and focuses on the availability of resources after the Vietnam war and the general alternative uses of those resources.

The National Security Council study involves at every stage a number of agencies, including the Department of Defense, Department of State, Central Intelligence Agency, Office of Emergency Preparedness, National Security Council, Budget Bureau, Treasury, and the Council of Economic Advisers, although the contribution of the several agencies is different in different phases of the study. The study began with the specification of a large number of alternative strategies—combinations of objectives, contingencies and responses—for which forces might be prepared. The range of strategies specified seems to me to cover all those that are reasonably eligible for consideration. Estimates are then made of the forces needed to implement each of the alternative strategies. After that the alternative forces programs are appraised for their consequences in several dimensions—international political consequences, balance-of-payments consequences, and economic consequences. The analysis of economic consequences will deal in part with the overall economic implications of different rates of defense expenditures—for inflation and unemployment. But it will attempt more particularly to specify what non-defense uses of national output might have to be sacrificed if we choose larger rather than smaller defense programs. In this phase of the work the Council of Economic Advisers is heavily involved.

The post-Vietnam study, for the Cabinet Committee on Economic Policy, starts by asking what the potential national output will be, at high employment, over the next several years. It will then show what the consequences of different patterns of use of total output would be for various national objectives. How much more or less economic growth would we get from, say, \$10 billion more or less business investment in plant and equipment? How many more houses would we get from \$10 billion more expenditure on residential construction, and how would that relate to the national housing goals?

How much change in the rate of increase in per capita consumption would result from the \$10 billion changes there, and so forth?

There are all kinds of these comparisons which have to be weighed to try to arrive at a calculus of what is gained by allocating resources in one direction as contrasted with the cost of giving that much of those objectives in another.

Decisions for or against applying the national output in the ways suggested by these questions would have to be implemented mainly

through the Federal budget—that is, through the amount and character of Federal expenditures, including aid to State and localities, Federal taxes, and Federal borrowing.

I do not want to exaggerate what we can do in this kind of an analysis. We cannot reduce the consequences of all decisions to units of national welfare so that the decisions which would maximize the national welfare can be mathematically determined. We are far from that—in many cases very far from that. What we are trying to do is give the policymaker, who in our case is the President, a comprehensive view of the main decisions that are open to him and of their consequences in terms he can understand and evaluate. Our first efforts will yield only crude results, but I am hopeful that they can later be refined.

The organizations and processes I have described are still to be tested, but I think that they will contribute much to achieving certain desirable conditions:

1. That the decisions which should be made at the highest policy level are in fact made there.

2. That information and advice about these decisions should not come only from the sources of primary responsibility and interest—for example, from the Defense Department in the case of the defense decisions.

3. That the decisions should be made in a framework which recognizes that total resources are limited, that a decision to do or have more of something is also a decision to do or have less of something else, and that all major choices must be balanced against each other.

4. And finally, that the decisions should be made in the light of indirect and long-term consequences as well as of direct and short-term consequences.

I would like to turn now from questions of organization and procedure in making decisions about national priorities, including the defense decision, to some more substantive matters. First let me make some general observations of principle which I think would help to rationalize the debate which is now going on.

All priorities decisions are made at the margin and are choices to use a specific amount of resources for one purpose rather than for other purposes. It makes no sense to ask whether defense is more important than education or improving the cities without specifying how much of each we are talking about. We are not going to decide whether or not to have defense, or whether or not to have education, or whether or not to have urban improvement. We are going to have all, on some scale. The relevant question is whether to spend, say a billion dollars more on one rather than another, or, more realistically, a billion dollars more on a specific program in one area rather than a billion dollars on a specific program in another.

Moreover, and this, I think, is quite an important point, we must compare alternative programs by what they do, not what they are called, or what they claim to do. Above all we must not use inputs—outlays—as an automatic measure of results. There may be defense programs that do not defend; there may also be education programs that do not educate, and urban improvement programs that do not improve the urban environment. Unfortunately, much of the current discussion of national priorities reveals a striking mixture of skepti-

cism and naive wishfulness in this respect. That is, there are alleged to be billions of dollars of defense expenditures that make zero or negative contribution to the national security. As against this we are offered billions of dollars of unspecified nondefense programs with a vague promise of great benefits to the American society.

The main point, however, is that decisions about national priorities should result from comparison of all the alternatives, not from comparison of an arbitrarily selected class of alternatives. Thus it is not sufficient or even helpful to ask only whether a billion dollars of expenditure for defense is more or less valuable than a billion dollars of expenditures for, say, urban programs. The answer to this question would not tell us whether one of these programs should be increased and the other decreased unless we also know the value of still other expenditures that are also alternatives to both.

Basically the priorities problem is to allocate the total national output among all its uses, not to allocate some smaller amount of money between national defense on the one hand and urban-poverty programs on the other. Too much of the current discussion assumes that the country must choose only between more defense and more urban-poverty programs, or between defense and education within the public sector.

Thus, we have to recognize that ultimately all claims on resources are in competition for these limited resources available.

Between 1957 and 1967 defense purchases increased by roughly \$14 billion in 1958 prices. It would be quite erroneous to think that this increase was the major obstacle to greater spending on the newer social programs. Between the same 2 years total real nondefense purchases increased output by \$207 billion. Private purchases of output increased by \$169 billion; personal consumption increased by \$142 billion; and capital expenditures increased \$31 billion.

The basic reason for not spending more on the new social programs during this period was the preference of the American people, and of their elected representatives, for a greater increase in expenditures—mainly private—for other nondefense purposes. A secondary and minor reason was the preference or necessity for increased defense spending. This preference for private nondefense spending was explicit in the tax reductions which occurred during this period. The discussion at the time, from 1962 to 1964, showed clearly a deliberate decision to increase private spending rather than public. It was not the case that we were locked in by a historically given tax system and could increase new nondefense Federal expenditures only by cutting defense expenditures.

I am not suggesting whether these preferences or priorities were correct. My only point is that the outcome was not the result of a choice only between national defense and new social programs but was the result of a choice among a much wider range, including the use of resources in the private sector.

The same wide range of choices confronts us for the future. We are not given a fixed total of resources to divide between national defense and new social programs. Rather we must think about how to divide the total national output among a long list of objectives.

It seems reasonable to estimate that by 1975, with high employment, the gross national product would be about \$1,150 billion in today's

prices. What uses of that output would best conform to our national priorities? Particularly, what would be the gains in other fields from reducing the portion of that total going to defense?

One way to look at this is to assume as a starting point that defense spending in 1975 would be the same as in 1969—which is neither a recommendation nor a prediction. In that case total nondefense output would rise from \$845 billion in 1969 to \$1,075 billion in 1975. This would be a rise of 27 percent in total nondefense output, or almost 18 percent per capita. Suppose this total nondefense output were divided among the main categories of use as in 1965—the last year not much influenced by the Vietnam war. Then we would have the following results—and I indicate there the magnitude of the increases in consumption expenditures fixed investment, residential construction, and nondefense Government spending.

How would these results be different if defense expenditures were reduced by, say, \$10 billion? On the same assumption about the proportionate division of nondefense output among categories, all nondefense uses of output would be about 1-percent higher. As a consequence per capita consumption would rise by 19 percent from 1969 to 1975 rather than by 18 percent. There would be a higher rate of business fixed investment which would raise the rate of economic growth. As nearly as we can calculate, if the rate of growth would have been 4 percent with defense spending unchanged it would be between 4.01 and 4.02 percent, with defense spending reduced by \$10 billion. I would call your attention to a typo in the testimony. That is 4.01 and 4.02 percent.

There would be some additional housing, of course, possibly about 25,000 units.

It is not my intent to say whether these gains are greater or less than the value of \$10 billion of defense spending. My point is that these are the kinds of questions we have to ask, and they are the choices that we have to make.

There may be some extremely valuable nondefense expenditures that would not be made if the total nondefense output were proportionately divided as in my illustration. If this is so, reduction of defense spending is surely not the only source from which we could make that extremely valuable expenditure. Starting, say, from \$80 billion of defense expenditures and \$1,075 billion of nondefense expenditures, there is no obvious reason why the defense rather than the nondefense should be the source from which urgent requirements should be met. This would only be reasonable if the defense expenditures were less valuable than the least valuable of all nondefense expenditures, including those in the private sector.

Such analysis cannot, of course, determine what the national priorities are. That can only be answered by the responsible officials. I am, however, urging that in determining priorities we should be looking at all the available alternatives and not at an arbitrarily selected subset of them—and I wanted to outline the structure of Government in the executive branch established to consider these priorities.

That is all.

Chairman PROXMIRE. Thank you, Chairman McCracken. You abbreviated the first part of your statement. The full statement will be printed in the record. It is a very thoughtful and helpful statement.

(The prepared statement follows:)

PREPARED STATEMENT OF HON. PAUL W. McCracken

Your hearings have raised many issues of importance to the American people. The Council of Economic Advisers has no special responsibility or competence in some of the areas you have been exploring. For example, the Council is not a good source of information on waste in the defense program and how to reduce it, or on the national security consequences of alternative national defense strategies and programs. There are, however, some aspects of the economics of defense that I would like to discuss today. I shall concentrate mainly on the question of national priorities, which I take to be the core of your present inquiry. But before turning to that I shall deal briefly with some other matters.

NATIONAL DEFENSE AND ECONOMIC STABILITY

The Employment Act of 1946, which established the Joint Economic Committee and the Council of Economic Advisers, explicitly gave the Council a special responsibility for the maintenance of high employment and implicitly gave it responsibility for the avoidance of inflation. With respect to the relationship between national defense and these economic objectives there are two common but mistaken ideas. One is that a high level of defense spending is necessary for the maintenance of high employment. The other is that a high level of defense spending causes inflation. Neither economic logic nor economic experience support these ideas. What happens to unemployment and prices depends on the behavior of total spending. Whether defense spending is large or small, there is some combination of fiscal and monetary policies that will adjust non-defense spending sufficiently to bring the total non-defense and defense spending to the desired amount.

The problem, of course, is to find the fiscal and monetary policies that would achieve the desired result. But a stable rate of defense spending, whether high or low, creates no special or unique difficulty in this respect. In time we would learn, and presumably achieve, the appropriate fiscal and monetary policies. The difficulty arises from large fluctuations in the rate of defense spending. A sharp increase in defense spending is likely to cause some inflation and a substantial decrease is likely to cause some transitional unemployment. We saw this during the large increase in military spending for the Korean War and during the demobilization that followed the Korean truce. We have seen it during the Vietnam War. Indeed we are still suffering from the inflation that expansion of defense spending, without adequate additional taxation, set in motion.

In principle there is also a set of fiscal and monetary policies that would offset these fluctuations in defense spending and keep the economy stable. In fact this is very hard to achieve if the variations of defense spending are large and unforeseen. Still we should be able to do better in the future than we have done in the past.

This problem now confronts us quite specifically in looking ahead to the reduction of spending for the Vietnam War. There is no lack of desirable and indeed urgent things to do, both private and public, that will more than absorb the resources that would be released by the end of Vietnam spending. For example, if we knew now, as the Administration begins the development of the Federal budget for fiscal 1971, that there would be no spending for Vietnam in that year, our problems would be greatly eased. It would be much easier, starting from now, to design a 1971 budget consistent with economic stability without Vietnam spending than with it.

However, the problem is not to plan for a future reduction of Vietnam spending of known timing and amount. The problem is to prepare for a reduction whose time and degree are not yet known. Thus, in beginning work on the fiscal 1971 budget we must make the most realistic assumption we can now make about Vietnam spending. At the same time we must recognize the possibility of developments which will change the Vietnam spending level. We must be prepared in that case to adjust the budget plans to the new situation.

Our expectation is that when the decisions have been reached which will permit a reduction of Vietnam spending the decline of spending will follow gradually. Withdrawal of troops will take time and there will be a period during which defense production will be sustained by the need to rebuild inventories. This would give time to adjust to the change in Vietnam spending. Even with this we should expect more than the usual interim adjustments of the budget to be required. This will require preparation. These seem to be reasonable assumptions.

tions, but we must also be prepared for the possibility that spending will not move along any schedule we can now foresee.

An Interagency Study Group, under the Cabinet Committee on Economic Policy, is now at work on this problem. The main requirement for being ready is one that is close to the interest of your Subcommittee—namely, a decision about national priorities. There will be more claims for the resources released from Vietnam spending than can be possibly satisfied, including claims for tax reduction. We need an early decision about which of these claims we intend to meet, so that when the time comes the resources do not go to waste for failure to agree on what to do with them.

The Interagency Study Group is concerned not only with the problem of overall economic adjustment to a decline on Vietnam spending but also with possible problems for particular communities and groups of workers. With the assistance of the Departments of Defense and Labor and the Arms Control and Disarmament Agency, a survey has been made of the localities which have either large absolute numbers of workers or large numbers of workers relative to their total labor force engaged in production of kinds that might be cut substantially. We have also tried to appraise the alternative employment opportunities that might exist in those areas after Vietnam spending declines, on the assumption that general prosperity is maintained. Our preliminary impression from this work is that there will be a small number of workers who would substantially benefit from readjustment assistance not routinely available under existing government programs. There would probably also be a small number of rather small communities that might need special government assistance. We are considering the desirability of stand-by programs that would permit the direction of special training, job counselling and movement assistance to workers and development assistance to communities, if required, in the course of a Post Vietnam transition.

I have been talking thus far mainly about the effects of the level of defense spending and of changes in that. It may be also that there are important economic consequences of the character of defense spending and the way it is managed. Of course, the structure of relative prices and wages will be different if we spend 8 or 9 percent of GNP on defense than if this figure were substantially smaller. This is natural and not necessarily a problem. Sometimes more than that is implied. It is implied that having a large defense program gives an overall inflationary bias to the economy because of the inherent nature of defense spending. For example, defense contractors might for one reason or another be less inclined to watch costs generally, perhaps grant large wage increases which other employees would then have to match. However, we see little evidence that the labor market works in this way.

There has been concern that the defense program absorbs a large number of scientists and engineers who might otherwise be engaged in employment making a greater contribution to economic growth and national welfare. It is true that about one-fifth of all engineers and one-tenth of all scientists work for the defense program. However, it should not be concluded that this is a net subtraction from the supply of scientists and engineers available for civilian work. The total supply of scientists and engineers has undoubtedly been increased as a result of the defense program, partly as an automatic response to the demand for such people and partly because of government activities to stimulate their training. Moreover some R&D work initially undertaken for defense purposes subsequently turns out to contribute to growth in the civilian sector. In any case, no adverse effect on the rate of economic growth is visible.

I do not mean to suggest that there are no specific economic effects of the defense program with which we should be concerned. Surely, there are points at which different management of the program might give beneficial results. We encountered one such case in the Administration's action to deal with the skyrocketing price of lumber. We concluded then that moderation of the Department of Defense purchases of lumber could make a useful contribution to restoring more orderly markets. A more comprehensive and systematic review of the effects of governmental procurement on the behavior of the economy is desirable, and we hope to initiate that soon. This does not imply, however, that defense procurement raises problems that other procurement does not.

DEFENSE EXPENDITURES AND THE BALANCE OF PAYMENTS

One cost of national defense expenditures to which much attention has been paid recently is the cost to the balance of payments. If there were a perfectly

operating international adjustment mechanism, the balance of payments consequences of defense spending could be ignored—the economic costs of a dollar's defense spending abroad would be no different from the economic costs of a dollar's defense spending at home. It is conceivable that the balance of payments effects of defense programs might have desirable side effects. For example, defense spending abroad during the first postwar decade, and the flow of dollars abroad during the period of general "dollar shortage," made the international economic system work more smoothly. However, at a time when we have been concerned about our balance of payments position, defense expenditures abroad contribute to our worries.

Pending a higher degree of success in the international adjustment process than presently exists, it is relevant to consider the balance of payments costs of programs. It should be clear, however, that figures for balance of payments costs do not mean the same thing as budgetary costs of defense expenditures. That is, a policy change which adds a dollar to the balance of payments cost would not be in any sense equivalent to a policy which adds a dollar to budgetary costs.

The most straightforward calculation of the balance of payments cost of defense expenditures involves direct military expenditures abroad. Figures for these expenditures, along with a breakdown, were presented to the Subcommittee on International Exchange and Payments of the JEC by the Honorable Robert C. Moot, Assistant Secretary of Defense, on January 14. In fiscal 1968, these direct balance of payments costs were \$4.5 billion, and in fiscal 1967, 4.2 billion. When subtractions are made for defense receipts from abroad, these figures are reduced to \$3.3 and \$2.4 billion, respectively.

It is generally agreed, however, that these direct balance of payments figures do not measure the ultimate balance of payments effects in any fundamental sense. To measure the ultimate effects, it is necessary to take account of the repercussions of defense outlays abroad on other components of our balance of payments, such as our civilian imports and exports. Unfortunately, in making any general equilibrium calculation, it is necessary to make assumptions regarding a number of very difficult points, and the results which one derives are very sensitive to the assumptions made.

Thus, there are grounds on which it might be argued that the ultimate balance of payments effects may be smaller than indicated by the direct payments. Defense expenditures abroad add to the foreign exchange resources of other countries, and therefore may be expected to increase their imports—including imports from the United States. Again, the strength of this balance of payments offset is quite sensitive to the assumptions made about foreign behavior in the face of additional foreign exchange income.

On the other side it has been argued that the ultimate balance of payments effects may be larger than indicated by the direct payments. Defense expenditures, to the extent they were not offset by additional revenues, have contributed to excess demand in the economy, which has in turn pushed up prices and reduced the competitive strength of U.S. industry. Thus, it is possible to attribute a share of the general deterioration in the U.S. trade account indirectly to defense spending—the size of the share depending very much on the assumptions made about general economic policy and the course of domestic demand in the event that defense expenditures had been lower in recent years.

If one encompasses capital as well as current account items in one's purview, the outcome becomes even more indeterminate. It is possible to argue, for example, that the high level of demand in the U.S.—to which defense expenditures have contributed—have pushed interest rates up, with favorable effects on the U.S. capital accounts. It should be noted that the international impact of defense expenditures, just like the domestic impact, depends to a large extent on the way in which these expenditures are financed. With a number of countries where American troops are stationed we have agreements intended to hold down the balance of payments cost.

NATIONAL SECURITY AND NATIONAL PRIORITIES

I shall turn now to the national priorities question, the main subject of these hearings.

To raise the question of expenditure for national security as a question of national priorities implies two things:

1. First, it implies that at the margin expenditures for national security do make a contribution to the national security. If that is not the case no problem of priorities arises. If national security expenditures do not add to the national se-

curity there is no need to go through the exercise of comparing the value of those expenditures with the value of expenditures for other purposes. Such national security expenditures should, of course, be eliminated. There is a problem of national priorities only if we have to rank a gain or loss in the national security objective against a gain or loss in some other objective.

2. Second, it implies that achievement of the national security objective is not an all or nothing proposition. That is, it implies that there is no figure for national security expenditures at which we get total security and below which we get zero security. If there were such a figure we would presumably choose to spend that amount, and neither more or less—except in the unlikely event that we chose to spend nothing on national security. The problem of priorities arises in a practical sense because national security is a matter of degree. We can have more or less of it by spending more or less on it. Therefore, we have to decide whether more of it is worth what it costs—meaning the sacrifice of other objectives that would be necessary to obtain it.

This is a question that should be answered at the highest level of government, by the President and the Congress. That is to say, it is not a question that can be answered by technicians. The addition to national security that would result from expenditure of another billion dollars on defense cannot be measured in terms permitting direct comparison with the benefits that would result from spending the billion dollars for something else. Is the national benefit from a billion dollars of defense expenditure greater or smaller than the national benefit from a billion dollars of private consumption expenditures or a billion dollars of private investment expenditures or a billion dollars of non-defense public expenditure? There is no scientific, objective answer to such a question. In the end we have to rely on the judgment of government officials who were chosen by the people in the belief that they have that good judgment and reasonably represent the public's standard of values.

Not only should these decisions be made by the responsible elected officials but *at least in a formal sense* they are made by those officials. The President determines the Administration's recommendations on the size and composition of the defense budget, on budgets for all other Federal programs, including Federal assistance to States and localities, and on the level and character of taxes. Congress approves, rejects or revises these proposals and adds others of its own. All of these decisions reflect *implicitly or explicitly* an appraisal of the value of expenditures for national defense compared with the value of expenditures for other purposes.

But of course this is not sufficient. We want these decisions to be made by the responsible officials not only in the formal sense that they sign certain pieces of paper or vote on certain resolutions but also in the real sense that they choose freely among the available alternatives in full understanding of their implications. The basic decisions should not be preempted by officials who, however dedicated, have special responsibilities and interests which prevent them from objectively weighing the full range of national goals. The responsible officials should have before them all the important eligible options, and objective or at least competing evaluations of the consequences of different choices and should make their decisions in recognition that if there is more of something there must be less of something else.

This Administration is making strenuous efforts to improve decision-making procedures in the Executive branch to assure that the real national priorities are accurately reflected. I should like to describe the current procedures, especially in their new aspects, as seen from the vantage point of the Council of Economic Advisers. I will then turn to a summary description of the problem of national priorities confronting the country for the next few years. The Bureau of the Budget has a central role both in the decision-making process and in the analysis of options and the Director of the Bureau will discuss these questions in terms of his responsibilities.

The whole procedure which I shall discuss is aimed at improving the ability of the President to make the basic decisions on priorities—to make sure that the options are presented to him with a comprehensive analysis of their implications. Many other people and several organizations participate in the process, but they participate as proposers, claimants, or analysts, not as decision-makers.

The President has three main high-level organizations through which he obtains different perspectives on the problem of national priorities. They are the National Security Council, the Urban Affairs Council, and the Cabinet Committee on Economic Policy. The National Security Council was established

by legislation in 1947. The other two bodies were created by President Nixon through executive orders soon after he took office.

The statutory members of the National Security Council are the President, the Vice President, the Secretary of State and the Secretary of Defense and the Director of the Office of the Emergency Preparedness. In addition, other officials including the Secretary of the Treasury, the Director of the Bureau of the Budget and the Chairman of the Council of Economic Advisers attend NSC meetings when appropriate. Members of their staffs frequently participate in the preparation of studies for the NSC.

The NSC system has a number of functions, but we are concerned here only with its role in the development of the national defense program. This role is to consider with the President and advise him about alternative national defense strategies, alternate programs that would be needed to carry them out and the costs of these alternative programs not only in dollars but also in other national objectives that would be sacrificed in the execution of the defense programs.

The National Security Council system is operated so that the Council and the President are not presented an agreed program for ratification by the President but rather with realistic alternative strategies and programs to implement the strategies.

The NSC does not consider only the national security benefits of alternative strategies; it also considers their costs.

The NSC considers not only the dollar costs of alternative national strategies; but also the costs in other objectives that may be less adequately served if more is spent on defense. The NSC is not, however, the main instrument for considering these costs.

I shall return to the process by which the NSC presents to the President the alternative defense programs in the context of other national objectives. Before doing that I shall describe briefly the other two main bodies involved.

The Urban Affairs Council was established by President Nixon in recognition of the high priority which must now be given to what is loosely called the urban problem. I say that this is loosely called the urban problem because the complex of poverty, injustice, squalor and hostility which constitutes the urban problem is also found outside urban areas, as the Council recognizes. The Council is chaired by the President and includes the Vice President, the Secretaries of Agriculture, Commerce, Labor, Health, Education and Welfare, and Housing and Urban Development, and Transportation, the Attorney General, the Director of the Office of Economic Opportunity, the Chairman of the Council of Economic Advisers, and the Assistant to the President for Urban Affairs.

The Urban Affairs Council serves as an instrument for assisting the President in developing programs in the field of its concern and evaluating them in relation to other objectives. The participation of the Bureau of the Budget, the Counselor to the President, the Council of Economic Advisers and the Treasury helps to assure that the claims of objectives other than urban problems are represented in the Council's deliberations.

The Cabinet Committee on Economic Policy was established by President Nixon to assist in the consideration of economic problems of government-wide significance. Unlike the other two bodies described above, it does not concentrate on Federal programs in particular areas. Rather it is conceived with the requirements for growth and efficiency of the economy, upon which the satisfaction of many national objectives depends and with the long-run allocation of the national output among the broadest categories of uses, private as well as public, insofar as that is influenced by Federal policy. The Cabinet Committee on Economic Policy is chaired by the President and includes the Secretaries of the Treasury, Agriculture, Commerce and Labor, the Counselor to the President, the Director of the Bureau of the Budget, the Deputy Under Secretary of State for Economic Affairs, the Assistant to the President for Urban Affairs, and the Chairman of the Council of Economic Advisers. Representatives of the National Security Council and other Executive Office agencies often participate.

There are now two closely-related major studies under way designed to assist the President in making long-run basic decisions about national priorities, including the appropriate level and character of the national defense program. One of these is being done in the National Security Council system and focuses on possible alternative strategies and defense programs for the next five years. The other is being done under the direction of the Cabinet Committee on Economic Policy, as part of its Post Vietnam planning, and focuses on the availability of resources after the Vietnam War and the general alternative uses of those resources.

The National Security Council study involves at every stage a number of agencies, including the Department of State, Department of Defense, Central Intelligence Agency, Office of Emergency Preparedness, National Security Council staff, Budget Bureau, Treasury, and the Council of Economic Advisers, although the contribution of the several agencies is different in different phases of the study. The study began with the specification of a large number of alternative strategies—combinations of objectives, contingencies and responses—for which forces might be prepared. The range of strategies specified seems to me to cover all those that are reasonably eligible for consideration. Estimates are then made of the forces needed to implement each of the alternative strategies. After that the alternative forces programs are appraised for their consequences in several dimensions—international political consequences, balance of payments consequences and economic consequences. The analysis of economic consequences will deal in part with the overall economic implications of different rates of defense expenditure—for inflation and unemployment. But it will attempt more particularly to specify what nondefense uses of national output might have to be sacrificed if we choose larger rather than smaller defense programs. In this phase of the work the Council of Economic Advisers is heavily involved, along with the Bureau of the Budget, the Treasury and other agencies. The analysis of the nondefense alternative is largely derived from the Post Vietnam Study.

The Post Vietnam Study, for the Cabinet Committee on Economic Policy, starts by asking what the potential national output will be, at high employment, over the next five years. It will then show what the consequences of different patterns of the use of the total output would be for various national objectives. How much more or less economic growth would we get from, say, \$10 billion more or less business investment in plant and equipment? How many more houses would we get from \$10 billion more expenditure on residential construction, and how would that relate to the national housing goals? How much change in the rate of increase in per capita consumption results from a \$10 billion change in total consumption in 1975? What would be the effect of \$10 billion more or less of State and local expenditures on the per capita supply of State and local services? How much of the poverty gap in 1975 could be eliminated by an income maintenance program of certain magnitudes? What differences in our national defense posture would result from spending \$10 billion more or less on defense? The NSC study will provide a basis for making a judgment on this question.

Decisions for or against applying the national output in the ways suggested by these questions would have to be implemented mainly through the Federal budget—that is, through the amount and character of Federal expenditures, including aid to States and localities, Federal taxes and Federal borrowing. We intend to show what budgetary decisions would be required to effect different choices about the allocation of the national output.

I do not want to exaggerate what we can do in this kind of an analysis. We cannot reduce the consequences of all decisions to units of national welfare so that the decisions which would maximize the national welfare can be mathematically determined. We are far from that—in many cases very far from that. What we are trying to do is to give the policy-maker, who in our case is the President, a comprehensive view of the main decisions that are open to him and of their consequences in terms he can understand and evaluate. Our first efforts will yield only crude results, but I am hopeful that they can later be refined.

The organizations and processes I have described are still to be tested, but I think that they will contribute much to achieving certain desirable conditions:

1. That the decisions which should be made at the highest policy level are in fact made there.
2. That information and advice about these decisions should not come only from the sources of primary responsibility and interest—for example, from the Defense Department in the case of the defense decisions.
3. That the decisions should be made in a framework which recognizes that total resources are limited, that a decision to do or have more of something is also a decision to do or have less of something else, and that all major choices must be balanced against each other.
4. That the decisions should be made in the light of indirect and long-term consequences as well as of direct and short-term consequences.

I would like to turn now from questions of organization and procedure in making decisions about national priorities, including the defense decision, to some more substantive matters. First let me make some general observations of prin-

ciple which I think would help to rationalize the debate which is now going on.

All priorities decisions are made at the margin and are choices to use a specific amount of resources for one purpose rather than for other purposes. It makes no sense to ask whether defense is more important than education or improving the cities without specifying how much of each we are talking about. We are not going to decide whether or not to have defense, or whether or not to have education, or whether or not to have urban improvement. We are going to have all, on some scale. The relevant question is whether to spend, say, a billion dollars more on one rather than another, or, more realistically, a billion dollars more on a specific program in one area rather than a billion dollars on a specific program in another area.

Moreover, we must compare alternative programs by what they do, not by what they are called, or what they claim to do. Above all we must not use inputs (outlays) as an automatic measure of results. There may be defense programs that do not defend; there may also be education programs that do not educate, and urban improvement programs that do not improve the urban environment. Unfortunately, much of the current discussion of national priorities reveals a striking mixture of skepticism and naive wishfulness in this respect. That is, there are alleged to be billions of dollars of defense expenditures that make zero or negative contributions to the national security. As against this we are offered billions of dollars of unspecified nondefense programs with a vague promise of great benefits to the American society. This does not contribute to realistic decisions about national priorities.

The main point, however, is that decisions about national priorities should result from comparison of all the alternatives, not from comparison of an arbitrarily-selected class of alternatives. Thus it is not sufficient or even helpful to ask only whether a billion dollars of expenditure for defense is more or less valuable than a billion dollars of expenditure for, say, urban programs. The answer to this question would not tell us whether one of these programs should be increased and the other decreased unless we also know the value of still other expenditures that are also alternatives to both.

Basically the priorities problem is to allocate the total national output among all its uses, not to allocate some smaller amount of money between national defense on the one hand and urban-poverty programs on the other. Too much of the current discussion assumes that the country must choose only between more defense and more urban-poverty programs. It is implied that we have not spent more on urban-poverty programs in the past because we spent so much on defense, and that the only way to expand urban-poverty programs in the future will be to cut defense spending. However, this is not an accurate picture of what happened in the past or of the choices for the future.

Between 1957 and 1967 defense purchases increased by roughly \$14 billion in 1958 prices. It would be quite erroneous to think that this increase was the major obstacle to greater spending on the newer social programs. Between the same two years total real purchases of nondefense spending increased output by \$207 billion. Private purchases of output increased by \$169 billion; personal consumption increased by \$142 billion; and capital expenditures increased \$31 billion.

GROSS NATIONAL PRODUCT
[In billions of dollars, 1958 prices]

| | 1957 | 1967 | Change |
|---|---------|---------|---------|
| Gross national product | \$452.5 | \$673.1 | \$220.6 |
| Government purchases | 89.3 | 140.7 | 51.4 |
| Federal defense | 46.1 | 59.7 | 13.6 |
| Other | 43.2 | 81.0 | 37.8 |
| Private purchases ¹ | 363.2 | 532.4 | 169.2 |
| Personal consumption | 288.2 | 430.5 | 142.3 |
| Capital outlays | 68.8 | 99.5 | 30.7 |
| Addendum: Total nondefense purchases ² | 406.4 | 613.4 | 207.0 |

¹ Includes net exports not shown separately.

² GNP less Federal purchases for defense.

The basic reason for not spending more on the new social programs during this period was the preference of the American people, and of their elected representatives, for a great increase in expenditures—mainly private—for other non-defense purposes. A secondary and minor reason was the preference or necessity for increased defense spending. This preference for private non-defense spending was explicit in the tax reductions which occurred during this period. The discussion at the time, from 1962 to 1964, showed clearly a deliberate decision to increase private spending rather than public. It was not the case that we were locked in by a historically-given tax system and could increase new non-defense Federal expenditures only by cutting defense expenditures.

I am not suggesting whether these preferences or priorities were correct. My only point is that the outcome was not the result of a choice only between national defense and new social programs but was the result of a choice among a much wider range of alternative uses of the national output.

The same wide range of choices confronts us for the future. We are not given a fixed total of resources to divide between national defense and new social programs. Rather we must think about how to divide the total national output among a long list of objectives.

It seems reasonable to estimate that by 1975, with high employment, the gross national product would be about \$1150 billion in today's prices. What uses of that output would best conform to our national priorities? Particularly, what would be the gains in other fields from reducing the portion of that total going to defense?

One way to look at this is to assume as a starting point that defense spending in 1975 would be the same as in 1969—which is neither a recommendation nor a prediction. In that case total non-defense output would rise from \$845 billion in 1969 to \$1075 billion in 1975. This would be a rise of 27 percent in total non-defense output, or almost 18 percent per capita. Suppose this total non-defense output were divided among the main categories of use as in 1965—the last year not much influenced by the Vietnam War. Then we would have the following results:

1. Private consumption expenditures would rise by 27 percent, or 18 percent per capita from 1969 to 1975.
2. Business fixed investment would rise by 18 percent.
3. Residential construction would rise by 47 percent.
4. Total non-defense expenditures of government would rise by 27 percent, or about 18 percent per capita.

How would these results be different if defense expenditures were reduced by, say, \$10 billion? On the same assumption about the proportionate division of non-defense output among categories, all non-defense uses of output would be about one percent higher. As a consequence per capita consumption would rise by 19 percent from 1969 to 1975 rather than by 18 percent. There would be a higher rate of business fixed investment which would raise the rate of economic growth. As nearly as we can calculate, if the rate of growth would have been 4 percent with defense spending unchanged it would be between 4.1 percent and 4.2 percent with defense spending reduced by \$10 billion. There would be some additional housing construction, which we estimate as 25,000 units. Non-defense expenditures of government would rise by 19 percent per capita rather than 18 percent.

It is not my intent to say whether these gains are greater or less than the value of \$10 billion of defense spending. My point is that these are the kinds of questions we have to ask, and they are the choices that we have to make.

There may be some extremely valuable non-defense expenditures that would not be made if the total non-defense output were proportionately divided as in my illustration. If this is so, reduction of defense spending is surely not the only source from which we could make that extremely valuable expenditure. Starting, say, from \$80 billion of defense expenditures and \$1075 billion of non-defense expenditures, there is no obvious reason why the defense rather than the non-defense should be the source from which urgent requirements should be met. This would only be reasonable if the defense expenditures were less valuable than the least valuable of all non-defense expenditures.

Such analysis cannot, of course, determine what the national priorities are. That can only be answered by the responsible officials. I am, however, urging that in determining priorities we should be looking at all the available alternatives and not at an arbitrarily selected subset of them.

Chairman PROXMIRE. I neglected to introduce Mr. Sam Cohn of the Budget Bureau who is a brilliant man and who has been a great help to the Appropriations Committee, among others. He is also at the table.

He is the Assistant Director of Budget Review, I believe.
Mr. Mayo?

STATEMENT OF HON. ROBERT P. MAYO, DIRECTOR OF THE BUREAU OF THE BUDGET; ACCOMPANIED BY JAMES SCHLESINGER, ASSISTANT DIRECTOR; MAURICE MANN, ASSISTANT DIRECTOR; AND SAM COHN, ASSISTANT DIRECTOR FOR BUDGET REVIEW

Mr. MAYO. Thank you, Mr. Chairman and members of the committee.

It is a pleasure for me to be here today. I always enjoy the stimulation of our interchange.

INTRODUCTION

Allocating limited resources among alternative uses is the very essence of budgeting. In Federal budgeting there are two levels of resource allocation and priority determination: first, between the private and the public sectors, and Dr. McCracken has spoken of that, and second, within the public sectors, which is the subject of my testimony here today.

A detailed evaluation of program guides us in the recommendations that the executive branch makes to the Congress for the Federal sector. The final allocations are, of course, the responsibility of the executive branch and the Congress acting in concert. These allocations within the Federal sector reflect political, economic, and social decisions, and therefore, measure our national priorities. We are talking essentially about budgeting on an incremental basis, from a system as we have it today, not just some ideal system. The fact that we have a particular structure of the budget today doesn't necessarily mean that it is an ideal system. There are reasons for its being as it is, of course.

CHANGING PRIORITIES OVER THE PAST 10 YEARS

Our national priorities have changed significantly during the 10-year period ending with the current fiscal year, as reflected in the composition of the budget I have attached to my statement, Mr. Chairman, a table which shows that there has been a wide variation in the growth of individual program areas.

Let me make two points here. Despite an absolute increase of \$34.4 billion, from \$46.6 billion in fiscal year 1959 to \$81 billion in fiscal year 1969, total outlays for national defense have declined steadily as a percentage of total budget outlays. The absolute increase includes \$28.8 billion to support our Southeast Asia operations.

Outlays for civilian programs have increased by \$53.4 billion, from \$40.6 billion in 1959 to \$94.1 billion in 1969. Over 70 percent of the increase has been for human resource programs—health, income maintenance, education, manpower, housing, and community development. The percentage increase for civilian programs has been nearly twice as great as that for national defense. As a result, spending for civilian

programs has risen from 44 percent to 51 percent of total budget outlays.

By any measure, however, the growth in outlays for national defense programs has been sizable during the past 10 years, increasing, as is noted above, from \$46.6 billion in fiscal 1959 to \$81 billion in fiscal 1969, which ends in a couple of weeks. In fact, the \$34.4 billion growth accounted for 37 percent of the increase in total budget outlays over the period under review. The impact of this increase was magnified by the fact that more than 90 percent—almost \$31½ billion—occurred after fiscal year 1965, during a period when the economy was operating at excessive levels. The escalation after 1965 was not offset by lower outlays for other programs. Nor was it offset by higher tax rates until fiscal year 1969. As a result, increased defense spending became a major cause of budget deficits of \$3.8 billion in fiscal 1966, \$3.8 billion in fiscal 1967, and \$25.2 billion of budget deficit in fiscal 1968. These deficits fueled an already overheated economy and helped convert an incipient inflation into the stubborn one which continues to plague us.

Despite the limited resources of the economy, the Federal Government, during 1959-69, has increased civilian programs even more—by about \$53½ billion. The manner in which resources were allocated reflects the shift that took place in national priorities with respect to civilian programs.

Nearly 60 percent of the increase—\$31 billion—has been in health, income maintenance, and welfare programs, for which outlays were \$17.7 billion in fiscal 1959 and \$48.6 billion in 1969. Most of this increase has been in trust fund financed social insurance programs—retirement, medical care, disability, and unemployment insurance.

Over 11 percent—\$6 billion—has been for education and manpower programs, which grew more than sixfold during these 10 years, from \$1.1 to \$7.1 billion.

Agriculture and natural resources programs have accounted for about \$2.4 billion or less than 5 percent of the increase, rising from \$6.6 to \$9 billion. Despite this increase, these programs have received a diminishing share of total outlays.

I am not rendering judgment on any of these, I am merely stating the facts as they exist.

Outlays for international affairs and finance have risen by \$0.7 billion, from \$3.3 billion in fiscal 1959 to \$4 billion in fiscal 1969. The fiscal 1969 outlays, which include \$0.4 billion to support our Southeast Asia operations, are lower than the \$4.1 billion of fiscal 1964.

Although budget outlays for space research and technology have risen considerably, from less than \$0.2 billion in fiscal 1959 to \$4.2 billion in fiscal 1969, all of the increase occurred during the period 1959-64.

Veterans programs have grown from \$5.4 billion in fiscal 1959 to \$7.7 billion in fiscal 1969, while total commerce, transportation, and general Government activities have kept pace with the rate of growth in total outlays, rising from \$5.6 billion in fiscal 1959 to \$11 billion in fiscal 1969.

Interest costs, shown separately in table 1, have more than doubled during 1959-69—rising from \$7.1 billion in fiscal 1959 to \$15.6 billion in fiscal 1969 as the result of larger Federal debt and higher interest rates. In some respects, interest costs are representative of the wide

range of preemptive claims on the budget—for example, higher prices and workload—that are determined primarily by economic, demographic, and other conditions rather than by the budget process per se.

Outlays for civilian programs can be classified in different ways to indicate major shifts in priorities. The budget itself—and especially the special analysis volume—occasionally deviates from the functional classification used above in order to emphasize the broad, crosscutting nature of certain types of Federal activity and the shifts in priorities reflected in their trends. Total Federal outlays for civilian programs have increased 130 percent from fiscal 1959 to fiscal 1969. During the same period—

Federal aid to State and local governments has increased from \$6.7 to \$21 billion, or about 215 percent;

Federal aid to urban areas has grown from \$3.7 to \$13.8 billion, or about 275 percent;

Federal health services—mainly medicaid and medicare—have grown from less than \$0.2 billion in fiscal 1959 to over \$9 billion in fiscal 1969, which is something over 4,000 percent;

Manpower training programs have increased from less than \$5 million in 1959 to about \$1.5 billion in 1969; and

Low- and moderate-income housing programs have grown from \$0.1 to \$0.9 billion; while

Aid to the poor has risen from \$9.9 billion in fiscal 1960—the earliest year for which data are available—to \$24.4 billion in fiscal 1969, or nearly 150 percent. I would add that that figure will be more like \$27 billion for fiscal year 1970 in spite of the cuts that we have been making in the budget for that year.

Clearly, the priorities reflected in the budget for civilian programs have already shifted significantly in the direction of meeting the urgent needs of our Nation. This trend will be continued in the future.

THE BUDGET PROCESS

Budget making is a continuous process of interchange among the President, the executive agencies, and the Congress. This interaction is the budget process, and that is why everybody says that we are in the middle. Shortly after one budget is sent to the printer, work begins on the next. Agency and Bureau of the Budget staff continually evaluate programs, identify relevant policy issues, and reconsider budget projections. In evaluating programs special attention is given to possible modifications and innovations in programs, to alternative program plans, and to the benefits and costs of each.

The formal launching pad of the budget process is the spring planning preview, which usually begins in May and ends in July. We are currently, therefore, in the midst of our spring preview for fiscal 1971. The purpose of the spring preview is to permit the Bureau to identify and examine systematically prospective major program issues, possible alternatives, and budget impacts. Overemphasis on program details is avoided to permit concentration on issues of major importance.

The spring preview involved:

A review of the economic outlook in broad aggregate terms to help develop fiscal policy guidelines, and this is terribly important;

An examination of major Federal programs in terms of benefits and costs;

An evaluation of the likely long-range impact of emerging issues;

The development of specific planning guidelines to aid agencies in preparing budget requests.

The planning guidelines are the principal product of the spring preview.

The budget is put together in the fall and winter and is transmitted to the Congress in January. During the period of budget preparation, individual agency budgets are formulated and then are subjected to the budget review process. Simultaneously, the economic outlook is reevaluated as are the fiscal policy guidelines developed during the spring preview. These guidelines, which are revised as conditions require, provide the constraints on the budget totals.

Agency budget requests begin to come in during September and are reviewed thoroughly by the Bureau's budget examiners. After discussions with agency representatives to obtain a better understanding of each agency's policies and budget proposals, the requests are "marked up" to reflect the recommendations of the examiners to the Budget Director.

In November and December, the Director meets daily with Budget Bureau staff to review in depth each agency's requests and the Bureau staff's recommendations. Shortly after each meeting, the "mark" the Director plans to recommend to the President for the relevant agency or program is made known to the agency. Previously, the Director will have discussed with the President the principal issues to be considered for each major agency and the recommendations that the President can expect to receive from the Director. In making his recommendations, the Director is mindful of the constraint on the budget total and the overall fiscal policy developed earlier.

There will be occasional appeals—and they may be more than occasional—to the Director by agency heads. In a few cases, the Director may modify his decisions. In other cases, the Director will not modify his decision and the agency head may appeal to the President. In any case, the Director discusses his recommendations and agency issues with the President. The President may, of course, modify either the Director's recommendations or those of an agency head. When all issues are resolved executive branch preparation of the budget is concluded. The budget document is then sent to the Congress, and the congressional review process begins.

BUREAU OF THE BUDGET REVIEW OF THE DEFENSE BUDGET

I know you are particularly interested today, gentlemen, in the Bureau's review of the Defense budget. As in the case of all other agencies, the Bureau's review of the Defense budget for any fiscal year being immediately following submission to the Congress of the President's budget for the prior year. During the late winter and spring, our examiners devote a great deal of effort to probing the major issues and problems in their assigned areas.

First, the examiners become intimately familiar with the underlying factors that determine the upcoming Defense budget proposals. These proposals represent an evaluation of the threats, existing and potential,

to the Nation and its international commitments. In turn, this evaluation determines the missions our forces are expected to perform. Our examiners must look into alternative strategies, relevant forces and weapons systems, and the available technological, productive, and financial resources at our command. In addition to depth of understanding, Bureau staff are expected to recommend other viable alternatives if such are not already under consideration.

Our analysts acquire knowledge about their program by reviewing literally hundreds of reports produced at all levels of the Defense organization; by meeting and working with key personnel in the Office of the Secretary of Defense, the services and the Defense agencies, other concerned agencies, and outside the Department; and by visiting military installations and contractor facilities. Information and understanding are obviously essential to independent and responsible analysis and I stress both of those words.

The actual preparation of the 1971 Defense budget will officially begin with the establishment this summer of a planning guideline by the Bureau of the Budget based on a review of principal program plans and issues. Early in October, budget submissions will come to the Office of the Secretary of Defense from the three military departments, the Defense agencies, the Office of the Secretary of Defense staff, and others, including the Office of the Joint Chiefs of Staff. These estimates must be consistent with the currently approved 5-year defense program, which summarizes the projected force, manpower, and budget requirements for the currently approved defense programs. The 5-year defense program is not, of course, binding on the President, the Bureau of the Budget or even more so the Congress. Nonetheless, the internal Department of Defense review process provides adequate opportunity for considering different judgments on military necessity.

Following the submission of estimates by the Military Departments and Defense agencies, Bureau of the Budget staff and the staff of the Office of the Secretary of Defense will conduct a thorough and detailed review of all submissions. Force requirements to be supported, plans for deployment, proposed levels of operations, procurement quantities and costs, personnel strengths, production lead-time factors, and other details will be intensely examined. By combining resources—in joint hearings with the services, for example—Bureau and Office of the Secretary of Defense analysts can cover more ground in greater detail with less duplication of effort than would otherwise be the case. During this review, the Bureau of the Budget examiners must have access to all materials available to their Defense counterparts—plus the products of the Bureau's own investigations. In addition, Bureau staff will be in a position to offer alternatives at the staff level and to assure that these alternatives receive appropriate attention early in the review.

The review will culminate within the Department of Defense with a series of 400 to 500 program/budget education documents. Each document addresses a separate budget issue and consists of a concise description of the issue, a statement of the internal Department of Defense cost estimate, and a discussion of possible alternatives, as well as a brief description of the rationale for each alternative offered.

When the Secretary has chosen either the service submission or one

of the alternatives, this choice is recorded on the program/budget decision document. Together, the Service estimates, or selected alternatives, constitute the Defense budget to be transmitted to the Bureau.

While the Secretary is making choices from among the alternatives, Bureau staff will be discussing with the Budget Director the implications of the possible choices, particularly in those areas of major financial consequence or where Bureau staff are in disagreement with a chosen or likely Defense position.

Next, a budget mark, reflecting the Director's review and his recommendations for Defense, will be transmitted to the Secretary of Defense. Discussions will be held with the Secretary to review any appeals that he judges to be warranted. On any issue that may remain in dispute, the Secretary has the same right—and, indeed, responsibility—of appeal to the President as any other agency head.

After review and final "mark up" by the President, the Defense part of the budget is prepared for incorporation into the budget document to be transmitted to the Congress in January.

FUTURE DIRECTIONS

Let me turn to the future for a few moments, Mr. Chairman.

The Federal budget reflects the Nation's priorities as perceived by the President and modified by the Congress. Be that as it may, sweeping reductions in individual elements of the budget do not often occur from one budget to the next. The momentum of ongoing programs—powered by existing laws and international commitments—is too great.

President Nixon knew the strength of this momentum when he took office in January. He had been around the track. He became aware of it even more keenly when he began the difficult task of bringing Federal outlays under control and of trying to shift the course of Federal programs toward his administration's objectives. He is currently supporting fully our searching review of both our defense and international programs and our domestic policies.

The President has enunciated several high-priority goals toward which recommendations stemming from this review will be directed. These goals include—

- a return to relatively stable prices,
- maintenance of high level employment,
- an early, honorable peace in Vietnam,
- adequate provision for our national security,
- finding solutions to urgent domestic problems, and
- stepping up our battle against crime.

The proper definition of the first two goals provides primary guidance for allocating resources between the private sector and the Federal sector. The last four goals set priorities for allocating resources within the Federal sector. And obviously I am talking at the moment only about the expenditure side of the budget, not the receipts side.

International commitments.—Our national defense outlays—which account for about 40 percent of total outlays—are closely related to our international commitments. Unless there is a reduction in these commitments, we should not expect drastic reductions in spending for

these programs. Assistant Secretary Moot suggested in his testimony before this committee on June 6 that our non-Vietnam defense programs are underfunded now—given present commitments and the present status of congressional intent on the defense programs.

Our current international commitments and possible alternatives, and the budgetary implications of both, are under intensive study by the administration. The impact of alternative commitments on resources available for civilian programs, as well as on total budget outlays, is being considered, and will influence the decisions based on this study. It would seem to serve no useful purpose at this time for me to speculate on the probable decisions to be made following completion of the study.

On the *domestic commitments* side, built-in provisions of legislation involving many domestic programs make more than half of total budget outlays relatively uncontrollable in the short run. Moreover, these “uncontrollables”—open-ended programs such as social insurance, public assistance, and farm price supports, and programs with fixed costs, such as interest on the public debt—will continue to command a large share of total outlays. Nor are the civilian programs that are seemingly controllable under existing law likely to require fewer resources in the short run. Such programs are appreciably affected by prices and wages, as well as by increasing workload.

Nevertheless, in full view of these constraints, this administration is initiating new programs to cope with our urgent domestic problems. Programs have been or are being formulated to—

- make a beginning on revenue sharing,
- relieve malnutrition,
- use tax credits to help build or rebuild both the human and physical resources of our inner cities,
- extend unemployment benefits to more persons,
- improve our welfare payments system,
- find better ways to educate those who lag behind in our schools,
- and
- assist the establishment of new minority enterprises and the expansion of existing ones.

Some of these programs will be initiated in the new fiscal year that begins on July 1, even though they may be only experimental, and will be modest starts. In view of pressing demands on Federal resources, however, many new programs will not be at their optimum levels even in fiscal year 1971.

We already know that the 1971 budget will be exceedingly tight. That is obvious from the spring preview. Rising prices and wages and increasing workload will increase the cost of all ongoing Federal programs, even if there is no change in program content. Moreover, costs that are built into Federal programs by existing legislation will continue to rise.

On the recipients side, this administration has no desire that the income tax surcharge be extended a day longer than necessary. The proposed reduction of the surcharge rate on January 1 is in line with the President's intention to propose complete elimination of the surcharge as soon as military and economic conditions permit. In our planning for fiscal year 1971, we will take this intention into

account. Any loss of revenues from surtax termination obviously will act somewhat as a brake on the growth of the budget in fiscal 1971.

In our economic planning for the period following the end of Vietnam hostilities, we expect to obtain greater resources for the Federal sector from two sources. One source involves the growth dividend that will be derived from the additional tax revenues yielded by an expanding economy. The other involves the so-called peace dividend that will be derived from reduced spending in Southeast Asia. It is generally accepted that the annual growth dividend will amount to about \$15 billion by fiscal year 1972, which would be beyond the period of the elimination of the surcharge, presumably. However, at least half of that amount will have to be used to finance the built-in expenditures increases in existing programs referred to earlier. Thus, in each year in the future no more than half of the growth dividend will be available for program expansion or tax reduction.

As a result, it is clear that the extent to which we redirect funds from Southeast Asia savings will largely determine our ability to—
 expand existing civilian programs,
 introduce new civilian programs,
 reduce taxes,
 share revenues with State and local governments, and
 restore non-Vietnam national security programs to whatever
 may be decided appropriate levels—in real terms.

In the latter regard, Assistant Secretary Moot estimated in his testimony before you that the cost of restoring non-Vietnam national security programs to 1964 levels in real terms is about \$13½ billion. This statement appropriately cautions us that prospective “dividends”—from whatever source—tend to fade into the future, and that we should not as yet begin to spend the dividends that seem to lie ahead.

Clearly, growth of the economy and the end of the Vietnam war, taken together, will not yield a surfeit of unclaimed Federal revenues for major new programs or program expansions. We will be confronted with the priorities question that your committee is examining. We will attempt to satisfy the Nation’s emerging needs to the extent possible, whether for defense or for other purposes. We will exert extreme care in evaluating these needs and the way in which they are financed, whether by subordinating less important Federal programs—civilian or military—or by levying taxes that would divert resources from less important private uses.

CONCLUSION

Early in his administration, President Nixon directed that a thorough review be made of all Federal programs—military as well as nonmilitary. The first phase of that review was concluded when revised budget estimates for fiscal year 1970 were published in mid-April. As indicated earlier, we are continuing to evaluate those estimates. In establishing priorities for the fiscal 1971 budget, we are taking a hard look at the military budget and its relationship to other national priorities, with a heavy reliance on continuing program evaluation.

The Bureau of the Budget, through the review process described earlier, has the opportunity to make independent recommendations to

the President—indeed the responsibility to make such recommendations—on the Defense Department budget. The Department, of course, has the right to appeal those recommendations, similar to other agencies.

The magnitude of the Defense budget is largely a function of the existing and potential threats to the Nation and its international commitments. To be sure, alternative budgets are possible, given these commitments; it is possible to procure more or less forces, depending on the assessment of risks, strengths of allies, and the number and kind of contingencies we want to face. Also, as this committee has stressed, the level of the Defense budget depends on the efficiency and management control we exert in acquiring equipment and supplies. But, while we will—as must—insist upon efficient procurement to reduce costs, considerably lower defense costs will be obtained only if we reduce our international commitments significantly. Such a decision can be made only by the President, with the consent of the Congress.

(Attachment to statement follows:)

TABLE 1.—CHANGING COMPOSITION OF FEDERAL BUDGET OUTLAYS, 1959-60 (FISCAL YEARS)

[Dollar amounts in billions]

| Functional categories | Outlays | | | Percentage distribution | | | Change 1959-69 |
|--|-------------|--------------|--------------|-------------------------|--------------|--------------|-------------------|
| | 1959 | 1964 | 1969 | 1959 | 1964 | 1969 | |
| National defense: | | | | | | | |
| DOD, military..... | \$41.5 | \$49.6 | \$77.8 | 45.0 | 41.8 | 41.9 | \$36.3 |
| Military assistance (MAP)..... | 2.2 | 1.2 | .6 | 2.4 | 1.0 | .3 | -1.6 |
| Subtotal, military and MAP..... | 43.7 | 50.8 | 78.4 | 47.4 | 42.8 | 42.2 | 34.7 |
| Support of Southeast Asia operations..... | | | (28.8) | | | (15.5) | (28.8) |
| Other..... | 2.9 | 2.8 | 2.6 | 3.2 | 2.4 | 1.4 | - .3 |
| Subtotal, national defense..... | 46.6 | 53.6 | 81.0 | 50.6 | 45.2 | 43.6 | 34.4 |
| Civilian programs: | | | | | | | |
| International affairs and finance..... | 3.3 | 4.1 | 4.0 | 3.5 | 3.5 | 2.1 | .7 |
| Space..... | .1 | 4.2 | 4.2 | .2 | 3.5 | 2.3 | 4.1 |
| Agriculture and natural resources..... | 6.6 | 7.2 | 9.0 | 7.1 | 6.0 | 4.9 | 2.4 |
| Human resources programs..... | 19.6 | 28.4 | 58.1 | 21.3 | 24.0 | 31.3 | 38.5 |
| Veterans..... | 5.4 | 5.7 | 7.7 | 5.9 | 4.8 | 4.2 | 2.3 |
| Other civilian programs..... | 5.6 | 8.5 | 11.0 | 6.1 | 7.2 | 5.9 | 5.4 |
| Subtotal, civilian programs..... | 40.6 | 58.1 | 94.1 | 44.1 | 49.0 | 50.7 | 53.4 |
| Interest..... | 7.1 | 9.8 | 15.6 | 7.7 | 8.3 | 8.4 | 8.5 |
| Undistributed intragovernmental transactions..... | -2.2 | -2.9 | -5.1 | -2.4 | -2.5 | -2.8 | -2.9 |
| Total..... | 92.1 | 118.6 | 185.6 | 100.0 | 100.0 | 100.0 | 93.5 |

Note: Detail will not necessarily add to totals because of rounding.

Mr. MAYO. Thank you, Mr. Chairman.

Chairman PROXMIRE. Thank you, Mr. Mayo. Again, let me say, you are obviously a very competent man; and your statement indicates it.

However, I must say that there is a lot of area here for disagreement, and very strong disagreement.

This committee has been told of enormous overruns. We know of the nearly \$2 billion overrun on the C-5A. We know of a \$4 billion overrun on the Minuteman project. We were told yesterday by a Defense Department official, and it was confirmed, of an increase in the cost of a Navy rescue vessel from \$3 million to \$80 million for one unit, and we are buying six of those units at a cost of close to half a billion.

A Defense Department official testified yesterday that in his experience of several years in the Pentagon no one ever thought of cost cutting as a solution to a funding problem, no one out of the Pentagon as far as Defense is concerned.

We have the former Director, Charles Schultze, whom I think you will agree is a very able man, who testified that he had never asked the basic question of whether or not a particular system should be continued, for instance, the SAGE, or later the AWACS systems, the defense against manned bomber attack from Russia, which was highly questionable in view of the absence of a manned bomber fleet in Russia, as a system it was never questioned by the Bureau of the Budget.

We have been told that the big contractors are virtually tenants of the Government, that they are operating Government plants with Government equipment, with Government working capital because of progress payments, and with a system that has worked so well that none of them ever lose money.

What we have missed from the Pentagon, the administration officials is any sense of determination to really crack down and get the job done. We get arguments that the budget is under constant review, and we are dedicated to cutting costs wherever we can. And I know this administration is devoted and dedicated to keeping its voice down, which I think is pretty good advice on the part of the President. But somewhere in the sound, insulated rooms of the Pentagon, or the Budget Bureau, I hope that there will be some way that you, as the "No" man in this situation, the man who has to say no—it is an unpopular and tough job—will move in and lay down the law, pound the table, crack heads together, work to help cancel a few contracts, fire procurement officials, and cut agency budgets. Then I think we will get action.

Now, I don't mean to be critical of you. You are just beginning. But I hope that you are prepared to act. And I hope that you are prepared to show that this administration really means business, because you say in your statement, as you said at the very end, "to reduce costs, considerably lower defense costs will be obtained only if we reduce our international commitments," and I got the same attitude from Mr. McCracken. We were told yesterday that we could save \$5 billion by a more efficient procurement program. And on the basis of the evidence we have got I don't think that estimate is very far wrong.

What is your answer?

Mr. MAYO. You stated our position, I think, quite accurately; we are determined to show that this administration really means business. I cannot, of course, speak for the extent to which the previous administration failed in really getting a hold of the defense budget, or, if I may make the observation, that the Congress failed to get a hold of it. This is a joint responsibility.

Chairman PROXMIRE. I agree with that.

Mr. MAYO. I talked to Charles Schultze. I know him well. And I know that he had some misgivings about his own ability to get ahead with the problem of defense budget cutting.

I believe we are in a new environment here, Mr. Chairman. And I am not just saying that as a political statement, I am saying it as a realistic statement. The President of the United States is determined

that we should have a budget process that is a real and viable budget process. He has given me that support. I, in turn, owe it to him as well as to you people on the Hill to go about this in a responsible way. I am not going to take on the responsibility, Mr. Chairman, of trying to say how the Defense Department should be run. It's not the Budget Director's job to run it. We have a Secretary of Defense to do that. But no Defense Secretary can completely be his own auditor. That would defy the system. I plan to be that auditor. Secretary Laird and Deputy Secretary Packard and Comptroller Moot agree on that. It is reflected in their testimony, to you, I believe.

And the President, as I say, has his eyes open on this. He is not hellbent to spend for national defense just for the sake of spending money. We must have cost evaluation there just as much as in HEW or any other program. Otherwise our fiscal course is indeed a treacherous one ahead.

Chairman PROXMIRE. You see, what concerns me is, that the Defense Department—I think that there are many, many dedicated people in it, and this is no personal criticism against anybody, yet we get the feeling that it is the same old team. Three of the Assistant Secretaries are new, but four of them are people who have been in the Pentagon for some time. That is not necessarily wrong. But I get the feeling as they come up to testify, that their approach really hasn't changed very much. And I would hope that the Defense Department and the Bureau of the Budget would really move in and crack down, and as I say, move to cancel some of these contracts, move to fire some of the procurement officials who aren't doing a good job, and provide some real incentive, some real force that will overcome what has resulted in an enormous, excessive cost on the basis of documented evidence presented to this committee.

Mr. MAYO. Yes, sir. And I can assure you that in my dealing with Mel Laird and David Packard, to name the two most important keys to this, I have been encouraged that they do mean business, Mr. Chairman, in doing what you are suggesting.

We all know how an overrun takes place. Some of it is legitimate human error. Some of it is inflation. A lot of it, on the other hand, is plain error—there are probably stupid mistakes involved in every Government program. We happen to be looking at the Government program which takes 40 percent of our eye, and is the biggest, and therefore is the hardest to get a hold of in the sense of control. Our conversation, Mr. Chairman, back in March, when you and I sat across the table on this subject, strengthen my feeling that we must have a definition of this whole problem, so that it is clear to the Department of Defense and to the Budget Bureau what the President really wants in terms of equality of treatment among Government Departments in resource allocation.

Chairman PROXMIRE. In addition to this, I would hope that you would take a good hard look at the recommendations of this subcommittee, which were made a few weeks ago on the procurement process. Here are some specific actions that can be taken, which in our view, can save money and save a lot of money and save it swiftly. It is true that additional studies have to be made, but the President has created a committee to study procurement headed by Mr. Ash of Litton. And the Secretary of Defense has a committee to study

procurement. And we had another official who suggested that Congress work to pass a law to have another committee to study it. We think much should be and can be done right now to crack down without further study.

On the first page of your statement, Mr. McCracken, you asserted that the Council is not a good source of information on waste in the defense program or the national security consequences of alternative national defense programs.

It seems to me that the Council is not a good source of information on anything having to do with the military budget and its impact on the economy. And again it is not criticism of you, you have just begun a few months ago. This is a criticism that this committee visited upon previous Councils. But I think it should be corrected. It won't be, however, until you get much deeper into an analysis of military spending and its effect on the economy.

I would draw your attention to the annual report of the Joint Economic Committee,¹ issued in April. It states, and I quote:

We have had little concrete analysis of the defense budget or guidance from the Administration on the important question of the allocation of our resources between military and civilian programs. This committee urges the Administration to focus attention on assessment of our Nation's requirements and goals, the definition of long-range objectives of economic policy, and development of more realistic means of establishing priorities in public expenditure. We would expect the Council of Economic Advisers and the Bureau of the Budget to play a key role in conducting this effort. We feel that there are some limitations in the analysis of defense spending, in the report submitted to Congress. The Annual Report of the Council of Economic Advisers, for example, confines its analysis of defense spending to less than two pages. We urge that the Executive Office of the President undertake on-going and comprehensive investigations of defense procurement matters and submit their findings to this committee as part of the Annual Economic Report.

Mr. McCracken, has the Council undertaken a study of the regional impacts of defense spending, or is such a study contemplated?

Mr. McCracken. May I make two comments there, Mr. Chairman?

With respect to the few sentences you pointed to in my own statement—what I was indicating there was that the Council is not a good source of information on the national security consequences of alternative national defense strategies and programs, in other words, we don't try to be experts in the area of national security as such. The other part of that pertains to the question of the auditing and monitoring of on-going programs, which is of course more immediately the Budget Bureau's responsibility.

Now you are raising the larger question of the impact of the defense program on the economy of different segments, in different areas.

Chairman PROXMIRE. Starting specifically with whether or not you are making a regional study.

Mr. McCracken. And yes, a regional study.

We are involved at the present time in some aspects of this in the Cabinet Committee study of the problems of adjustment incident to any resolution of the Vietnam conflict.

Chairman PROXMIRE. Doesn't that only deal with Vietnam spending, not with overall spending?

¹ Joint Economic Report on the 1969 Economic Report of the President, Apr. 1, 1969. H. Rept. 91-142.

Mr. McCracken. This does. But it at least starts to get into a regionalization of the analysis. Certainly this is an important matter. And we shall want to move further into it.

Chairman Proxmire. Has the Council undertaken a study of the manpower demand of the defense spending, or is such a study planned?

Mr. McCracken. We have studied it to some extent. We have no specific study underway now.

Chairman Proxmire. Has the Council undertaken a study of the hardships imposed by the extraordinarily high demands of defense contractors on limited supply of engineers and technical personnel, or is such a study planned?

Mr. McCracken. Only in general as we are concerned with the Labor-Management Council.

Chairman Proxmire. Has the Council undertaken a study of the enormous rise in defense prices over the last 4 years, or is such a study planned as an element of inflation?

Mr. McCracken. No.

Chairman Proxmire. Mr. Malcolm Hoag of the RAND Corp., testified before this committee last week that price increases on standard military consumables rose about 21 percent in the last 4 years. Has the Council undertaken a study of the economics and practices of military procurement with a view to eliminating the major economic inefficiencies in the budget, or is such a study contemplated?

Mr. McCracken. We have no study underway. This gets into the area which is really between the Council, I think, and the Budget Bureau. My answer would be no.

Chairman Proxmire. Then is the Council studying anything to do with the impact of the military spending in the economy except post-Vietnam?

Mr. McCracken. Oh, yes.

Chairman Proxmire. What is the study on?

Mr. McCracken. We are concerned about the implications for the course of the economy of the trend in the defense budget, the impact on the growth capability of the economy for the longer run as we move more into the inside of the defense program as it were—these are aspects of the program that we have not yet explored.

Chairman Proxmire. These are only macro considerations. Are you concerned with any micro?

Mr. McCracken. This, I think, really was the distinction I was making myself, that we are concerned with the impact of the defense budget and defense spending on the economy generally. As we get more into the details of the defense budget, this, among other things, gets beyond the very limited resources of the Council to launch these studies into all aspects of it.

Chairman Proxmire. I will come back.

Senator Jordan?

Senator Jordan. Thank you, Mr. Chairman.

Gentlemen, I am pleased to see that there is the beginning of a little action on this defense budget. And I refer now to President Nixon's decision to end the space MOL program in the Department of Defense.

An interesting article appeared in this morning's New York Times. It says:

The White House ordered the cancellation of the manned orbit laboratory program—the military's most ambitious space project—over the objections of the Defense Department and the Air Force—

It goes on to say further in the article by Mr. John W. Finney:

For the first time in a long time, the Budget Bureau, as an arm of the White House, challenged a major Defense Department and won.

(The article referred to follows:)

[From the New York Times, June 12, 1969]

NIXON'S DECISION TO END SPACE LAB LAID TO CONGRESS—RISING PRESSURE BY CRITICS OF MILITARY COSTS TERMED KEY IN INTENSE STRUGGLE

BLOW TO AIR FORCE SEEN—BUREAU OF BUDGET REPORTED SCORING A RARE TRIUMPH IN DEBATE WITH PENTAGON

(By John W. Finney)

WASHINGTON, June 11.—The White House ordered the cancellation of the manned orbiting laboratory program—the military's most ambitious space project—over the objections of the Defense Department and the Air Force, Congressional sources reported today.

While the cancellation was a blow to Air Force aspirations in space, the Administration decision is taking on a larger symbolic significance in the Congressional debate over the military budget.

The manned orbiting laboratory program was the first major military project to be canceled by the Administration. The White House, in turn, was driven to the decision by the mounting Congressional pressures to hold down spending, particularly by the military.

While the cancellation of the program, announced yesterday by the Pentagon, seemed abrupt, an intense struggle over the \$3-billion project had been going on for several weeks within the Administration.

The Sides Form

The argument, basically between the Budget Bureau and the Pentagon, pitted the budgetary pressures on the Administration against military justifications that the United States "must maintain superiority in space"—the rationale offered for the MOL project since it was conceived by the Air Force six years ago.

For the first time in a long time, the Budget Bureau, as an arm of the White House, challenged a major Defense Department and won.

The cancellation also was a major victory for military economizers in Congress. Even before the Pentagon decision, Senator Thomas J. McIntyre, Democrat of New Hampshire, chairman of the Senate Armed Services Subcommittee on Research and Development, had been zeroing in on the MOL project and was prepared to recommend to the full committee that it be scrapped.

Yesterday before a private meeting of the Senate Democratic Policy Committee, Charles L. Schultze, former Budget Bureau director, explained that in the past the bureau had made no real attempt to fight Pentagon programs because "it would have been like tilting at windmills."

To some leaders in the Congressional economy force, the cancellation of the MOL project was proof of how the increasingly critical mood in Congress was giving the executive branch, and the Budget Bureau in particular, greater flexibility in challenging Pentagon programs.

The initiative to cancel the project, according to Congressional sources, began with the Budget Bureau. The proposal by Robert P. Noto, director of the bureau, was to cut \$325-million from the \$525-million requested for the project in the coming fiscal year—a reduction that would have virtually canceled the project just as it was reaching the flight-test stage.

Three weeks ago, Mr. Mayo reportedly won President Nixon's approval. Outmaneuvered by the bureau, Secretary of Defense Melvin R. Laird and Secretary of the Air Force Robert C. Seamans went to the White House to protest the decision.

Mr. Laird then left for a week-long visit to Western Europe, with the decision in suspense. When he returned early this month, the argument was resumed. Meanwhile, the project was continuing at a cost of about \$1 million a day.

When it was finally canceled, about \$1.3-billion had been spent. The Air Force has informed Congress that \$300-million more will probably be required in contract-termination costs. The figure that is being investigated by the Senate Preparedness Subcommittee.

Mr. Laird as much as acknowledged today that he had opposed a cancellation of the project and that it was the move in Congress to impose a tight ceiling on Federal spending that had led to the White House decision.

Asked whether he had opposed the cancellation, Mr. Laird recalled that he testified earlier this year in Congressional hearings in support of the MOL program.

He said, however, that Congress had introduced a new factor by moving to impose a tight limitation on spending in the coming fiscal year. To live within the budgetary guideline he said, it was necessary to eliminate some lower-priority programs, and "MOL did not have as high priority as other programs in the Defense Department."

Mr. Laird denied suggestions that there might have been an element of political reprisal against opponents of the Administration's Safeguard missile defense system.

A principal MOL contractor is the McDonnell Douglas Corporation, which has its headquarters in Missouri, the home state of Senator Stuart Symington, a leading ABM opponent.

Insisting that there were "no political considerations whatsoever" in the decision, Mr. Laird pointed out that a major portion of the work on the project was being conducted in California and Pennsylvania.

Senator McIntyre, meanwhile, made clear that by canceling the MOL project the Pentagon had not averted Congressional efforts to make additional cuts in the department's \$8.4-billion research and development budget.

Taking issue with a suggestion yesterday by Deputy Defense Secretary David Packard that the termination of the MOL program should satisfy the need for reductions in the Pentagon research budget, Senator McIntyre said:

"At this point, I am not prepared to accept the idea that terminating MOL is enough economizing on research and development."

Senator JORDAN. Mr. Mayo, does this indicate that the Budget Bureau will be more successful in restraining the Defense budget than previous Budget Bureaus have been?

Mr. MAYO. That, sir, is a very good question. And I will reiterate the statement that I made earlier, that we intend to treat the Defense Department and the other agencies in the Government on a parallel basis as far as the operations of our allocation of resources are concerned.

The story behind the cancellation of the MOL is a story of teamwork. I would say there was a slight exercise of journalistic license in the presentation that you quoted from. This was the President's own decision, after a rather careful and exhaustive consultation with the Department of Defense and with the Bureau of the Budget.

Senator JORDAN. I think it shows some progress in the kind of scrutiny—and I am not adverse to the MOL program in its proper place and its proper time, but I think it does prove, it does indicate to me at least that this administration is giving a closer scrutiny to the defense budget than we have had heretofore.

I would ask you, Mr. Mayo, do you make any provisions in your spring budget reviews for the possible cost overruns in large weapons systems such as the C-5A and the other systems that the chairman has just mentioned?

Mr. MAYO. Yes, sir.

Chairman PROXMIRE. If the Senator would yield for a moment, I would like to commend him on his initial question and the support for the vigorous and successful action on MOL. And I wholeheartedly agree.

Senator JORDAN. Thank you, Mr. Chairman. I will repeat the question. You talked about your spring budget review?

Mr. MAYO. Yes, on cost overruns.

Senator JORDAN. Yes, sir; on cost overruns, not only the C-5A but these other.

Mr. MAYO. One of the advantages, sir, of the joint review process is the knowledge gained by our examiners. The process has been criticized as one that weakens the independence of the Budget Bureau at the staff level. And I would urge that this is a misconstruction of the whole process. It does enable us to know what is going on in defense that has a budget consequence. And there are very few things that do not.

The spring review must be realistic, and is being realistic in regard to the evaluation not only of cost overruns but of the impact of inflation and difficulties that are involved in many defense programs. These difficulties are almost an inevitable consequence of the inauguration of new programs and experimentation. I don't want to just sign it off by saying that everything costs more than you think it is going to, but I suppose that is the story of our lives with some things. It is not an excuse or a justification. The overrun problem makes budgeting for defense programs an even greater challenge, is what I am trying to say.

Senator JORDAN. In your statement I believe you said that the Bureau's review of the defense budget is a little different from the budget process for civilian agencies. Will you point out the differences and explain why the defense budget is subject to a different process than the other agency budgets?

Mr. MAYO. Essentially, the process is identical. As I described earlier, the process involves our setting a guideline at the end of the spring review. We will set a guideline for the Department of Defense just as we will do it for every other department of government. In the process of building the Defense Department's internal estimates, Senator Jordan, during the summer and fall, our men will be elbow to elbow with the men across the river in preparing the Defense Department's submission of the budget. They will not be exercising broad policy statements or evaluations at that point; they will be formulating their own individual evaluations as to whether they think a specific program is being carried on too elaborately, or whether it should be cut back, or indeed, in a rare exception, whether something should be expanded to compensate for something else that is being held back.

I would say, then, that this creates a body of knowledge that is common to the Secretary of Defense and the Budget Director which is essential to the Budget Director if he is to make responsible decisions of an independent nature. Independence from the Defense Department isn't just independence in a frivolous way. It must be responsible independence. We just can't say, well, you or I or the next man we meet going down the street can pick a figure as to what he thinks the defense budget should be. That isn't the point. It is again this idea of responsible judgment.

Now, let me come to the most critical phase of the budget process, namely, marking up the budget, once it comes within the director's focus. It is up to him, then, with all the available evidence that he

has, to make the decisions as to whether the best efforts of the Secretary of Defense falls short of what he, the Budget Director, thinks should be done in a given circumstance.

It is then up to the Director to present his budget on the basis of his best judgment. If after it is presented in this manner to the President the Secretary of Defense wishes to take exception, he has that right, just as Tom Payne does in the space program and Glenn Seaborg in Atomic Energy, and so on around the Government.

So I would emphasize that regardless of what you might say about the process in prior administrations—and they have differed, depending partly on the personality of the President of the United States, and partly on the personality of the Secretary of Defense, and I suppose the personality of the Budget Director to a lesser extent—regardless of how you may characterize those procedures, our policy is one of equality in the budget process. Except for the joint review during the preparation of the Defense Department's submission, the rest of the budget process is just the same—for Secretaries Finch, Laird, Kennedy, and all others in the Cabinet.

Senator JORDAN. Are you plagued with overruns in the civilian budget like you are in the procurement phase of the Department of Defense budget?

Mr. MAYO. I am not just sure how we want to define the word "overrun," but we have important overrun problems in almost every one of the executive agencies. For instance, there have been overruns in price support payments in agriculture, and the Secretary of Transportation has come to me to say, "Bob, we are not sure what happened, but the highway program is costing more than it should have under these circumstances, and we are running out of money to meet obligations that have already been incurred."

I will cite medicare, I will cite medicaid, if we want examples of serious overruns on many occasions.

We are not smart enough to estimate those properly at the present time.

I would say that we have a surveillance problem which is more acute in defense, because there is more procurement—and because of the experimental nature of the items being procured.

But on the surface we have terrific problems of being unable to make safe estimates and finding either that inflation has caused greater increases, or that we are unable to estimate the number of grant recipients, or whatever the program may be. This is not an exclusive property of the Department of Defense.

Senator JORDAN. Thank you.

Mr. McCracken, in speaking of estimates, in 1967 the Council of Economic Advisers forecast that the spending for Vietnam would be on the order of \$10 billion, and it finally cost more than \$20 billion. They were 100 percent wrong. And you say in your statement it is difficult to design fiscal and monetary policies for a stable economy when variations in defense spending are so large. Do you anticipate that we are going to have such wide variations in your estimates as occurred in 1967 by your predecessor?

Mr. McCracken. No. I think that was a rather unusual case. I was not, of course, in Government at that point. But that was the case of what apparently was a rather unforeseen but large stepup in the Viet-

nam effort. And it did constitute the kind of thing I was talking about in my statement, where these very substantial and sharp shifts to another level do raise very difficult problems for economic stability.

Now, we do, of course, at the present time have the uncertainty about the future course of Vietnam. It is one of these uncertainties that we have to live with, and we have to manage our strategy of economic policy to be reasonably on track with whatever develops.

But I think that is one of the fairly rare cases of a major miscalculation in the course of the budget. And of course it did pose very difficult problems for the management of economic policies.

Senator JORDAN. Indeed it did.

Mr. Chairman, without objection, I would like to submit additional questions to Mr. McCracken for his subsequent answers.

Chairman PROXMIER. It is so ordered.

(Senator Jordan's questions and CEA Chairman McCracken's responses follow:)

Question 1. (A) A price deflator is often used to indicate the rate of increase in the cost of the goods and services that the federal government purchases. Could you tell us what the increase in this deflator has been in recent years and what the prospective increase is for this year?

(B) Does the deflator for Department of Defense purchases tend to rise at a more rapid rate than that for the rest of government?

(C) How much do you think that inflated costs of large weapons systems contributes to the stimulation and growth of general price inflation?

Answer 1. (A) The percentage increase in relevant deflators for the total economy and the Government sector are shown in Table 1. It is obvious from the table that the prices of Government purchases have risen slightly more than prices generally in each category. The only really large difference, however, is in the services category, where Government pay has been catching up to the levels prevailing in non-Government employment.

With Government deflators growing slightly faster than those of private purchases, we might expect a 4-5 percent increase in the Government deflator this year.

(B) We have no separate deflators for defense purchases.

TABLE 1.—Percentage increase in deflators by type of product and purchaser, 1958-67

| | <i>Percent</i> |
|-----------------------------------|----------------|
| Durable goods: | |
| Total | 5.99 |
| Producer's durable equipment..... | 9.00 |
| Government purchases..... | 10.26 |
| Nondurable goods: | |
| Total | 12.77 |
| Government | 12.93 |
| Services: | |
| Total | 26.02 |
| Government | 35.76 |
| Structures: | |
| Total | 24.64 |
| Government | 27.50 |

C. There can be no precise answer to this question. Large defense contracts by their nature represent a substantial claim on our human and material resources and thus inevitably contribute to upward pressure on the wage and price structure. To the extent that the costs of such contracts may be inflated, the contractors are able to bid higher for these resources than would be the case if their costs were more tightly controlled. Other companies needing similar labor, materials, and equipments are forced to step up their bids, further aggravating the prevailing pressures. I know of no way, however, in which this impact can be evaluated statistically.

Question 2. On June 11, Dean Acheson stated that the Bretton Woods agreement setting up our present international monetary system was not designed to take care of the consequences of a nation's maintaining sizeable military forces in foreign countries.

You say in your statement that if there were perfectly operating international adjustment mechanisms, the balance of payments consequences of defense spending could be ignored. Could you elaborate on what you mean by this statement?

What are the present obstacles to reducing the balance of payments costs of our defense spending?

Would you recommend any changes in the Bretton Woods agreements?

Answer 2. In recent years, we have had a balance-of-payments problem which has induced us to take steps which have had undesirable side effects. For example, the United States imposed controls on international investment. It is logically possible to conceive of a situation in which we would feel no pressures to adopt such balance-of-payments programs even if additional foreign spending were to occur. Suppose, for example, that we are in a strong over-all balance-of-payments position, and suppose also that defense expenditures took place in a country with a very great demand for U.S. products. Then, additional U.S. defense expenditures in that country would quickly lead to additional U.S. exports, and there would be little need to be worried about the balance-of-payments consequences of additional defense expenditures.

This does not, of course, mean that additional U.S. defense expenditures would be costless from an economic viewpoint. On the contrary, military equipment shipped to that country would be produced with real U.S. resources—which could otherwise have been used to meet alternative needs. And monetary defense expenditures in that country would also have an economic cost. As we earned our money back through additional exports, we could also be giving up the goods represented by the exports. Rather, under such a situation, the budgetary costs could be taken as an accurate measure of the economic costs of the defense expenditures, with little or no reference to balance-of-payments complications.

Such a situation—where we could ignore balance-of-payments costs—does not exist at present. Thus, there is a cost involved in defense expenditures abroad over and above the budgetary costs. If we spend more money abroad on defense, we will find it more difficult to relax balance-of-payments programs—such as the direct investment controls.

It would be possible to reduce balance-of-payments costs of defense expenditures further. For example, it would be possible to further substitute spending in the United States for foreign spending in some instances. To do so might, however, be expensive in some cases, we can get much more for our money by spending it in other countries than in spending it here in the United States. As there has already been a concerted effort by the Defense Department to transfer spending from foreign to U.S. sources except in cases where the budgetary costs would be high, any additional transfers of spending away from foreign countries would probably be quite expensive.

Although there have been strains in the international monetary system, it is important to recognize that this imperfect system has worked rather well. In the postwar period, there has been an enormous expansion in world trade and prosperity. It is therefore important that the system be developed with care and caution. We are not, however, in any sense complacent about the shortcomings of the present system, and very careful consideration is being given to a strengthening of international monetary arrangements.

Question 3. In your statement you say "with a number of countries where American troops are stationed, we have agreements intended to hold down the balance of payments costs."

Could you describe these agreements? Are these largely agreements where foreign countries agree to step up their purchases from us, or are they lending operations?

Answer 3. U.S. agreements with other countries concerning the balance-of-payments cost of defense expenditure encompasses both purchases of U.S. goods and special financial arrangements. Agreements by other countries to increase their purchases of U.S. military goods have been employed since the beginning of the 1960's, with an increased number of such agreements have been negotiated in 1967 and 1968.

Such military purchase agreements have only partly offset the balance-of-payments costs of our defense operations. In the past few years financial arrangements, primarily foreign purchases of long-term U.S. Government securities, have

been used as an additional offsetting device. These financial transactions simply defer the balance-of-payments cost of our defense activities; they do not eliminate that cost. These special financial transactions thus are not a satisfactory long-term solution to the military deficit.

Chairman PROXMIRE. Congressman Moorhead?

Representative MOORHEAD. Thank you, Mr. Chairman.

Mr. McCracken, in your testimony you make this statement: "The basic decisions should not be preempted by officials who, however dedicated, have special responsibilities and interests which prevent them from objectively weighing the full range of national goals."

It seems to me that in that one sentence you have summed up exactly what this subcommittee is attempting to do, not to criticize the people who are making the decisions, but to be sure that the decisions are made at high enough levels so that it is not made by a single purpose institution. And I applaud you for that statement.

Mr. McCracken. Thank you.

Representative MOORHEAD. Mr. Mayo, in this connection I recall in the testimony before the full Joint Economic Committee in February that you stated that one of your objectives was to get a handle on the military budget.

Mr. MAYO. Yes, sir.

Representative MOORHEAD. Have you gotten that handle yet, sir.

Mr. MAYO. We are working very hard on that handle. I think we have a handle on the military budget. And the handle is getting stronger. This must develop over a period of time. And I say again, with the accompanying statement in the same breath, that I was hoping to get a handle on the budget of HEW when I met with you in February, and I think we have a better handle on this, too.

We were even newer in February than we are now. And we still have, I think, very realistic but very firm convictions here that we have to get a handle on the U.S. budget. This is our basic problem.

Representative MOORHEAD. We are with you all the way.

Mr. MAYO. I know you are, sir.

Representative MOORHEAD. We are trying to give you support because we think you may need it more in the military area. And this is why we keep stressing this point. I notice early in your testimony you say that agency budget requests begin to come into the Bureau of the Budget during September. And yet later in your testimony you say early in October budget submissions will come, not to the Bureau, but to the Office of the Secretary of Defense. It seems to me that you may be, if you aren't careful, in the same position as your predecessors, with the civilian budgets coming in to your office in September; however, the Defense budget may not come to your office until November—this, it seems, will put you at a great disadvantage considering the size of the budget versus the time for analysis.

Mr. MAYO. This is a good point, Mr. Congressman, and one that I should have explained a little more carefully, perhaps, in my prepared statement.

One of the advantages of this joint review process at the lower level, if I may be so demeaning, is that our men are engaged day by day, right now, in helping the people across the river prepare the Defense budget. We are aware of the alternatives and of the is-

sues right from the beginning of the process. We are aware of the alternatives in other agencies, too, but we are not at this stage of the game working as closely with the actual agency formulation of the budget, since by definition, the Defense budget is a bigger budget, and takes longer to prepare. So by the time we get a submission from the Secretary of Defense in November there are no surprises in that from the standpoint of the Director of the Budget, he knows the alternatives on various issues.

Representative MOORHEAD. Mr. Mayo, if this joint review process is so good, why don't you use it in HEW where you want to get a handle?

Mr. MAYO. Well, I shouldn't draw the black and white comparison so greatly that we don't know exactly what is going on in HEW up to that point either. But I think it is again a question of degree that reflects the fact that you people have emphasized that in considering the Defense budget we are dealing with 40 percent of the budget.

Now, on the other agencies, the list of issues is not quite as complicated. You don't, despite what Senator Jordan and I have been talking about, have quite the overrun problem. You don't have quite the complicated nature of many of the decisions that have to be made.

So I find the joint review process peculiarly adaptable to the Department of Defense.

But we tell the other departments what we consider the major budget issues for them to be as we go along to indicate the nature of our judgment so that they can be considering these issues as they prepare their budget requests, and not have us surprise them at the last moment when we get to budget hearings.

Representative MOORHEAD. One of the things that has come up before this committee, it seems to me, is that with these close relationships, almost inevitably as is the case with the close relationship between the defense contractors and the systems project officer or the military in general—they tend to lose their independence. And I just hope that you would be concerned about that—that in dealing day by day with dedicated and sincere people in the Defense Department you don't lose your independence, which is one of the virtues you have—in the independent review.

Mr. MAYO. That is right. If you were to sit down with us, Mr. Moorhead, and listen to our men, you would, I think, form the same conviction that I have formed—that our men have not lost their independence. They are critical.

Representative MOORHEAD. I assure you that nothing improper was meant by this admonishment.

Mr. MAYO. And if I find that any of our men have grown old and tired, whether only figuratively or physically, in their evaluation of any of the programs in this Government, we shift them around, and we do.

Representative MOORHEAD. I can say to you, sir, that dealing day by day with Members of Congress, and knowing the problems they have back home, I may have a higher opinion of them than you do. It is that kind of a thing.

Mr. MAYO. I understand your point.

Representative MOORHEAD. Let me read to you how one of your predecessors described the budget process involving the military budget as opposed to the civilian agencies, and ask you in which respect or whether you have made changes in the process. I will read from Mr. Schultze's testimony before this subcommittee. "In all other cases," he said, meaning civilian cases, "In all other cases agency budget requests are submitted to the Bureau which reviews the budgets and then makes its own recommendations to the President, subject to appeal by the agency head to the President." And then he goes on: "In the case of the defense budget, however, the staff of the Budget Bureau and the staff of the Secretary of Defense jointly review the budget requests of the individual armed services."

This sounds very much like where you are concerned. And then he says:

The staff make recommendations to their respective superiors. The Secretary of Defense and the Budget Director then meet to iron out differences of view. The Secretary of Defense—

This is the key—

The Secretary of Defense then submits the budget request to the President, and the Budget Bureau has the right of carrying to the President any remaining areas of disagreement he thinks warrant Presidential review.

In other words, in the civilian agencies, as I understand it, the Budget Bureau makes the final submission to the President, whereas in the military the Secretary of Defense makes the final submission. Is that the same process under your procedure?

Mr. MAYO. No, it is not. I am quite conscious of Mr. Schultze's description of the budget procedure of the prior administration in this regard. Without giving any implications of criticism to the Secretary of Defense at that point—he was an unusually capable man in terms of facility with figures, and systems analysis—I would say that he became more of his own budget officer than would be true of most Secretaries of Defense. I reiterate, Mr. Moorhead, that our policy with regard to defense as well as nondefense is quite accurately described by Mr. Schultze's first observation about how the nondefense budget works.

Now, I realize that there has been quite a bit of—I wouldn't call it folklore because you have given an illustration that isn't just folklore—difference between Defense and other agencies on the policy side. I am referring to policy specifically, not the initial stages of budget formulation when, as I have explained the joint review takes place. On the policy side, there have been differences before. It is our position that there are no differences now.

Now, with that in mind, I am one of those people who likes to know where he stands and to have an orderly system for doing what he is expected to do, rather than just operating on an ad hoc basis.

So I have proceeded to try to get this matter of the budget process clarified at the top level of Government in the executive branch. And I have here—with the chairman's permission I would like to read into the record—a memorandum for the Budget Director from the President.

Representative MOORHEAD. I think this should be submitted for the record.

Chairman PROXMIRE. It will be made part of the record.
(The memorandum follows:)

THE WHITE HOUSE,
Washington, June 11, 1969.

MEMORANDUM FOR THE BUDGET DIRECTOR

Looking forward to the fiscal problems of the coming year, and specifically to the necessarily rigorous approach we must take to the 1971 budget, this memorandum will outline the review procedure which I believe will be most effective in accomplishing our objectives. Substantively, the continuation of a restrictive fiscal policy to combat the critical problem of inflation will be controlling in formulation of the 1971 budget, and the policy should be applied to the budget requests of *all* departments and agencies.

I want it made clear to all departments and agencies that the budget going to Congress will be *my* budget and that it should reflect the goals and objectives of my Administration. To that end, I want budget requests presented to me sufficiently early and in such fashion that I can make choices which can be aggregated and presented as components of the Administration's program. Procedurally, I ask that you take the following steps in preparing the budget estimates of all departments and agencies for my review.

Establish by midsummer a preliminary 1971 target for the major departments and agencies based on a priority-oriented review of the principal program issues which have emerged since this Administration took office.

Review the 1971 budget submissions of all departments and agencies in relation to these targets.

After consultation with me, make a determination of budget levels for 1971 (and revisions for 1970) and transmit such determination to the agency heads.

Receive and review whatever appeals agency heads determine are warranted and make whatever reconsiderations are supportable within overall fiscal objectives.

Refer to me for consideration those major program and budget issues which you and the agency heads agree I should review. I look to you to present objectively the pros and cons of such issues in order that priority of choices will be facilitated and allocation of resources Government-wide will be made most effectively.

[Signed] RICHARD NIXON.

Representative MOORHEAD. Mr. Mayo, I am happy to see that very excellent memorandum made part of the record.

Do you understand that to mean that you treat the Defense Department just like all other agencies?

Mr. MAYO. Yes, sir.

Representative MOORHEAD. Particularly as to time of submission and so forth?

Mr. MAYO. My instruction from my boss is "all."

Representative MOORHEAD. So that the time frame described in your written statement will be changed, do I understand that?

Mr. MAYO. This was a statement which I think is subject to some, shall we say, poetic license in terms of the individual weeks where we get one versus another. But they will be more consistent in timing than is indicated in the statement.

Representative MOORHEAD. Mr. Schultze when he was before this committee hypothesized that if the climate—the political climate—changed sufficiently, the President would be in a better position vis-a-vis the Joint Chiefs, and that he could then unleash the Bureau of the Budget on the Defense budget. My question to you, sir, is, Have you been unleashed?

Mr. MAYO. Well, I think I have my marching orders, Mr. Moorhead. Representative MOORHEAD. Thank you, Mr. Chairman. My time has expired.

Chairman PROXMIRE. I am delighted that you have done what you have done with regard to Defense. I think it is true that you have a more vigorous approach now. The man sitting on your right is a symbol of that, and not only a symbol but an active working force in this area, I understand.

Mr. MAYO. That is correct.

Chairman PROXMIRE. Mr. Schlesinger is the Assistant Director charged with the responsibility for military, is that correct?

Mr. MAYO. Yes. He is in the military and international and scientific area. He is my what you might call personal assistant with no line responsibilities, merely a staff of one to give me the benefit of his independent judgments on the types of programs I have just indicated, a judgment which is based on years as head of strategic analysis for the RAND Corp.

Chairman PROXMIRE. We like to think that at least in part this committee had some influence on your decision. You came before us and we hammered away very hard on this issue, that the Budget Bureau should give more attention to the budget, in view of the fact that 80 percent of the controllable costs are military costs, and the Budget Bureau in the past has allocated about 10 percent of its personnel, or maybe 20 percent of its investigative personnel to the Defense Department.

Mr. MAYO. I have some figures on that that I can introduce into the record, too.

Chairman PROXMIRE. What does it show now?

Mr. MAYO. Let me get the figures right here.

There are several ways that we could go about this, Mr. Chairman. I won't bore you with the details. But let me mention this, that in terms of number of budget analysts, let us say in the human resources area, we have 38 budget analysts working with 37 percent of the budget. In the national security area we have 46 analysts working with 40 percent of the budget. So there is really almost—

Chairman PROXMIRE. You are not talking about the controllable part?

Mr. MAYO. No; I am talking about the whole budget now.

Chairman PROXMIRE. When you say human resources, of course you included the allocation of the budget, included money that is paid under social security, for example?

Mr. MAYO. Yes; this would include everything under social security, that is right. And on natural resource programs, for instance, we have 33 budget analysts. And this is Interior, Agriculture, Corps of Engineers, and so forth, with only 5 percent of the budget.

Now, one of the reasons for a seeming lack of attention to either human resources or national security programs is the fact that we are dealing with literally over a thousand budget accounts. Some of them have big numbers in them, and some of them have small numbers. And if you go through those you find that the military part of Defense accounts for 10 percent of the number of accounts; HEW, 10 percent; and Interior, 10 percent. They are seemingly equal.

The only point I am getting at is that we have to submit a budget for the American Battle Monuments group. We have to submit one for the Marine Council, which although it may be only \$800,000, is dear to the Vice President's heart, and he has to be in on the specifics of that \$800,000 budget. And I don't blame him.

So I am merely illustrating that we have horses and apples here to work with.

Chairman PROXMIRE. Will you submit that for the record? It will be very helpful.

Mr. MAYO. I would be glad to. I have two tables 1 that I refer to on the number of accounts, and one on the personnel of the Budget Bureau.

(The tables follow:)

TABLE 1.1 1970 BUDGET—NUMBER OF ACCOUNTS, BY MAJOR AGENCY

| | Outlay accounts | | Receipt accounts | | Total accounts | |
|--|-----------------|------------------|------------------|------------------|----------------|------------------|
| | Number | Percent of total | Number | Percent of total | Number | Percent of total |
| Executive branch: | | | | | | |
| Agriculture..... | 112 | 11.0 | 76 | 6.0 | 188 | 8.2 |
| Commerce..... | 67 | 6.5 | 46 | 4.0 | 113 | 4.9 |
| Defense—Military..... | 74 | 7.2 | 154 | 12.0 | 228 | 10.0 |
| Defense—Civil..... | 23 | 2.2 | 60 | 4.7 | 83 | 3.6 |
| Health, Education and Welfare..... | 131 | 12.7 | 100 | 8.0 | 231 | 10.0 |
| Housing and Urban Development..... | 54 | 5.2 | 9 | .7 | 63 | 2.7 |
| Interior..... | 110 | 10.7 | 120 | 9.0 | 230 | 10.0 |
| Justice..... | 15 | 1.5 | 37 | 3.0 | 52 | 2.3 |
| Labor..... | 33 | 3.2 | 30 | 2.0 | 63 | 3.0 |
| Post Office..... | 1 | | | | 1 | |
| State..... | 35 | 3.3 | 53 | 4.0 | 88 | 4.0 |
| Transportation..... | 50 | 4.8 | 48 | 4.0 | 98 | 4.3 |
| Treasury..... | 39 | 3.8 | 126 | 10.0 | 165 | 7.2 |
| Atomic Energy Commission..... | 4 | .4 | 4 | .3 | 8 | .3 |
| General Services Administration..... | 39 | 3.8 | 44 | 3.0 | 83 | 3.6 |
| National Aeronautics and Space Administration..... | 4 | .4 | 27 | 2.1 | 31 | 1.3 |
| Veterans' Administration..... | 26 | 2.5 | 47 | 4.0 | 73 | 3.0 |
| Funds appropriated to the President: | | | | | | |
| Agency for International Development..... | 9 | .9 | 28 | 2.2 | 37 | 1.4 |
| Office of Economic Opportunity..... | 3 | .3 | | | 3 | .1 |
| Other..... | 20 | 2.0 | 36 | 3.0 | 56 | 2.4 |
| Other agencies and commissions..... | 181 | 17.6 | 225 | 18.0 | 406 | 17.7 |
| Total executive branch..... | 1,030 | 100.0 | 1,270 | 100.0 | 2,300 | 100.0 |
| Legislative branch..... | 119 | | 47 | | 166 | |
| The Judiciary..... | 21 | | 20 | | 41 | |

TABLE 1.2.—Bureau of the Budget analysts assigned to selected programs

| | <i>Estimated fiscal year 1970 budget analysts</i> |
|---|---|
| Human resources programs: | |
| Education..... | 5 |
| Health..... | 7 |
| Social and rehabilitation services..... | 2 |
| Income maintenance..... | 2 |
| Housing programs..... | 3 |
| Urban development programs..... | 2 |
| Manpower development..... | 5 |
| Other labor functions..... | 2 |
| Veterans programs..... | 3 |
| Poverty..... | 3 |
| General program support..... | 4 |
| Total..... | 38 |

*Estimated
fiscal year 1970
budget analysts*

| | |
|---|-----|
| National security programs : | |
| Strategic forces----- | 6 |
| General purpose forces----- | 19 |
| Intelligence and communications----- | 7 |
| Research and development----- | 3 |
| Logistics, construction, and general support----- | 8 |
| Support to other nations----- | 2 |
| Atomic weapons----- | 1 |
| | 146 |
| | 146 |
| Natural resources programs : | |
| Agriculture price support, Public Law 480, and related programs----- | 2 |
| Conservation programs----- | 1 |
| Credit programs----- | 1 |
| Forestry programs----- | 1 |
| Research programs----- | 1 |
| Marketing, foreign agriculture, and food programs----- | 1 |
| Indians----- | 1 |
| Territories----- | 1 |
| Mineral exploration, production, and supply----- | 1 |
| Land, forage, and timber----- | 1 |
| Recreation use and preservation (also includes fish and wildlife programs)----- | 2 |
| Water supply and control----- | 7 |
| Corps of Engineers—Civil, including project report review----- | 5 |
| Power and energy----- | 4 |
| General program support----- | 4 |
| | 33 |
| | 33 |

¹ All but 11 of these positions are located in the National Security Programs Division; 1 is an assistant director; 7 are located in the International Programs Division; 2 in the General Government Division; and 1 in the Economics, Science, and Technology Programs Division.

And I would also emphasize another phase of this, Mr. Chairman, that I haven't gotten into at all. The functions of the Budget Bureau are broader than even I realized when I took this job, in terms of coordination of executive management, organization, efficiency, accounting, statistics, systems analysis—you can go on at some length. And these areas involve to one degree, or another, coordination with defense. And I can't fully split them up into little pieces.

Chairman PROXMIRE. I would like to ask you, Mr. McCracken, pursuing the line of questioning I was pursuing before, whether anyone outside of the Defense Department is making a study of the impact of military spending on the economy or any other subject other than this post-Vietnam study to which you refer.

Mr. McCracken. I think you would find a substantial amount of activity in that area in, for example, the Labor Department. I know in some of our own investigations incident to this ongoing study we have been in consultation with the Labor Department for some of our information.

I don't know whether—I am not familiar with whether anything like that is going on in the Department of Commerce or not. But I know it is in the Department of Labor.

Chairman PROXMIRE. Apropos of that, I have a letter here which is to me a dramatic example of why some of the assumptions you state to us may not be true. You said :

Defense contractors might, for one reason or another, be less inclined to watch costs generally, perhaps grant large wage increases which other employers would then have to match. However, we see little evidence that the labor market works in this way.

And here is what I have from a letter that came in a few days ago. And I have not gotten permission to release the name of either the defense firm involved or the small firm which made the complaint. This is the letter:

Since [deleted] corporation was awarded a contract to build the [deleted] we have had a very difficult time keeping our longtime employees, and it has been virtually impossible to hire new people to keep up with the demand for our equipment, because of [deleted] unrestricted wage policy.

Let me cite an example that happened just last week. In cooperation with one of the area vocational schools as a part of their educational program, we put on a plant tour of our facilities for the upcoming graduation class of machinists. We were then invited, along with about a dozen other firms, to be present to make offers of employment on a special day set aside for this purpose. When our representative arrived at the school at the appointed time, he, along with all of the other company representatives, was advised that the entire graduating class had already accepted employment at [deleted]. The going rate in the area for apprentice machinists is \$2.50 per hour. [deleted] had offered every member of the class—good, bad or indifferent—\$3.09 per hour, and in addition had agreed to take them into their employment immediately before graduation with the provision that they would receive their diploma later while completing the required academic work on company time.

We feel very strongly that [deleted], by virtue of its contract with the Defense Department holds a very unfair advantage over concerns such as ours in this area and throughout the country. Aside from producing excessive defense costs, this unquestionably is very bad for the economy as a whole.

What is your comment?

Mr. McCracken. I am not familiar with the case in point here. But I think I could duplicate that, in fact I can think of two or three illustrations.

Chairman Proxmire. I am sure you could. After all, with a \$43 billion procurement, there must be a great deal of this in this country.

Mr. McCracken. I was going to say that I can think of two or three illustrations of essentially this kind of thing which has also happened in the nondefense area. In other words, when you have a decision, for example, to put up a new facility in an area—I have a substantial amount of mail from Ohio, for example, incident to complaints there about one of the automotive companies mopping up the supply of labor and driving up wage rates. In other words, you have got a situation there where apparently a new operation was being cranked up, and wage offers there were apparently above the market average at that point. My sentence here merely refers to the general statistics on wage rates. And we certainly can examine the evidence further.

Chairman Proxmire. But the point is that this is being fueled by Federal public money, and under circumstances in which the wage rates are not competitive, they are much higher. And this kind of thing it seems to me is bound to be inflationary, seriously inflationary.

Mr. McCracken. Yes, this is true. The only point I am making is that you have parallel situations in the nondefense area, too, the situation where you have something being cranked up. And in that kind of situation you are going to have a disturbed labor market.

Chairman Proxmire. Here is where it would seem to me that a real analysis would be most helpful. I just wonder as to the usefulness of the economic analysis which simply comes in after the fact and says,

"If you want more defense you will have to spend more money, and more money means more defense," and it doesn't really get into this kind of study of what effect on inflation the wage policies of the defense contractors have when they don't have to really worry about their costs.

Mr. McCracken. As I indicated in my statement here, we certainly do not condone the expenditure of funds for defense that does not produce defense. And if there is any money being wasted, whether it is a dollar or a billion dollars, this is a misallocation of resources.

Chairman Proxmire. You see, until we have a study we don't really know what this impact is, we are not in a position to act on it, we are not in a position to make judgments, and we are not in a position to know, in this highly inflationary period, when it is our No. 1 economic problem, whether or not our decisions on the military budget have a real relevance. And I suspect they have a very real relevance to inflation. Without a study, though, we are getting nowhere.

Mr. McCracken. I think that is probably true. On the other hand, the resources of the Council of Economic Advisers are extremely limited. I would like to say that I noted the Budget Director's comment about the negligible size, I believe, of the Marine Council. I couldn't help but note that it wasn't very far away from the total budget of Economic Advisers. So with the total budget we have we simply do not in the Council have the resources for the detailed study. There are other agencies where this sort of thing would have to be done. I would want to register our interest in this. And I am aware, of course, of the Joint Economic Committee's concern about this area.

Chairman Proxmire. My time is up. I would just say that we would hope the Council would emphasize a real leadership role in getting it done.

Senator Jordan?

Senator Jordan. Thank you, Mr. Chairman.

Just one question to Mr. Mayo. What is the cost of the war in Vietnam now on an annual basis—around \$27 billion?

Mr. Mayo. That is in the ball park, yes; actually, it is around \$25 billion.

Senator Jordan. All of us of course hope that that war will be brought soon to an honorable conclusion. And many of us could hope that if and when we do get some relief over there that moneys might be available for other urgent programs, the need of which is fully recognized.

But comes now the testimony presented by many witnesses, including yourself, to tell us that defense inventories have been depleted. And there will be a costly replenishment of those inventories before any money can safely be set aside or be allocated for other purposes. What is the extent of that non-Vietnam defense spending which you say in your statement is underfunded now, what is the extent of that depletion, and how long will it take to catch up on it?

Mr. Mayo. In answering your question, I will again go back to Assistant Secretary Moot's testimony to this committee as one way of looking at this—that the cost of restoring non-Vietnam national security programs to 1964 levels in real terms is about \$13½ billion. Now, I mention that not as a digit that we should bow down to, but rather as an indication, Senator Jordan, of the seriousness of the

resource allocation problem that will be posed to the Budget Director. This doesn't reflect any decisions. This is a calculation. I would say again it is posed to the Budget Director, but more importantly to the President and the Congress, as to what our stance should be in what at this stage is a political definition of post-Vietnam, and what the post-Vietnam world might look like in terms of our international commitments. We have to consider that, of course, as the time nears when the judgment must be made. So I would urge that some of this may be changed by a reappraisal of the Congress and the President as to what national security programs are pertinent to the post-Vietnam economy.

I merely wish to emphasize, that we shouldn't get too big a gleam in our eyes, as to the entire \$25 billion figure being a nice pie that we can divide up. Even if it were \$25 billion, I don't think you and I would have much trouble, conservative as we are, in finding claims already established for at least double that amount.

Senator JORDAN. I think they are standing in line, Mr. Budget Director, and drooling for the day when that money is going to be available. But I wanted you to bring out the point here—and you have—that it is not going to be available in anything like the amount they expect after we have replenished these defense stocks that have been pilfered or taken away for the Vietnam effort.

Mr. MAYO. Right. But to the extent that we have control of this budget, Senator Jordan, I again would pledge every effort on my part to make sure that they are looked at, too. We are not going to rebuild defense stocks just to rebuild defense stocks. This must be part of our evaluation of the Government's resource allocation.

Senator JORDAN. I am glad to hear you say that. You will take a thorough look at the need for those stocks whether they be replenished in kind or otherwise?

Mr. MAYO. Yes, sir.

Senator JORDAN. Thank you, Mr. Mayo.

Chairman PROXMIRE. Congressman Moorhead?

Representative MOORHEAD. Thank you, Mr. Chairman.

Mr. McCracken, in your testimony you discuss the role of the National Security Council, particularly in advising the President about alternative national defense strategies, and the cost of those alternative programs. The newspapers recently carried a story indicating that the cost range was from \$10 billion to \$16 billion annually for our strategic forces, and \$26 billion to \$85 billion for our conventional forces, for a potential range of from \$36 billion to \$101 billion for the total military budget. You also state that these alternatives will be stated not only in dollars but in national objectives that would have to be sacrificed. Will these alternatives be presented to the Congress?

Mr. McCracken. I think this is what I had in mind—the basic reason I wanted to outline these three agencies that have been created here, was to indicate the structure of this evaluation, and decisionmaking process, within the administration and within the Executive Offices of the President.

Many of these alternatives are alternatives which for a variety of reasons may never see the light of day and may have received very little consideration. These are the alternatives, the incremental decisions at the margin, that are part of the inputs into what finally consti-

tutes the President's program. And I mention not only the National Security Council, but the Urban Affairs Council, and the Cabinet Committee on Economic Policy, all of whom are, of course, chaired by the President, as a part of the process by which these resource allocation decisions ultimately will have to be made. I would assume that much of what goes into these decisions would never see the light of day, and undoubtedly they would not come up here. What you see, in other words, is a result of those evaluations.

Representative MOORHEAD. What will be presented to the Congress, you say, will be not the alternatives that the executive is considering, but the conclusion which the executive branch reaches after it has studied the alternatives?

Mr. McCracken. Right.

Representative MOORHEAD. Wouldn't you think that \$36 billion for national defense is just totally out of the question, and we aren't going to be able to drive the budget down to anywhere near that figure? However, I do feel that it would be both instructive and essential that these alternatives be made available to the Congress. I can readily understand the need for Executive privilege in certain areas but I do think that when the amount of national resources that went into this study of alternatives that they should be made available. May I remind you that these are taxpayers' dollars and I think it would be helpful for both the Congress and the taxpayers to know what estimated level of national security we are obtaining at different levels of defense expenditures.

If you do feel there are security problems, then maybe these alternatives should be presented in executive sessions, to appropriate committees for consideration.

Did you really consider the cost in the terms you have mentioned of the 15 attack aircraft carriers before you decided to recommend 15 or 14?

Mr. McCracken. This was a description of the process as to the evaluation of something—possibly Mr. Mayo could comment on that. I would like to make the general comment here that of course the evaluation of alternative uses of resources is not confined to the executive branch. That is a part of the entire congressional process by which decisions are made about programs, and funds are appropriated, and that sort of thing. I was describing here the machinery by which the executive branch finally arrives at the program, and the pricing out of the program that is translated to the Congress.

Mr. Mayo. The answer I think is very clear—that, of course, we must look at the incremental benefit and cost of any one of any particular item in a series, the retirement of x Navy ships or whatever it may be. And we do this in just that detail. Much of my afternoon—4 hours—yesterday, just as a matter of coincidence, happened to be spent on a review of the likely issues in defense programs for 1971. This is still strictly at the information level, of course, in terms of my own staff telling me how they visualize some of these issues, without judgment at this stage, but in terms of the alternatives. This is far too indefinite to suggest where we are going for 1971. But it follows some of the process that you are suggesting is valuable here, and I agree with you.

Representative MOORHEAD. I just mentioned to you that if you haven't seen the testimony, that Mr. Schultze said when he was asked by Senator Symington, if he had the new marching orders that you have, sir, where he would start. He said he thought he would start to look long and hard at our 15 attack carriers and our eight ASW carrier task forces.

Mr. MAYO. Yes.

Representative MOORHEAD. I think—and this would be just my own thought—that the contingency assumption we are starting on is the two and a half or two plus simultaneous wars, an assumption which may have begun when the Chinese and the Soviets were more monolithic and therefore could consciously launch simultaneous conventional warfare. It would seem now that the split between these powers—especially after the Ussuri fight—is so severe that either one would be wary of launching a simultaneous war in which they might find the other not as an ally, but on the contrary, taking advantage of that situation to make an attack. So those are continuous assumptions that are driving our present military budget and I hope you gentlemen who are participating in the National Security Council studies may at least have in mind.

Mr. MAYO. The President ultimately, with the assistance of the Congress, must make an appraisal of these risks. The dollar impact of this is part of the equation—the basic equation must reflect a risk evaluation, however, not a dollar evaluation.

Representative MOORHEAD. Of course.

Mr. MAYO. I want to make it clear in what I have said—and I sense that this is the meaning of your hearings—that we are not in any way, any of us, against national defense. That isn't the point at all of what I am saying. What the chairman is saying, or any of us is saying, if I may so interpret it, is to be sure that we have an efficient national defense that gives us our dollar's worth in relation to other resources. And our goals are identical in this respect.

Representative MOORHEAD. Obviously; particularly when you are talking about this \$10 billion to \$16 billion for strategic defense where the lives are so paramount the cost should be secondary. In the conventional—or general purpose forces—which totals over 60 percent of the budget, reasonable men can differ over assumptions and risks as it does not involve direct loss of American civilian lives, I think that the cost can assume a higher proportion of consideration. That is about all I mean.

Mr. Mayo, one final thing.

I want to commend you for getting those marching orders, and as Senator Jordan pointed out, exercising some real influence on the MOL decision.

There is one reorganization in the Bureau that, if I understand it correctly, disturbs me—maybe you can explain it. As I understand it, 2 years ago Mr. Schultze established a resource planning staff with the objective of achieving a capability of long-range planning and devising techniques for making interagency trade-offs. At the same time a program evaluation staff was evolved for making intra-agency trade-offs. I understand, sir, that since you took office that the resource planning staff, the interagency group, has been demoted and absorbed into the fiscal analysis staff, whereas DES, the intra-agency trade-off

staff has been promoted to the level of an Office. It seems to me as an outsider that the interagency trade-off staff, particularly bringing the military budget into this process of determining priorities, would be extremely important. And I would hope that the reorganization does not mean what to an outsider it appears to mean.

Mr. MAYO. I would like to say several things about that, if I may.

In the first place, you are getting into the area that is very dear to my heart. And that is that we must do more long-range planning in the Budget Bureau if we are to get control of things before they become uncontrollable. We have to have as much influence as we can in looking down the road. Director Schultze set up the resource planning staff, partly in recognition of this, although some of it came, I believe, technically a bit before. You will recall that there was a President's Commission on Budget Concepts set up by President Johnson in early 1967.

One of the recommendations of the Commission was that a better means of evaluating future implications of budget decisions be established. Mr. Schultze was a member of the Commission. I was Staff Director and David Kennedy was Chairman of the Commission, and Paul McCracken was on it, so it was a commission which has some continuing responsibility in the present administration. Anyway, Charlie Schultze set up the resources planning staff on his own initiative to provide him better evaluation of the long-term impact of Federal programs. I feel at least as strongly about the value of this activity as Charlie Schultze did when he set up the staff. There is no demotion of the staff. It has been, in effect, elevated in the sense that it has now been made a part of the real budget process, not just in looking ahead, but bringing the value judgments in looking ahead to bear upon the preparation of the current year's budget.

I reiterate, then, that I don't feel that there is any loss of prestige, or loss of value in what we are doing. The way you inaugurate a new tool, whether it be PPB, or whether it be this sort of a longer range planning, is to start it off as an individual independent operation to keep it away from the day-to-day affairs of the Budget Bureau. By the time it is established in strong manner it can then serve its function even better by exerting influence on the preparation of, say, the 1971 budget, which is at this stage getting into short range, not just long range.

So I would disagree with anyone who says that we have demoted the function.

I have also made the point more often, so often that I am getting tired of listening to myself, that if I could reduce as Director of the Budget from 99 percent to 98 percent of the amount of time that I spend in the current year putting out fires, or however you want to say it, I will have doubled the long-term planning activities of the Bureau from 1 percent to 2 percent.

Well, that is terribly modest in the sense that obviously, we should be spending more than 2 percent of our time on long-term planning. And we are. And this will increase, not decrease.

Representative MOORHEAD. Thank you. My time has expired.

Chairman PROXMIRE. Gentlemen, both of you have just come, as I understand it, from the White House.

Mr. MAYO. Yes.

Chairman PROXMIRE. Where you were discussing the surtax.

Mr. MAYO. That is correct.

Chairman PROXMIRE. With the President and with congressional leaders.

Mr. MAYO. Yes, sir.

Chairman PROXMIRE. What you consider a very urgent action.

Mr. MAYO. Absolutely.

Chairman PROXMIRE. Well, I would like to ask you about that.

Now, we have been told by the Congressional Quarterly that we can cut \$10.8 billion of our defense spending without reducing our combat effectiveness. Mr. Benson, of the GAO, has made a similar analysis and argued that we could cut \$9 billion. It seems to me that, in addition to cutting our defense budget, which I think we can do, we can cut \$10 billion without reducing our combat effectiveness, we can cut the space budget by \$1 to \$2 billion in a number of ways.

One that is conspicuous is ending our manned flights once we land a man on the moon next month.

We can certainly reduce our public works budget, with regard to highways especially, stretch it out, and so forth. Back in 1966, December of 1966, President Johnson did reduce it, he postponed highway spending, as you recall, for a period of several months. And it seemed to have a prompt effect on slowing down the economy.

And I would like to ask you, what consideration has been given to this kind of action to stem inflation as an alternative to the surtax?

Mr. MAYO. I would say that not as an alternative to the surtax extension, Mr. Chairman, but on its own merits, we are moving ahead with a very close examination of the space budget, the public works budget, just to name two that you did, and the highway program.

Now, let me be candid about certain aspects of this. We took the Johnson budget on public works, which was already pared to the level that has prompted letters to me by, I would say, conservatively, three-quarters of the Members of the Congress on both sides of the aisle, in both Houses, to protest that we are cutting too much. We have cut it further than the Johnson budget. And I can assure you can see some examples of that yourself.

On the highway program—

Chairman PROXMIRE. You have cut it, but why can't you cut it more? You and I know that the only way that you can cut the public works budget is for the Budget Director and the President to make the initial cut. Congress can't do it, itself. However, meritorious the case may be, Senators aren't going to vote against the projects in their own States or the projects in another Senator's home State when the Budget Bureau has approved. The Budget Bureau has to take the initiative.

As I said, President Johnson took anti-inflationary action in regard to the highway program. Why can't you do it?

Mr. MAYO. Our highway program is lower than his.

Chairman PROXMIRE. Yes; but he cut it in 1966, he just suspended a great deal of highway construction.

Mr. MAYO. We have two different things here. I was thinking of public works in the sense of other than highways first, and then highways. Now, what President Johnson did in the summer of 1968, in response to the expenditure ceiling enactment June 28, was to cut the highway obligations, and cut them practically down to nothing, if I remember

correctly, in the second quarter of the fiscal year that we are in right now. Whether that was an efficient operation, I have some serious doubts. John Volpe has no doubt whatsoever that it was not an efficient operation.

Chairman PROXMIRE. Whether it was efficient or not, it worked, it slowed down the economy.

Mr. MAYO. It did slow down highway spending somewhat. But I would urge that because of the long leadtime here on obligations, the obligations that have already been incurred have, in effect, precluded more than just a very small amount of cuts in 1970 spending for highways. We have \$4.7 billion—

Chairman PROXMIRE. This was Executive action, it wasn't a matter of waiting for the Budget to work its ways over a period of several years.

Mr. MAYO. That is, it was a suspension of obligation.

Chairman PROXMIRE. It was a suspension as of that day.

Mr. MAYO. That is right. Except that, if you were to look at the figures—and we have them here—I believe it is fair to say that the spending for the fiscal year 1969 on the highway program was still \$4.7 billion or thereabouts, despite President Johnson's action in suspending.

Chairman PROXMIRE. I am talking about the period which, as you agree, did result in a slowdown in highway building from December of 1966 to about March or April of 1967.

Mr. MAYO. That did have an effect on slowing the award of new contracts and so forth; that is right. But it didn't slow down a lot of highway spending in terms of the budget impact.

Chairman PROXMIRE. Let me ask you about the big item, the recommendation by the Congressional Quarterly and by Mr. Benson that we can and should cut defense spending by \$9 to \$11 billion, and we can do it without adversely affecting our combat effectiveness.

Mr. MAYO. Well, it has to be a judgment again, in the last analysis, by the President. And we are doing everything we can to help him make that judgment by analyzing the very things that you people have called attention to, that studies such as Mr. Benson's have called attention to. These are not unique studies. I have seen several others.

Chairman PROXMIRE. Give us an item-by-item appraisal for the record, because both those were specific, they give a series of areas where we could make cuts, and they both made about half of their cuts in personnel, manpower. And I have talked to a number of members of the Armed Services Committee, and they agreed that we have excess personnel. We don't need 3½ million men in the Armed Forces. And this is a place where we can conserve. I would like a brief explanation of why you dismissed each of these recommendations.

Mr. MAYO. Dismiss is not the word either, Mr. Chairman. We are following up. These are the very items that are the subject of our defense review, and not only ours. David Packard is conducting a review, a searching review with NSC auspices at this point into the entire Defense Department program.

Chairman PROXMIRE. Let me put it this way. I know you don't like to answer hypothetical questions. I can understand why. But there seems to be a real chance now, some people think it is a probability, that Congress may not enact the surtax. After all, looking at the

calendar, it is hard to see how it can be done by the time it expires. Under those circumstances, would you then be able to act on the spending side to counteract what you would construe, I presume, as an inflationary impact, at the expiration of the surtax?

Mr. MAYO. We made it clear, Mr. Chairman, when we submitted our April budget review estimates, that we weren't through with the 1970 budget. I think we have demonstrated that with a couple of things that have happened since April 15. We are continuing to look at these. We believe that control of spending should continue on its own merits here. Again, I do dislike trying to answer hypothetical questions, but I think one of the points that should be emphasized more in the Congress than it has to date is that the failure to enact the surtax could in many ways reduce—well, reduce the funds available to do a good job on many of our programs, not just on the military side. Without arguing on what analysts have said on the outside in terms of how much could be cut theoretically out of the defense budget, I have seen figures on the civilian side, too. And actually, a complete stoppage of the highway program, for instance, or a complete stoppage of the manned space program could save dollars but this again is part of the problem of evaluation of priorities, not just appraisal of waste and inefficiency. Those probes for waste and inefficiency are going to proceed, as far as I am concerned, very seriously, regardless of what happens to the surtax.

Chairman PROXMIER. I have a few more questions, but unfortunately I have to be on the floor in the next 5 minutes. I would appreciate it very much if you would answer the questions and submit them for the record. There are a number, but they require very brief answers.

Mr. MAYO. I would be glad to.

(The questions originally sent to Mr. Mayo follow:)

QUESTIONS SUBMITTED TO HON. ROBERT P. MAYO, DIRECTOR, BUREAU OF THE BUDGET

Question 1. On page 6 of your prepared statement, you speak of the issue identification process. Last month, this Committee was informed by Assistant Director of the Bureau Carlson that 75 major policy issues have been identified in this budget cycle on which there would be "rather intensive measurements of benefits and costs."

How many of these 75 issues on which analysis will be done pertain to the military budget? If you do not know precisely, what would be your estimate? Would you supply for the record the 75 issues on which analysis is being done and distinguish in your insert those issues which pertain to military expenditures?

Question 2. On page 8, you assert that the examiners become intimately familiar with the underlying factors that determine the upcoming defense budget proposals.

In testimony by Assistant Secretary Moot, it is clear that the really basic underlying factors relate to intelligence reports and the definition of our international commitments.

Are you stating that the budget examiners have access to these intelligence reports and have an independent appraisal of the extent of our international commitments in the same sense that planners in the Pentagon do?

If they do, then isn't it true that if the Bureau had sufficient staff, it could undertake an independent evaluation of the threats and the alternative strategies, forces, weapons systems, and so on, which are necessary to plan against these threats?

In your judgment, would such an independent capability outside of the Pentagon lead to a more effective review process and a military budget which is more streamlined than the current one?

What I am getting at here, Mr. Mayo, relates to a comment by Charles Schultze that the combination of new technologies and the propensity of military planners to plan against all contingencies, no matter how remote, drives the military budget up inexorably. It seems to me that unless there is a capability outside the Pentagon that can question the plans of the military in an independent way, it would be most difficult to achieve efficiency and, indeed, economy in the military budget.

Would you comment on this point of view for me, Mr. Mayo?

Question 3. Some time ago a member of the Bureau of the Budget staff, while on leave of absence, did a major study relating the performance of major weapons systems and the profitability of the contracts. This report pointed out the shockingly low performance of many of the major weapons systems programs and noted that, often times, the poorer the performance, the higher the profits.

Is this study or studies like it helpful to you in your attempts to control the level of military spending?

Is the Bureau in the process of undertaking similar studies on an on-going basis?

Would you insert this study for the record?

Question 4. The closing remarks in your written statement seem to me to be somewhat inconsistent with not only much of what this Subcommittee has heard in the past two weeks, but with the Bureau of the Budget's own experience in the MOL case which we have discussed. You say that defense costs cannot be considerably lowered unless we reduce our international commitments significantly. You also say that this decision can be made only by the President with the consent of the Congress. It seems to me that not only is the MOL case inconsistent with this assertion, but that it is not an accurate interpretation of the relationship between Congress, the President, and the Defense budget.

As I have pointed out, if the MOL case precedent were applied in other areas, considerably lower defense costs can be obtained without changing our international commitments. There are many other programs, in my opinion, which could be eliminated and which would significantly reduce defense spending. Last week, former Budget Director Charles Schultze talked about the bomber defense system and aircraft carriers. He said that the DOD never has examined into the necessity for having a bomber defense system or having the kind of multi-billion dollar bomber defense system that has been built and that is being replaced at a cost of additional billions of dollars. It would seem to me that the Bureau might want to examine into the question of whether it is worthwhile to replace the old system, SAGE, with a new system, AWACS. Mr. Schultze also suggested that our fleet of fifteen attack aircraft carriers ought to be looked into. In fact, he said that this should probably be the first program to look into. Why do we have a fleet of fifteen attack aircraft carriers anyway?

In addition, you seem to imply that although Congress constitutionally holds the purse strings, it cannot use them until the President reaches a decision about international commitments. This seems to me, frankly, to be a topsy-turvy interpretation of the role of the Legislative Branch.

I wonder if you would comment on these matters?

Question 5. You speak of the Spring Planning Preview, which is now in process at the Bureau of the Budget. You state that in the Spring Preview, you examine systematically major program issues. Would you describe for the Committee in some detail the substance of one of your Spring Preview meetings on the military budget?

For example, if one of the issues for particular scrutiny was the F-14 or, let us say, a carrier task force, what kinds of questions would be asked with respect to that proposal? Would you only be looking for the most cost effective way of attaining a particular objective, or would you question whether or not the objective itself was worth the kind of expenditure which is likely to be made on it?

Would you inquire as to the total cost of the life of the expenditure, or would you only be concerned with the current year budget costs?

What people would be present at this Spring Planning Preview session? Are any decisions made? And if so, what would they consist of?

In these Spring Previews, would you judge that the level of scrutiny given to the military budget is as great as the scrutiny which is made of domestic programs?

Now, let us look at the Budget Review Process which occurs later in the year. You state that agency budget requests are thoroughly reviewed by the Budget Bureau's examiners? Could you describe for me in detail what happens in the

Bureau's budget examination of the military budget? Who is present at the Bureau's detailed examination of the military budget?

In these sessions, too, what kinds of questions are asked, let us say, of the budget request for a carrier task force of the F-4, and what kinds of decisions are made in these sessions?

You state that after the examination, the Director of the Bureau of the Budget "marks up" the defense budget to reflect the recommendations of Bureau examiners. Could you give us some sense as to the extent to which the military budget is marked up? Are the changes made by the Budget Director marginal changes, or do you in fact recommend that entire programs be excluded or included from the budget?

(The Bureau of Budget replied as follows:)

EXECUTIVE OFFICE OF THE PRESIDENT,
BUREAU OF THE BUDGET,
Washington, D.C., July 19, 1969.

Mr. ROBERT HAVEMAN,
Senior Economist, Subcommittee on Economy in Government,
Joint Economic Committee, Congress of the United States,
Washington, D.C.

DEAR MR. HAVEMAN: AS your letter of June 19 stated, Senator Proxmire left open the record of the hearings of the Subcommittee on Economy in Government so that my answers to his additional questions could be included. The answers to his questions are enclosed.

Sincerely,

ROBERT P. MAYO, *Director.*

Answer 1. The 75 major policy issues mentioned by Assistant Director Carlson are among the more important of the issues that the Bureau has requested various departments and agencies to examine over the coming months. However, they do not include, in any sense, all the issues submitted to any agency. The Bureau itself has communicated many more important issues to departments and agencies and yet other major issues have been developed by other Executive Office of the President agencies and White House staff, with whom the Bureau works very closely.

None of the 75 issues referred to by Assistant Director Carlson concerns programs in the defense area. The Bureau has communicated defense issues through other means, including the 1970 budget reexamination and the spring preview examination of the 1971 budget. In addition, other institutions such as the National Security Council have major policy reviews underway that will affect the Federal budget and in which the Bureau is actively participating.

Inasmuch as many major policy issues are modified continuously as a result of discussions with department and agency staffs, a listing of those originally submitted to the agencies would not necessarily provide the Committee with a clear picture of the issues being pursued by the Bureau.

Agencies often use their completed analyses of policy issues to support appropriations and legislative requests. An example of the marked improvement in the information available for this purpose for the Congress and for the executive branch is shown in Attachment 13 to the paper prepared by Assistant Director Carlson for the PPB Compendium published recently by the Subcommittee. Also, agencies often publish the results of their analyses. An example is AEC's study of the Fast Breeder Reactor Program that was published in May.

Answer 2. There are two parts to this question. First, whether the Bureau of the Budget makes an independent evaluation of our national intelligence estimates and participates in the formulation of our international commitments; and second, whether the Bureau questions in an independent way the strategies, force structures, and weapons systems proposed by the military to support our commitments.

In response to the first part of the question, the National Security Council, which—like the Bureau—is in the Executive Office of the President, has the responsibility for making an independent assessment of intelligence estimates

and the extent of our international commitments, and for advising the President thereon. Thus, there is an independent capability outside the Pentagon to evaluate these estimates and commitments for the President.

It is the job of the Bureau to evaluate the budget impact of strategies, force structures, and weapons systems proposed by Defense to support our commitments. The Bureau examines these proposals independently. To consider alternatives relating to a given force or weapons system, we must, of course, be familiar with the threats and commitments to which they relate.

Answer 3. As you have requested, the study done by Richard A. Stubbing of the Bureau staff while he was enrolled at Princeton University is submitted for the record. Mr. Stubbing's paper has been helpful in the continuing search for more effective ways to acquire the weapon systems which the Department of Defense needs, though some of the uses of this paper have distorted its intrinsic value.

To place Mr. Stubbing's paper in context, it is one of a fairly large number of studies and articles which have appeared in the open literature concerning the problems and potential improvements in the Defense development and procurement process. The suggested improvements in Mr. Stubbing's paper parallel in many respects the recommendations made by others. Public commentary on the paper has tended to fasten on the highlights of past problems rather than suggested improvements. It is the latter rather than the former that the Bureau finds most useful.

Bureau staff continually analyze the factors which influence the costs of programs in their areas of responsibility. Program evaluation and intensive searches for ways to control the level of spending in these programs—whether military or civilian—are emphasized in these studies. Such studies are invaluable in our efforts to control Federal spending.

Answer 4. Through the appropriations process Congress is fully empowered to exercise its judgment in the appropriation of Defense budget funds.

It has been our experience, however, that large reductions in annual defense budget levels—of \$10 billion, for example—are difficult to achieve in the absence of changes in our international commitments or overall defense strategy.

MOL is an excellent cast in point. The cancellation of this effort—one of the largest defense research programs—is expected to reduce FY 1970 authorization requests by \$525 million and outlays over the 1970 to 1974 period by \$1.5 billion, or an annual average of only about \$300 million.

Even when the impact of individual budget revisions for many programs are added together, large reductions are difficult. The Nixon Administration's initial Defense budget revisions of \$3.3 billion in total obligational authority and \$1.1 billion in expenditures, for example, are the consequence of more than 150 individual program revisions affecting over half of the major Defense appropriations.

Answer 5. As explained in the testimony, the spring preview permits the Bureau to identify and examine systematically prospective major program issues, possible alternatives, and budget impacts. In attendance at the Director's preview sessions are the Director and the Deputy Director, the Assistant Directors, and such other persons as the Director may designate.

The Defense preview involves an examination of major programs, an evaluation of emerging issues, and the development of specific planning guidelines.

The Defense budget review will proceed in the manner described in the testimony, with attendance similar to that of the preview process. During the review, however, program issues will be subjected to much greater scrutiny than during the preview. The Director will examine with his staff each program issue and the staff recommendations with regard to that issue. Taken together, the recommendations which are approved or worked out during these sessions will make up the budget "mark" which the Director plans to discuss with the Secretary of Defense and to recommend to the President.

It is, of course, too early in the budget process to foresee what the magnitude of our "mark up" of the Defense request will turn out to be next fall. We fully expect, however, that our scrutiny of the Defense request will not be unlike the scrutiny given other budget requests.

(After receipt of the foregoing from the Bureau of the Budget, Chairman Proxmire sent the following letter:)

HON. ROBERT P. MAYO,
*Director, Bureau of the Budget,
 Executive Office of the President,
 Washington, D.C.*

JULY 25, 1969.

DEAR MR. MAYO: I have received your letter of July 19th and the enclosed answers to my questions pertinent to the June 12th hearings of the Subcommittee on Economy in Government. After reading your answers, I have concluded that in many cases they do not respond to the questions which I submitted to you. Consequently, I would ask you to review your answers to these questions and, where possible, to develop responses which would enable us to increase our knowledge of the budgetary process in the Executive Branch.

I would call your particular attention to the following matters which are directly referred to in my questions:

1. In question (1) I requested that you supply for the record the 75 issues which have been identified in this budget cycle. These are issues which have been brought to the attention of the agencies and departments in the Executive Branch and on which they have been requested to perform "rather intensive measurements of benefits and costs." In your answer you state that a listing of the issues "originally submitted to the agencies would not necessarily provide the Committee with a clear picture of the issues being pursued." While I agree that a listing would not necessarily give us this picture, it would without question give us a far better understanding of the analysis and evaluation of public expenditures which is being undertaken in the Executive Branch.

2. Question (3) asks if the Bureau of the Budget is in the process of undertaking studies similar to the Stubbing's study and whether or not such studies are made on on-going bases. In your answer, you state that the Bureau staff continually analyzes "the factors which influence costs of programs." My question, however, referred to studies dealing with the performance of major weapons systems and the profitability of contractors which are producing these systems for the Government.

3. In question (4) I am asking you to comment on (1) the influence of international commitments on the ability of the Government to cut substantially defense expenditures; (2) the examination by the Bureau of the Budget of the need to replace the old bomber defense system, SAGE, with a new system AWACS; (3) the reasons why the Navy has 15 attack aircraft carriers; and (4) the relationship of the Executive and Legislative Branches regarding international commitments. Insofar as I can discover, your answer is not addressed to these matters.

4. In question (5) I was hoping for a detailed description of the spring preview and the budget review processes. I am interested in the kinds of questions that would be asked concerning particular weapons systems purchases, the attention paid to the objective for which a particular weapons system is purchased, the personnel who are present at these sessions, the decisions which are made in these sessions, the emphasis given to current-year budget costs relative to the total costs over the life of the expenditure, and the extent to which the Director of the Bureau of the Budget has in past years marked up the defense budget. I would ask you to give explicit consideration to each of these points in responding to the questions.

About two months ago now, the Joint Economic Committee was informed of President Nixon's memoranda circulated to agencies in the Executive Branch requesting full disclosure of information to the Congress. We were told that "only in the very most exceptional cases will any information be withheld." I hope that the policy enunciated by the President is still in effect and that your response to Subcommittee's questions will reflect that policy.

Sincerely,

WILLIAM PROXMIRE,
Chairman, Subcommittee on Economy in Government.

(The Bureau of the Budget's reply follows:)

EXECUTIVE OFFICE OF THE PRESIDENT,
BUREAU OF THE BUDGET,
Washington, D.C., August 14, 1969.

HON. WILLIAM PROXMIRE,
U.S. Senate,
Washington, D.C.

DEAR SENATOR PROXMIRE: Your letter of July 25 requested further responses to your earlier questions pertinent to the June 12 hearings of the Subcommittee on Economy in Government. Our responses are enclosed.

Sincerely,

PHILLIP S. HUGHES, *Acting Director.*

(Bureau of the Budget additional replies follow:)

1. (Question 1) As our July 19 reply stated, the major policy issues mentioned by Assistant Director Carlson do not include all the issues submitted to any agency. The Bureau has communicated many other important issues to agencies. Major issues have also been developed by other agencies in the Executive Office of the President and by White House staff. Moreover, we expect many additional policy issues to be raised and considered as the fiscal year 1971 budget is being developed between now and January 1970, and as we look forward to the fiscal year 1972 budget.

The major policy issues mentioned by Assistant Director Carlson in his earlier testimony before the Joint Economic Committee include:

1. Commodity program decisions on price supports and acreage diversion.
2. Alternative Federal policies and programs designed to stabilize timber prices.
3. Evaluation of the status of current Federal direct loans to the rural electric and telephone programs.
4. Study of procedures to remove interest rate ceiling in Farmers Home Administration loan programs.
5. Improvement of the U.S. trade surplus.
6. Area and regional economic development program rationalization.
7. Construction of merchant ships abroad.
8. Federal food assistance programs.
9. Increasing the supply of physicians.
10. Health services research and development in the Department of Health, Education, and Welfare.
11. Community mental health services.
12. Health insurance and reforms in Medicaid.
13. Plan for experimental education programs.
14. Analysis of higher education student aid proposals.
15. Evaluation plan for education programs.
16. Extent and nature of financial crisis in institutions of higher education.
17. Impact analysis and improved data system for elementary and secondary education.
18. Relationship of Social Security benefit system to current prices and earnings.
19. Effectiveness of the social services provided to public assistance recipients.
20. Utilization of the minimum benefit under Social Security to support income of needy beneficiaries.
21. Short-term assessment and long-term evaluation plan for the WIN program.
22. Impact of new neighborhood development program on urban renewal program and on the budget.
23. Evaluation of water and sewer programs relative to stated or implied objectives.
24. Establishing priorities within and among the Federal agency land acquisition programs financed through the Land and Water Conservation Fund.
25. Analysis of reclamation construction policy.
26. Selection of reclamation new starts.
27. Effects of Federal reclamation fees on private provision of facilities.
28. Alternatives for utilizing Naval Petroleum Reserve No. 4.
29. Review of helium program.
30. Alternatives for more intensive use of plant and other fixed resources within Bureau of Indian Affairs school system.

31. Central Valley program special study.
32. Review of coal demonstration plant program and other research activities.
33. Alternative ways of meeting water demands.
34. Excess lands policy.
35. Impact of budget constraints on water resource project construction costs.
36. Relation of inputs and outputs in Federal crime reduction.
37. Crime statistics and information.
38. Configuration of manpower programs at different levels of economic activity.
39. Transition of youth from institutions to work.
40. Design and strategy for research, evaluation, and data collection for managing manpower programs.
41. Facilities planning and pending construction.
42. Internal management of postal system—potential for decentralization of authority.
43. Restructuring of preferential mail service and smoothing of postal operations workload peaks.
44. Role of postal source data system in fulfilling operational and fiscal management information needs.
45. Federal involvement in airports.
46. Post-interstate highway program.
47. Federal role in urban mass transportation.
48. State and community highway safety grant program priorities.
49. Level of IRS audit coverage.
50. Standards of protection for Presidential candidates.
51. Disposition of uranium enrichment enterprise.
52. Costs and benefits of R&D on liquid metal fast breeder reactor.
53. International cost-sharing in high energy physics.
54. Possible stockpile adjustments.
55. Optimum method of supply (for items in the Federal Supply System).
56. Financing of GSA real property activities.
57. Future requirements of the Advanced Records System.
58. Auto replacement policy.
59. Role, scope, and flexibility of manned lunar exploration.
60. International cost-sharing for space programs.
61. Future level of NSF's direct training programs in the light of the reduced rate of expansion of Federal research.
62. Graduate science development programs under reduced Government support of research.
63. Strategy for NSF's applied research program.
64. Priorities (and international cost-sharing) in astronomy.
65. Plan for organization and operation for OEO research and development effort.
66. English language broadcasting level and costs.
67. Impact of Medicare and Medicaid on medical care programs.
68. Veterans and survivors compensation: alternatives to achieve better goals.
69. Availability of mortgage financing for veterans.
70. Contingency reserves for health insurance.

2. (Question 3) At the present time, most of the Bureau of the Budget's staff who review national security programs are heavily engaged in the Nixon Administration's broad, comprehensive review of alternate defense strategies and the force and budget levels associated therewith.

Each examiner, in his review of the programs for which he has responsibility, makes a thorough analysis of weapons performance and cost, and the comparative effectiveness of existing systems and proposed systems. During this review, the examiner takes into account the degree to which cost increases have been experienced with similar systems. The kind of broad, formal study comparing weapons system performance and profitability, similar to the one completed by Richard A. Stubbing while he was a graduate student at Princeton University, however, is not presently being undertaken by the Bureau of the Budget.

3. (Question 4) There are four parts to this question.

(a) The influence of international commitments on the ability of the Government to cut substantially defense expenditures.

In his prepared testimony and in answer to questions; the Director stated that significantly lower defense costs will be obtained only if we—the Nation—reduce

our international commitments significantly. As was noted in our earlier response, his answers were in response to a suggestion that defense spending could be cut immediately by \$10 billion without changing our national commitments. We continue to hold the position that reductions totaling this amount are not possible without changing our commitments.

The Director also stressed that both our international commitments and the budget to support them are proposed by the President and acted upon by the Congress and, therefore, are decided jointly by the Congress and the President. There was no intention in either his testimony or his answers to imply that the Congress' role is a secondary one.

The nature of our present international commitments, the relationship between these commitments and the degree of defense readiness that is required to meet them and possible alternate defense forces and budget levels are currently under review by the Administration. The Bureau is intensively involved in these efforts. Proposals resulting from this review will be submitted to the Congress for its consideration.

(b) The examination by the Bureau of the Budget of the need to replace the old bomber defense system, SAGE, with a new system, AWACS.

The Bureau of the Budget and the Department of Defense have been examining the Airborne Warning and Control System (AWACS) as an alternative to the ground-based SAGE. In keeping with declining threat projections in recent years, the Bureau has recommended and the Department of Defense has accepted significant reductions in the SAGE system. AWACS, if it is successfully developed, would permit even greater reductions in the SAGE system as well as in total air defense costs.

(c) The reasons why the Navy has 15 attack aircraft carriers.

The size of the Navy's attack carrier force is based primarily upon numerous studies conducted in prior years by earlier administrations. Funds to build this force were appropriated by the Congress specifically for that purpose.

The number of attack carriers which will be required in the future to support our international commitments is one of the defense issues not yet resolved by the Nixon Administration. The earlier studies, which support the logic of satisfying our overall tactical air requirements with a mix of land and sea-based forces, are being reviewed.

(d) The relationship of the Executive and Legislative Branches regarding international commitments.

As you know, the question of national commitments was actively considered by the Senate this session when it adopted Senate Resolution 85 on June 25. The views of this Administration on that subject are expressed in the letter of March 10, 1969, from Assistant Secretary of State William B. Macomber, Jr., to Senator J. W. Fulbright, Chairman of the Committee on Foreign Relations. That letter appears on pages 35-38 of Senate Report No. 91-129 of April 16, 1969, which accompanied S. Res. 85. Among other points, it states:

"We recognize and firmly believe that close cooperation between the executives and legislative branches of Government is essential in the area of the Nation's foreign affairs. It will be the policy of this Administration to act on the basis of this proposition. We intend to engage in frequent and full consultation with the Congress so that the executive and legislative branches can work in harmony in discharging their respective constitutional responsibilities."

4. (Question 5) As described in the Director's testimony, the formal spring preview and budget review sessions are the culmination of a process which involves all of the examining resources of the Bureau for a considerable period of time in the most intensive kind of review of Federal budget programs. The process begins with each examiner becoming familiar with the programs and issues under his review and leads to formal and informal preview and review sessions with the Director.

Attendance at these sessions varies widely, depending upon the degree of general interest in the subject and the sensitivity of the issues. Attendance at sessions dealing with the economic outlook and with basic fiscal policy, for example, are usually attended by persons from all parts of the Bureau. Those dealing with the most sensitive security issues are, on the other hand, restricted to persons with a "need-to-know."

Although attendance varies, a typical defense preview or review session would be attended by the Director, the Deputy Director, the Assistant Directors of the

Bureau, the Director, Deputy Director, and Assistant Directors of the National Security Programs Division, and appropriate defense program examiners.

During the spring preview, the focus is upon major program issues in order to assist the Director in deciding upon a planning guideline or budget target for the defense budget total. During the budget review, attention is focused more intensively upon specific issues and the specific program levels which together make up the budget mark the Director transmits to the agency head.

The typical manner of proceeding in the preview and review sessions is for the Division examiner or Division Assistant Director responsible for a given program to summarize briefly the issues to be considered. The summary usually includes a statement of the current or proposed program level and its implications, as well as a brief discussion of possible alternate program levels and their consequences.

This statement of the issues would normally be followed by questions and answers, a discussion of the issues, and a decision by the Director (1) to accept as the preview guideline or budget mark the proposed or an alternative program level, (2) to discuss the issue in greater detail at a subsequent session, or (3) to examine some other approach for later consideration.

Ultimately, as a consequence of these formal sessions and other smaller, follow-up sessions between the Director and the Division Director, and/or their deputies and Assistants, a preview guideline in the spring and a budget mark in the fall will be determined.

A great deal of attention is given to program objectives. While primary emphasis is on current and budget year costs, life cycle costs are discussed in some detail. Examiners are particularly alert to systems whose costs can be expected to build significantly in future years.

The specific kinds of questions that are considered in the preview and the review of individual weapons systems pertain to such subjects as: cost experience, technical development progress, demonstrated effectiveness, risk (the likelihood that proposed performance can be obtained within cost parameters), specific test results, threat changes, duplications, the urgency of the requirement, the degree of concurrency in development and production, the timely availability of sub-systems and matching components, and a host of similar issues.

Question submitted to Hon. Paul McCracken, Chairman, Council of Economic Advisers, for hearing record of June 12, 1969—"Military Budget and National Economic Priorities":

1. It has been argued before this Committee that one of the major fallacies of the new economics is that it fails to distinguish between the relative values and impacts of alternative kinds of public spending, but argues that the size of the Federal budget is what matters in fiscal policy, but that its composition is of minor importance.

Others have argued that the over-concentration of the Council on only issues of macro-economic or fiscal and monetary import is one of the basic reasons why the level of defense spending has gotten out of control in the last half dozen years.

Would you comment on these assertions, and describe for us how the performance of the Council could lead to more appropriate expenditure policy in the military area?

Answer to Senator Proxmire's question:

You have asked me to comment on assertions about "major fallacies of the new economics" and about "over-concentration of the Council" on certain issues during the past six years. I am not really the best authority on either point. However, without trying to comment on my predecessors I will explain my own views about the substance of the matter.

I do not believe that the composition of the budget is of minor importance. On the contrary, I believe that it is of critical importance. The composition of the budget is one of the main outcomes of a decision about the allocation of the national output in the service of competing objectives. The welfare of the nation depends upon the wisdom of this decision, and the survival of the nation may depend upon it.

The question of the importance of the composition of the budget for *economic stabilization* must be understood against the background of the great importance of the allocation decision. What counts for policy is not whether the composition of the budget has some effect on economic stability, or even whether it has an

important effect. What counts is whether that effect is so important as to make it a dominant consideration in the decision on budget composition to the subordination of other effects. And in thinking about this we must also ask whether there are other means of achieving stability objectives that would involve less sacrifice of other objectives. When these factors are considered I believe that we have to put manipulation of the composition of the budget pretty far down on the list of useful instruments for economic stabilization.

The question of the analytical significance of the composition of the budget, as distinguished from the policy significance, is another matter. In our own work to understand the past behavior of the economy or forecast the future we distinguish among six kinds of government expenditures—defense purchases, nondefense purchases, grants-in-aid, transfers, loans and interest.

As for the over-concentration of the Council on macro-economic or monetary-fiscal problems, this is a common and understandable misconception. Macro-economic problems led to the creation of the Council, they are in a sense its bread-and-butter and no one else in the administration has a similar responsibility for them. But we regard our function to be the provision of economic analysis on any problem likely to require a decision of the President and on which economic analysis can make a significant contribution. In fact, the greatest part of our time is not spent on macro-economic problems.

The main contribution the Council can make to appropriate expenditure policy in the military area is to analyze and present the economic consequences of military expenditure decisions. As I indicated in my statement, the most important of these consequences is the sacrifice of other uses of the nation's resources, not only for Federal government programs but also for State and local services, business investment, housing, and personal consumption. Procedures adopted by this administration provide an unprecedented opportunity for analysis of these consequences to enter into decision-making and we have devoted a great deal of effort since we came here to this work.

Chairman PROXMIRE. Once again I want to thank you very much for an excellent job. You are extraordinarily able men. And we appreciate your appearance very much. And you have helped us a great deal.

Mr. MAYO. Thank you.

Mr. McCracken. Thank you, Mr. Chairman.

Chairman PROXMIRE. Without objection the articles from the New York Times to which Senator Jordan referred will be put in the record right after his question and at the point preceding his question to Mr. Mayo. (See p. 677.)

And the committee stands in recess until tomorrow morning at 10 o'clock and we will hear Mr. Elmer Staats and Mr. A. E. Fitzgerald.

(Whereupon, at 12:50 p.m. the subcommittee recessed to reconvene at 10 a.m., Friday, June 13, 1969.)

THE MILITARY BUDGET AND NATIONAL ECONOMIC PRIORITIES

FRIDAY, JUNE 13, 1969

CONGRESS OF THE UNITED STATES,
SUBCOMMITTEE ON ECONOMY IN GOVERNMENT,
OF THE JOINT ECONOMIC COMMITTEE
Washington, D.C.

The Subcommittee on Economy in Government met, pursuant to adjournment, at 10 a.m., in room G-308 (auditorium), New Senate Office Building, Hon. William Proxmire (chairman of the subcommittee) presiding.

Present: Senators Proxmire and Jordan; and Representatives Moorhead and Conable.

Also present: John R. Stark, executive director; Richard F. Kaufman and Robert H. Haveman, economists; and Douglas C. Frechtling, minority economist.

Chairman PROXMIRE. The subcommittee will come to order.

I am sorry to announce that the chief executives of five of the largest defense contractors have refused to appear as witnesses before the subcommittee in its current hearings on "The Military Budget and National Economic Priorities."

We have invited the most prominent of the defense contractors to present their views on the military budget and national priorities. In response, they tell us that "such questions are outside our province," and refuse to appear.

Such excuses are offered by Mr. Daniel J. Haughton, president of the Lockheed Corp., which has been so prominently involved in the notorious \$2 billion cost overrun on the C-5A contract. Similarly, Mr. T. A. Wilson, president of Boeing Aircraft; Mr. Roger Lewis, president of General Dynamics Corp.; and Mr. Robert Anderson, executive vice president of North American Rockwell, which has responsibility for the huge overrun on the Mark II avionics contract, have refused to appear before this subcommittee.

Most surprising of all is the refusal of Mr. Roy Ash, president of Litton Industries, which does over 30 percent of its business with the Defense Department. Currently, Mr. Ash is the Chairman of the Presidential Advisory Council on Executive Organization and Performance. I find the refusal of a person in this position to testify before the subcommittee on this question of major import to be most baffling.

This refusal of the industrial half of the military-industrial complex is a most distressing example of the lack of public scrutiny under which defense contractors operate. Theirs is surely the new isolationism.

How, in all good conscience, can these men who are so intimately involved in decisions which affect our national security and our \$80 billion military budget be so sanctimonious and uncooperative? This unresponsiveness to a committee of Congress which is seeking information on the handling of billions of dollars of taxpayers' money underlines my concern with the isolation of these contractors from public scrutiny and accountability. It heightens my suspicions concerning mismanagement and loose handling of the public trust.

We have been told that the practices of defense contractors in consciously seeking contracts through providing unrealistically low-cost estimates commits the Government and the Congress to expenditures which may well not have been undertaken had we had accurate and honest information. This is all the more reason why the defense industry ought to be represented at these hearings.

These firms are sheltered from competition by negotiated and sole source contracts. Among them are some who operate in plants built by the Government, who use Government-owned machinery, whose working capital is provided through progress payments, and whose profits are guaranteed through change orders, escalation clauses, and sweetheart options.

Most of them could not exist except for the huge noncompetitive Government contracts they receive and the special features and favors attending those contracts.

They are sheltered from the harsh winds of free enterprise and competition by huge subsidies.

As the biggest recipients of funds from the public purse and as firms whose contracts and wasteful practices have been under heavy criticism from knowledgeable and responsible persons, they have a special duty to appear and to tell us how, in the interests of the security of the country, this situation can be improved.

Waste weakens us. Huge cost overruns destroy public confidence. In my judgment, it is the patriotic duty of the heads of these companies to appear here voluntarily and to help us strengthen the fabric of our country and our society.

The purpose of these hearings is to provide a record reflecting all pertinent viewpoints. We have had before us hawks and doves, Pentagon officials, budget officers, economists, efficiency analysts, and foreign policy experts of all points of view.

Indeed, we have almost boxed the compass except for one very important group. The great corporations which sell tens of billions of dollars of defense hardware and who are right in the center of this controversy have not appeared.

The evidence we have developed shows that a major reason for the immense allocation of our resources to defense is both the fact that these weapons by the billions are sold—and I mean, sold—to the Government by these contractors; and, second, these contractors allegedly waste literally billions of dollars each year.

That is the story as it has been told to this committee. Now we have asked these contractors to come before us and give us their viewpoint. What have they got to say in their own defense? What is their side of it?

This committee is not asking that they open their books or bring their records. This committee is not accusing them of any illegality. What we want is an explanation.

In the past, committees of Congress have often been charged with refusing to allow those who have been publicly criticized to have their day in the sun. We want to be fair and to do what is right. But the big defense contractors have turned us down.

If they have a case, they don't have enough confidence to express it. The record of these hearings will be incomplete because these military contractors have not been heard. And that failure to appear is strictly on their heads.

Today concludes the current series of hearings by the Subcommittee on Economy in Government on the military budget and national economic priorities, but it doesn't really conclude it in the sense that we aren't going to have further hearings.

A week from Monday we expect to have 2 days of hearings—and I think these may be the most important part, or certainly one of the most important parts of the entire series—when we will hear from Russian experts—American experts on Russia, I should say—who will give us their best understanding of the nature of the Russian threat, especially from an economic standpoint. This committee has a record of having studied the Russian economy in some detail. And many people feel that we made one of the finest studies that has been made back in 1959. We have brought that study up to date. And we feel that the economic strength and force of the Soviet Union is an element that we have to understand fully if we are going to fully comprehend the nature of the threat that faces us and how far we have to allocate our resources to our defense.

The subcommittee welcomes today Mr. Elmer Staats, Comptroller General of the United States—

Representative CONABLE. Mr. Chairman, I wonder if I could just make a comment on your opening statement, sir.

Chairman PROXMIRE. Yes, indeed.

Representative CONABLE. I would like to express my regret also for the nonappearance of these defense contractors. I was not aware that they had been invited, but I regret that they did not show up. I don't think we can draw all the inferences that you may have unintentionally implied in your statement. I would urge these contractors to cooperate with respect to specific future inquiries from committees of Congress charged with oversight of military matters generally, because it is important that the Congress get their point of view.

I do think that it is important to say that the basic responsibility for defense appropriations and for oversight of defense appropriations is here in Congress. I am sure, Mr. Chairman, you don't intend to transfer that basic responsibility by your comments about the defense contractors. This is the purpose of our hearings. In view of some of the charges you have made against them, it is incredible that they didn't come forward and present their point of view.

It is quite obvious from what has transpired in the past 6 or 7 years that we are going to have to ride herd to a much greater degree on not only defense contractors but the problems of military procurement generally. And while I don't feel that we should draw major inferences from the nonappearance of people whose motives we may not understand, I think their nonappearance does point up the basic responsibility we have got to be more careful and more critical in the future.

Chairman PROXMIRE. Mr. Conable, I want to thank you. I agree with everything you have said completely. But I want to add that I certainly didn't intend, in any sense, to transfer our responsibility for appropriations or for decisions on the military budget to anybody outside of the Congress. I say that when we make this decision, however, in order to fully understand the implications of our decisions, we should have before us the people who are so heavily responsible in the area of expending the taxpayer's dollar. We have found on the basis of all the testimony we have that so much of the procurement goes to these top contractors. The allegation is that they have wasted money, they could do a far more efficient job. I think that their testimony before us would be very helpful in giving us a much better, deeper understanding. They haven't appeared. And I hope, as you say, in the future that they will.

Now we welcome Mr. Elmer Staats, Comptroller General of the United States. Mr. Staats became Comptroller General on March 8, 1966, after 26 years service in the Federal Government, primarily with the Bureau of the Budget. He was Deputy Director of the Bureau under Presidents Johnson, Kennedy, Eisenhower, and Truman. Mr. Staats is a native of Kansas, graduating from McPherson College. He received his M.A. from the University of Kansas and his Ph. D. from the University of Minnesota. We welcome him to our hearing this morning, and look forward to hearing his testimony.

Following the statement and questions of Mr. Staats, the committee will continue its questioning of Mr. A. E. Fitzgerald. And I will present Mr. Fitzgerald when Mr. Staats is finished.

Mr. Staats, we are delighted to have you. You may proceed in your own way.

Would you care to introduce the gentlemen at the table?

Mr. STAATS. Thank you, Mr. Chairman.

With your concurrence I would like to read my statement and then introduce my colleagues at the table, and then we will be prepared to answer any questions the committee may have.

Chairman PROXMIRE. Fine.

STATEMENT OF ELMER B. STAATS, COMPTROLLER GENERAL OF THE UNITED STATES; ACCOMPANIED BY ROBERT F. KELLER, GENERAL COUNSEL; RICHARD W. GUTMANN, DEPUTY DIRECTOR, DEFENSE DIVISION; JAMES H. HAMMOND, ASSOCIATE DIRECTOR, DEFENSE DIVISION; HAROLD H. RUBIN, ASSOCIATE DIRECTOR, DEFENSE DIVISION; AND GEORGE GEARINO, SUPERVISORY AUDITOR, GENERAL ACCOUNTING OFFICE, ATLANTA REGIONAL OFFICE

Mr. STAATS. We appreciate your invitation to participate in these hearings and to comment on the recommendations contained in the May 23, 1969, report of your Subcommittee on Economy in Government on the economics of military procurement.

My statement principally will be addressed to that point here today.

But as background to this I would like to explain briefly the broad areas being covered by the General Accounting Office as well as some

of the recent changes in emphasis in our accounting, auditing, and legal work.

To my right here this morning with us is Mr. Keller, our General Counsel.

To my immediate left, Mr. Richard Gutmann, who is the Deputy Director of our Defense Division.

Mr. James Hammond, who is the Associate Director, and is in charge of our procurement work.

Mr. Harold Rubin, who is the Associate Director in charge of our work in the R. & D. area.

And to his left, Mr. Gearino of our Atlanta office, who has done most of our work in the C-5A program.

Mr. Chairman, of our total operating budget for fiscal year 1969 of \$59.6 million, over \$30.1 million, or 50.5 percent is related to defense programs and activities. The allocation of our resources in accounting, auditing, and legal and other related functions is slightly in excess of that portion of defense spending of the total Federal budget, some 43 percent.

Notwithstanding the unprecedented number of new social, economic, and health programs which the Federal Government has undertaken in the past few years, we continue to place heavy emphasis upon the major functional areas of defense activities, including procurement, supply management, manpower, research and development, facilities and construction, support services, and management control systems.

We have already initiated action to provide increased coverage of defense procurement matters for the fiscal year beginning July 1, 1969, in the following areas of procurement:

- Major weapons systems.

- Procurement systems.

- Pricing of negotiated contracts.

- Contract incentives.

- Contract administration.

- Research and development management.

- Construction contracts.

- Procurement career development programs.

Our proposed budget for fiscal year 1970 provides for a total professional audit staff of 2,585. If approved by this Congress, approximately 425 staff members, or about 16 percent, will be involved in defense procurement and contracting areas. In addition, approximately 40 members of our legal staff are concerned with procurement matters.

GAO is confronted with an increasing workload in practically all the larger agencies of the Federal Government. For example, Federal aid to State and local governments is expected to triple in the present decade—from \$7 billion in 1960 to \$25 billion in 1970. The increase in the number of and scale of Federal aid programs reflects the high priority being given to investments in human resources. Consequently, we face demands for increasing our efforts with respect to new and expanded programs for health, education, manpower training, housing, welfare, community development, and antipoverty programs, generally, and for carrying out substantial efforts in areas such as agriculture, commerce, natural resources, and transportation.

In addition to the need to apply additional staff resources in non-defense areas, we have found that we are being asked to do an in-

creasing amount of work in carrying out specific assignments of interest to congressional sources.

During the past 2 fiscal years our staff effort involved in assignments for specific congressional requests has increased from 238 man-years in 1966 to 445 man-years in 1968, an increase of 207 man-years or nearly 90 percent. During fiscal year 1970 we contemplate that nearly 500 professional staff members—about 18 percent of the total—will be involved in assignments resulting from congressional requests or assignment of our staff to committees.

Despite the fact that we are increasing our efforts in the defense area, because of other demands on our resources we believe that considerable additional resources would be required to implement the recommendations in your report that are directed to the General Accounting Office. We have not had sufficient time to analyze in depth all of their ramifications, or to determine how the objectives of the recommendations could best be achieved, and whether the results expected would be commensurate with the attendant costs. We need to further consider these matters and we plan to advise you of our views at an early date. At this time, however, I would like to offer some preliminary comments on certain of the recommendations.

The first recommendation is that the General Accounting Office conduct a comprehensive study of profitability in defense contracting. In our opinion the prerequisites for such a study should include adequate and representative coverage of the entire spectrum of defense contracting, authority to require contractors to respond to requests for information, and authority to verify the data furnished.

Under our present legislative authority, we do have the right of access to contractors' incurred costs under negotiated contracts. By use of this authority we could obtain information on realized profits by individual contract, by product, and by industry. Obtaining information of this nature and performing the necessary verification work would require a sizable increase in our audit staff.

While we have access to directly pertinent records under negotiated contracts, we do not have access to records relating to advertised fixed-price contracts or to non-Government work, both of which seem to be essential to obtaining information necessary to make a meaningful study of profits on defense contracts. Also we do not have the right of access to contractor capital investment data which would be necessary to express profits in terms of return on investment and make comparisons between returns on non-Government and Government work.

Information of this nature generally is not available on an individual contract basis and therefore might be difficult to obtain, even with the full cooperation of the contractors involved.

We believe that our office would need broad legislative authority as well as additional staff resources in order to undertake a comprehensive study of defense contracting profits which would be of the greatest assistance in evaluating the effectiveness of the various types of contracts used in defense procurement.

The second recommendation in the report proposes to break down total package procurement into smaller, more manageable segments. Total package procurement was designed to (1) inhibit buy-in with its related problems of overstated performance and understated cost, (2) motivate the contractor to design for economical production, high

reliability, and easy maintenance, (3) encourage the contractor to obtain supplies and services from the most efficient reliable sources, and (4) permit the Government to make a choice between competing contractors on the basis of binding commitments for a major portion of the Defense requirement.

The first time this concept was used on a major weapon system procurement was in connection with the C-5A aircraft. When we are dealing with a procurement of the magnitude, complexity, and duration of program such as the C-5A, we have serious reservations as to the feasibility of using the total package concept. Our preliminary conclusion indicates that this method may be best suited for the procurement of those systems requiring only limited additional development effort and where it is reasonable to break down the Government's requirement into manageable segments and where commitments for contractor performance will not extend over too long a period of time.

I think another point needs to be made on the subject. The term "total package" means different things to different people. You can have a package of one size or another. It depends a great deal on what is included in the package, as to whether or not it is an appropriate contractual arrangement.

The Government prior to contracting for significant production units under a fixed-pricing arrangement should have real assurance that the item can be produced and the costs can be predicted with reasonable accuracy. We are, however, giving further consideration to the alternative methods of procurement of weapon systems and expect to have further comments on this matter in the near future.

In your report you recommended that GAO develop a weapons acquisition status report to be made to the Congress on a periodic basis. The report is to include information on cost estimates, progress payments, performance standards and impact of changes on cost, schedule, and performance.

In this connection, we have work underway at this time to examine into contractor management information systems for major weapons. We are interested in whether or not such systems are adequately assisting the contractor in identifying problems on cost, schedule, and technical performance; and to what extent the contractors' systems are being used and could be used by the Department of Defense to obtain needed information on problems as they arise.

With regard to improvements needed in information available in the Department, we are aware of the efforts made in recent years to improve the quantity and quality of information pertaining to the acquisition of major weapons systems. With regard to information on original cost estimates, underruns and overruns, and the estimates to completion of the contracts, the cost information reports system is worthy of note.

This system was designed on the basis of experiments conducted in 1964 and 1965 and was approved by the Bureau of the Budget in 1966. DOD formally implemented the system in June 1966. Consequently, there is beginning to be collected a data bank of actual costs which are broken down in considerable detail in these reports. For example, these reports show the breakdown of contracts into the labor, material, and overhead elements of the major functional categories such as engineering and manufacturing.

The Department of Defense is in the process of clarifying its instructions regarding the use of the system at the present time. We believe that the system represents a major advance over the historical cost information which was available in the Department prior to its implementation.

With regard to the subcommittee's specific recommendations a comparison of actual performance of weapons systems with contract specifications in terms of technical performance standards would be very desirable. Further, the proper handling of contract changes and the estimation of their impact on system performance, schedules, and cost is one of the most difficult problems involved in the procurement of major weapons systems.

We think that the responsibility for a report of this nature should be with the Department of Defense which has, or should have, the information necessary for its preparation. We will be glad to cooperate with Defense to develop an adequate status reporting system and to review or evaluate from time to time the information included in the reports to assure its accuracy.

You also recommended that GAO develop a military procurement cost index to show the prices of military end products paid by the Department of Defense, and the cost of labor, materials, and capital used to produce the military end products.

The Bureau of Labor Statistics in the Department of Labor is the Government's principal factfinding agency in the field of cost indices. Presently, the Bureau compiles indices on prices of certain commodities as well as labor costs in certain industries both of which would be useful in the development of a military procurement cost index. It would seem to us that the Department of Defense in consultation and cooperation with the Bureau of Labor Statistics would be the appropriate agencies to develop such an index.

You recommended that GAO study the feasibility of incorporating into its audit and review of contractor performance the "should cost" method of estimating contractor costs on the basis of industrial engineering and financial management principles.

We are aware that this technique has been used effectively by the Department of Defense at least in one significant instance. In hearings last month before the House Subcommittee on Military Operations, Mr. Gordon Rule, Director of Procurement and Clearance Division, Office of Naval Materiel, Department of the Navy, testified that the results of the study in this one case saved the Government a minimum of \$100 million. He also said that the "should cost" method should be used very sparingly, and only in instances where it is absolutely necessary. We believe the Department should consider what further use should be made of it in contracting and in evaluating contractor performance under certain contracts.

We plan to consider the feasibility of its use in our reviews of contractors' performance under Government contracts. We are interested in whether or not, under present contractual arrangements, contractors are motivated to reduce costs and to operate in an efficient and economical manner. Some people with whom we have discussed this matter contend that contractors may gain financially by holding costs at a higher level for those contracts where profits are established on the basis of costs or estimated cost of performance.

Although we share your concern about inappropriate use of historical costs, we believe that the "should cost" method of estimation, if feasible, is likely to be more useful in conjunction with estimation based on historical costs.

It is important to make the distinction here between the estimating required for major weapons decisions and the independent estimating which should precede a contract award. In the case of major decisions it is most appropriate for the analysts to attempt to determine the most probable cost of the proposed system. On the other hand, once the major decisions have been made, the analysts involved in the negotiation of contract prices should have a different point of view and should be more interested in what the product should cost rather than the probable cost if past practices are allowed to continue.

The report includes the recommendation that GAO compile a defense industrial personnel exchange directory to record the number and places of employment of retired or former military and civilian Defense Department personnel currently employed by defense contractors, and the number and positions held by former defense contractor employees currently employed by the Defense Department.

Establishing such a directory, and maintaining it on a current basis, would be a major undertaking, especially for an agency outside the Department of Defense, such as GAO. In fact, since many people move about from one position to another, there may be some question as to the practicality of such an effort in relation to the benefits to be attained. We believe that, if a directory is to be established and maintained, the Department of Defense should assume the responsibility. In addition, perhaps the concept should be expanded to include other agencies such as NASA and AEC.

Mr. Chairman, the committee's report contains two recommendations for legislative action on which we would like to comment.

The report recommends that legislative action should be taken to make the submission of cost and pricing data mandatory under the Truth-in-Negotiations Act for all contracts awarded other than through formally advertised price competition procedures, and in all sole-source procurements whether formally advertised or not.

Cost or pricing data provisions included in the Truth-in-Negotiations Act at the present time are not applicable to negotiated procurement actions over \$100,000 in four situations: (1) a waiver of the provisions by the head of the agency, (2) where prices are set by law or regulation; (3) pricing on the basis of catalog or market prices; and (4) where adequate price competition is present. Mr. Chairman, I will discuss each of these separately.

The first, waiver of the provisions by the head of the agency, was provided in law to permit the Government to obtain necessary supplies and services in rare and unusual situations where the provisions could not, as a practical matter, be imposed. An example of such cases would be contract awards to foreign companies. As long as the waiver privilege is rarely used and not abused, we see no problem with continuing its use. In reaching a conclusion on this matter, the Congress may want some data from the DOD on usage of the waiver.

Prices set by law or regulation as in the case of public utilities should, in our opinion, continue to be exempt from the cost of pric-

ing data provisions. Since these prices are established by law or regulation, it does not appear that there would be a need in these cases to obtain cost or pricing data.

Catalog or market prices of commercial items sold in substantial quantities to the general public must meet certain standards in order to be properly exempt. There should be, for example, a regularly maintained catalog. The items involved should be sold in the normal course of business to other than Government sources in substantial enough quantities to constitute a real commercial market and to establish fair and reasonable prices. Such sales must involve end use of the product by the public—not the Government or an affiliate.

Where these standards can be met, we believe it is not inappropriate to waive the requirement for submission of cost or pricing data. As our review has shown, the standards are not always met in practice and it may be desirable to require submission of cost or pricing data initially and for procurements made after changes in catalog or market prices.

Adequate price competition as an exemption under the Truth-in-Negotiations Act indicates that known and qualified sources were given an opportunity to compete, that the low offeror did not have such advantage, that he was practically immune to the stimulus of competition, and that a minimum of two companies were independently engaged in the competition.

We have found that the term "adequate price competition" is subject to substantial variations in interpretation by contracting personnel, and that the exemption has been used by industry as an excuse for resisting Government attempts to obtain cost or pricing data. We are in agreement that it would be appropriate for Congress to consider whether this exemption should be modified.

Where competitive influence can properly be brought to bear, regardless of the form, it appears to be in the best interest of the Government to rely on the forces of the marketplace. We believe this principle should be adhered to generally, even though individual instances may appear from time to time indicating that the extent of competition obtained was questionable. In this latter case, cost or pricing data can be and should be requested from the contractor.

This is also true when competition is lacking under formal advertising procedures. In such circumstances, the agency should negotiate under exception 15 of the Armed Services Procurement Act and obtain cost or pricing data from the prospective contractor.

To sum up our views, we believe that the Government should rely on competition in setting prices but should obtain cost data in any case where there is question as to the effectiveness of competition in establishing fair and reasonable prices.

You also recommended that legislative action should be taken to establish uniform guidelines for all Federal agencies on the use of patents obtained for inventions made under Government contract. Many patents also have been obtained by contractors for inventions arising under their independent research and development, the so-called I.R. & D. programs, the cost of which frequently is borne to a significant degree by the Government. Consequently, in view of the difference in Government rights to inventions under these two situations, they will be discussed separately.

The General Accounting Office has been aware for many years of the lack of uniform guidelines for Federal agencies, with respect to the ownership of patent rights to inventions, arising from performance of work under research and development (R. & D.) contracts. We recognize that there are arguments that can be made justifiably in favor of retention of such rights by the Government, but we also recognize that convincing arguments can be made favoring retention of such rights by contractors, provided that the Government obtains a royalty-free license to use of such inventions.

In 1963, we began a broad review of Government patent activities with the primary objective of establishing a basis for advising the Congress as to Government policies, practices, and procedures relating to ownership and disposition of inventions resulting from Government-financed research work.

In October 1963, shortly after our review started, the President issued a memorandum and statement of Government patent policy, which established for the first time basic criteria to guide all executive Departments and agencies, not otherwise governed by statute, in allocating rights in inventions made under Government contracts. It was our opinion that this statement recognized many of the problems which prompted our study. In addition, the President's policy required that reports be made concerning the utilization of patents arising from Government-sponsored research, which information previously had not been available.

In September 1966, the Committee on Government Patent Policy established by the Federal Council for Science and Technology commissioned a special study into the patent policy questions. A report prepared by Harbridge House, Inc., covering the results of this study was released in May 1968. It is our understanding that as a result of this study the Federal Council for Science and Technology is recommending certain changes in the President's patent policy. We have been informed that the proposed changes will not drastically modify the President's patent policy. However, pending receipt of further information in this area we are not in a position to comment on this matter.

Now, with respect to inventions made under contractors I.R. & D. programs, the President's patent policy statement does not apply to inventions arising under contractors' independent research and development (I.R. & D.) programs, and the Government does not obtain any rights to title or use of such inventions although, in many cases, the Government reimburses contractors for a major part of their I.R. & D. costs.

The cost to the Government for participation in I.R. & D. programs is significant, exceeding \$600 million in 1966. According to information furnished to us by contractors during a study of contractors' I.R. & D. programs, a substantial portion of their patents resulted from inventions arising from I.R. & D. programs. These programs are frequently closely related to the work being performed under R. & D. contracts funded directly by the Government under which the Government is entitled to obtain at least royalty-free license rights, and it appears that it may be difficult at times to determine whether a given invention arose from work under the I.R. & D. program or the R. & D. contract. Our previous studies have disclosed a need by the Depart-

ment of Defense to take steps to provide greater assurance that the Government is obtaining all the rights to which it is entitled.

In view of the relationship between I.R. & D. and contracted R. & D. work and in view of the substantial amounts of I.R. & D. costs being absorbed by the Government, we have proposed that a special study be undertaken by the Federal Council for Science and Technology as to whether the Government should receive royalty-free license rights to inventions arising from I.R. & D. We have been informed by the Office of Science and Technology and by the Bureau of the Budget that a study into this area would be appropriate.

As stated previously, over \$600 million was spent by the Government in 1966 for its participation in contractors' I.R. & D. programs. In view of the significant amount involved, congressional interest in this subject, and the differences between the procurement policies on I.R. & D. followed by the Atomic Energy Committee (AEC) and those followed by the Department of Defense (DOD) and the National Aeronautical and Space Administration (NASA), we have made a study of I.R. & D.

The bulk of the Government's expenditures for participation in contractors' I.R. & D. programs, are authorized under Armed Services Procurement Regulation (ASPR) 15-205.35 which is followed by both DOD and NASA. This regulation permits allowance of "reasonable" I.R. & D. costs as indirect costs, provided independent research is allocated to all work of the contractor and provided independent development is allocated to all work of the contractor on product lines for which the Government has contracts.

The current regulation provides some broad criteria for determining the reasonableness of expenditures for I.R. & D., including such factors as previous contractor R. & D. activity, cost of past programs, and changes in science and technology. The Armed Services Procurement Regulation also provides that these expenditures should be pursuant to a broad planned program, reasonable in scope, and well managed. It further provides that such expenses should be scrutinized with great care, in connection with contractors whose work is predominantly or substantially with the Government.

The current regulation also states that, in recognition that cost sharing of a contractor's program may provide motivation for more efficient accomplishment of such program, it is desirable in some cases that the Government bear less than an allocable share of the total cost of the program. We have found that cost sharing has been used extensively.

AEC's policies on acceptability of I.R. & D. costs differ significantly from the ASPR policy, primarily because of the difference in method of operation. AEC's contract work is performed mainly by contractors who operate AEC-owned plants and laboratories on a cost-plus-a-fixed fee basis. The generation of new ideas through R. & D. is an integral part of the program which is completely financed by AEC. There is, therefore, no independent research and development performed by the contractors under an AEC operating contract but the equivalent thereto is performed and fully funded as part of the AEC program.

About 20 percent of the AEC business is generally with contractors who perform the contract work in their own facilities, and without Government advance of funds. In addition, the contractors who oper-

ate AEC-owned plants and laboratories subcontract some work with industrial firms. These subcontractors, as well as the prime contractors who perform in their own facilities, frequently are also engaged in contract work with DOD or NASA.

The major difference between the AEC policy toward acceptability of I.R. & D. costs and the policy currently followed by DOD and NASA is as follows:

The contractor's entire I.R. & D. program is not submitted to or evaluated by AEC for reasonableness. Rather, the contractor submits for evaluation individual projects. The cost of these projects is accepted for allocation only, when AEC establishes that the projects individually benefit, either directly or indirectly, existing AEC contract work.

DOD/NASA, on the other hand, generally negotiate agreements with companies conducting large I.R. & D. programs, specifying the maximum amount of costs which will be considered reasonable. To facilitate such negotiations DOD/NASA may (1) request contractors to submit brochures describing their entire planned I.R. & D. programs, and (2) perform a technical evaluation of the contractor's I.R. & D. program. The negotiated amount of the program that DOD/NASA considers reasonable for allocation is based on the entire program, rather than representing a project-by-project determination of acceptability.

Proposed revisions now under consideration provide for determination of "reasonableness" of I.R. & D. and related costs by means of a formula generally based on costs and sales of previous and current years. This formula approach will eliminate the negotiation of advance agreements and, consequently, the need for evaluation of contractors' I.R. & D. programs. We have been informed, however, that evaluation of specific I.R. & D. programs will be made on a selective basis only.

We have been asked by the chairman of the ASPR Committee to review and comment on the proposed revisions. Our evaluation has not been completed pending receipt of additional information that we have requested from DOD.

Our analysis to date indicates that the Government's share of I.R. & D. costs will increase substantially if the proposed revisions are adopted. Further, the Government's control over the costs it will incur will be lessened, and the degree of assurance it now has that the I.R. & D. efforts will be in areas in which the Government has an interest could be significantly diminished.

Mr. Chairman, this completes our formal statement.

We would be happy to respond to any questions you may have.

Chairman PROXMIER. Mr. Staats, you know I like you very much, and I think very highly of your ability and the people you have working for you. But I am very deeply disappointed with this statement. And I think you expected this committee to be disappointed in this statement.

I am puzzled, because you claim you don't have the manpower to really dig in and audit and analyze and advise Congress about military spending programs, particularly the high-cost weapons systems, and at the same time you assert that the GAO is devoting more than 50 percent of its operating budget to defense programs. You have several hundred professional staff people, as I understand it, about 2,000—perhaps that figure isn't exactly correct, but you have a large number.

And when a committee of Congress such as this issues a unanimous report making recommendations to the GAO for improving the supply and quality of information as to our defense programs through Congress, the GAO, while conceding that it would be a good idea to have the new information, makes an excuse on recommendation after recommendation as to why the GAO should not be the one to provide it.

I don't know where else we can turn. We would like to call you our watchdog, but in view of your response to this committee's recommendation I just wonder if we should.

Mr. STAATS. I think, Mr. Chairman, that the response we would like to make to that point is, one, that we do have very broad obligations with the Congress in all of the areas of Government, that we have felt a particular need in the defense area. We have just recently increased the allocation of our professional staff 10 percent out of our current year's budget.

We were attempting to cover a wide range of activities, including responses to requests from other committees of Congress. It has been part of my policy to attempt to relate the work of the General Accounting Office more directly to the interests of the committees of the Congress, so that we could be more useful and more effective as a result. And as our statement indicates, this has increased very sharply. And by 1970 we will have doubled the work that we do directly for committees of Congress in the period of 3 years. And this will continue to be our objective, to render all practical assistance to the committees of Congress directly.

We have, for example, recently been doing a great deal of work for the Senate Armed Services Committee and the House Armed Services Committee in this area which will involve very substantial increases in our manpower.

We have just recently received a letter from the chairman of the Senate Armed Services Committee in which he has asked us to go deeply into three of the major weapons systems in addition to those which we have been involved. These include the Condor, the SRAM, and the Cheyenne program. We have also initiated—and I would be happy to supply it for the record or state it at this time—a review on a large number of additional weapons systems. We have done a great deal of work with the Appropriations Committees of both the House and the Senate in the military area.

The point I am trying to emphasize here is that we do feel very strongly the need for relating our work as much as we can to the interests of the committees of Congress in all areas, both defense and nondefense.

Chairman PROXMIRE. I know there are great demands on you.

Let me give you an example of the feeling in Congress that the GAO should move more forcefully and more aggressively in this area. I would like to read a copy of a letter I have just received—and you have got the original letter, it was directed to you—from Senator Magnuson. You know Senator Magnuson is a man of great influence and ability. He has served in both the House and the Senate. He served in the Senate for many years. He is chairman of one of the top committees in the Senate. And this is the letter to you dated June 10. [Reading:]

"I have just read what may well be one of the more important documents submitted to Congress this year: 'The Economics of Military Procurement,' a report of the Economy in Government Subcommittee of the Joint Economic Committee.

"This report is significant because it is not an 'attack' on the Pentagon. It does not concern itself with the strategic debate over force levels or particular weapon systems. Its sole concern is the elimination of waste in military procurement—waste that the report states may run to billions of dollars every year.

"As a member of the Defense Subcommittee of the Senate Appropriations Committee, I have learned that present military procurement policies thwart rational congressional control over defense spending. The subcommittee and Congress as a whole simply do not have access to the critical information—cost data, profit reports, source selection procedures, rates of progress in production, and so on—needed to make consistent and enlightened decisions about which programs are on schedule and which need investigation.

"For years, we have accepted these limitations on our access to information because we believed that Defense Department procedures were geared to efficiency and least-cost procurement. Today, it is clear that that is frequently not the case. The current military procurement procedures, far from insuring the best buy for the taxpayer dollar, actually result in the waste of several millions every year. Some of the largest and most respected American business firms take advantage of contract loopholes, while we in Congress are kept ignorant of contract terms and cost data alike.

"The report of the Economy in Government Subcommittee does more than catalog the waste in military procurement. It also makes positive, practical recommendations for promoting efficiency in procurement, returning civilian control over military spending to Congress, and consequently saving billions of needed dollars.

"As you know, the report's recommendations are in several sections. But the most crucial changes the report recommends involve a dramatic new role for the General Accounting Office: Obtaining the relevant cost and production data on major defense contracts and presenting this information to Congress.

"In this time of urgent national needs, certainly few tasks for the GAO can be more important than this move to eliminate waste and inefficiency in military procurement. I would like to hear from you what plans GAO has for implementing the report's recommendations in this particular."

I regret that, as I understand what you have told us this morning, you just can't do what Senator Magnuson asks.

To specific recommendation after specific recommendation you say, no, we can't do it, or it will be done some other way more efficiently. At any rate, the answer seems to me to be consistently no.

Mr. STAATS. I do not believe, Mr. Chairman, that that would fully reflect our thought with respect to the subcommittee's recommendations. I believe we have to take these up case by case, one by one.

I think we are prepared to say, and what we have said in our statement here this morning on the profit study, is that if there is recognition of the statutory limits under which we would work, we are prepared to go ahead with it. But we would have to be very candid and very honest

with you in saying that any such study would be subject to some of the same faults and difficulties which we have previously in testimony before this committee pointed out with respect to the Defense Department study.

We are in full agreement with the importance of having an adequate study on defense profits. The question really is whether or not we have authority—

Chairman PROXMIRE. Can you tell us specifically what statutory authority you need? Our staff feels that you have ample statutory authority for virtually all these recommendations. But it may be there are some cases where you need specific additional authority. Where you need it, if you would tell us what it is, I think this would be a big step toward having Congress act to give it to you.

Mr. STAATS. We spent considerable time on this, because the matter has been subject to previous correspondence, and also previous testimony on the subject. So we have attempted not only to ascertain our own statutory authority, but we have been in touch with the Renegotiation Board, and the Bureau of the Budget, and the Commerce Department to see whether or not we might have overlooked any other authority that was available in this area.

We would be very happy to present draft legislation for this purpose to you.

Chairman PROXMIRE. Very good. We would welcome that.

Mr. STAATS. But we have said in our statement what authority we do have, and the authority that we do not have. We have tried to spell that out very specifically that we do have the right of access to contractors' incurred costs under negotiated contracts. And by use of this authority we could obtain information on realized profits by individual contract, by product and by industry. And this is what the committee indicated in its report it was desirous of having. Obtaining information of this nature and performing the necessary verification work we say would require a considerable staff.

Most of the staff, by the way, would work on the verification.

Chairman PROXMIRE. Mr. Staats, if you could go ahead with the study within the limitations that you now have, what would be so wrong with that? I think the LMI study everybody would recognize has very serious defects. You can do far better. The Weidenbaum study is of some use, but that was a study that one man put together in a few hours ahead based on Fortune magazine reports and a few other things. It seems to me that with your facilities, while there would be some limitation, and you might want to state the results of your study with qualifications, nevertheless you could make a far more useful study than we have now.

Mr. STAATS. We have some doubts about that, Mr. Chairman, to be honest with you, because we could not get information on any of the advertised fixed-price contracts, and we couldn't get any information on non-Government work which we could compare profits with. We could take the published data already available by the SEC and by the Federal Trade Commission.

Chairman PROXMIRE. That is pretty good.

Mr. STAATS. But we could not obtain any separate information with respect to that.

Chairman PROXMIRE. We were not as interested in advertised competitive bid contracts, we are interested in the other contracts and the available data on the profits of nondefense in the private sector which are very substantial.

Mr. STAATS. The area which could be very vital is the last one we pointed out in our statement. We do not have the right of access to contractors' capital investment data which would be necessary to express profits in terms of return on investment and make comparison between returns on non-Government and Government work. Now, this, I think, is almost fatal to any study that we do in this field.

Chairman PROXMIRE. We will certainly try hard to get you that. I do hope you will consider again the possibility of going ahead with what you now have.

Mr. STAATS. We would be quite prepared to suggest legislation on this. And we would be prepared to do what we could within the limits of our staff. But the area, I would like to emphasize, would be important, and there would have to be sufficient staff to verify the data supplied by the contractors. And here again is one of the criticisms that we made of the LMI report, that it was voluntary, and therefore incomplete even as to the respondents who were invited to submit information, and secondly, that there was no verification, no opportunity to verify the data. We sincerely believe that a study of this type is important. But we equally believe, Mr. Chairman, that if the Government needs this information and is willing to put this kind of manpower into it, we will do it right. And we ought to get something we can stand behind which we do not now have. And we have testified before that we did not believe that we had available anywhere in Government an adequate analysis of defense profits. We have been critical of the LMI report, as you have been.

Chairman PROXMIRE. You have the legal right now to audit contractors' books, you don't need voluntary responses.

Mr. STAATS. Yes. But we cannot tell you whether or not they have properly charged their capital investment in defense work as against their civilian work.

Chairman PROXMIRE. I will be back. My time is up.

Mr. STAATS. Let me just emphasize, though, that we are not trying to throw roadblocks here.

Chairman PROXMIRE. As I say, when I make this kind of critical statement I certainly don't mean to imply anything about your sincerity or your intentions, it is just that somehow I hope we can get on the same track, because I am sure you have the best of intentions. You have done a marvelous job in many respects and we just hope you are going to continue to do a good job overall and give us the kind of information that is essential for us to have to be responsible as members of the Congress.

Mr. STAATS. We don't want to mislead in any sense. We think we have an obligation to tell you what in our judgment would be necessary to give you the kind of result which we believe you seek and which we agree you should have.

Chairman PROXMIRE. Senator Jordan?

Senator JORDAN. Thank you, Mr. Chairman.

Mr. Staats, carrying on the trend of the chairman's questions, you state that you believe that your office would need the broad legislative

authority as well as additional staff in order to undertake a comprehensive study of defense contracting profits, which would be of greatest assistance in evaluating the effectiveness of the various types of contracts used in the Defense Department. And you have discussed your limited access to the contractors' books, and so on. We have had several witnesses before this committee that stressed the overstaffing that is prevalent among all general contractors almost without exception. Would you need legislative authority to make such studies as manpower overstaffing in the various categories both supervisory and direct?

Mr. STAATS. I think the answer is, we would not need additional statutory authority.

I believe, Senator Jordan, this would go principally to the discussions that the committee has had with respect to the so-called "should cost" method as against the "will cost" method, the latter being based primarily on historical costs and past experience as against what would be a judgment as to ways in which the contractor could reduce his costs. As long as a year ago, when Mr. Gordon Rule completed his study we met with him and had extensive discussions. I, as well as members of our staff, met with him personally. And we think there is much value to the approach which he has outlined, I believe, only very recently before the House Government Operations Committee.

How far you could go with an effort to, you might say, force—I guess we would have to use that word—force the contractor to revise his management methods to install new equipment, to put in new and different kinds of assembly lines, is a matter that would have to be looked at case-by-case, and it will be a matter of judgment. There is no question about it, if there are excess costs, if there are excess personnel, these are things which clearly ought to be done presently. What we have indicated in our statement is that we would like to look into this further. And we are responding, I think, in this case quite affirmatively to the committee's suggestion that we will proceed, and we will be glad to give the committee the report of our results, on the feasibility of the "should cost" approach.

But what I am really saying here this morning is that what we will need to look at will be some examples as to really how far we think you could go. To be extreme about it, you could, say, bring in a whole new board of directors, change your president, change your production manager, in other words, how far can you go? If a management consulting organization or an industrial engineering organization would go in at the request of a contractor, he is expected to give the contractor on a confidential basis at least all the recommendations of this type that he can validly make. How far the Government can go as a condition of awarding a contract and forcing management to change its organization or its financing methods or its industrial engineering approach is a matter which I believe is fraught with considerable problems.

Senator JORDAN. It is not just a matter of sanctions—what can you do if you do have evidence of overstaffing, what sanction can you bring to bear against this contractor other than to recommend that he be given no future consideration for Government work?

Mr. STAATS. If you have alternative sources you can say we will go somewhere else. But if you don't have alternative sources, then you are up against a problem.

Senator JORDAN. You mentioned Mr. Rule. And he was a good witness. When he appeared before this committee he indicated there was a question in his own mind as to whether the military should be involved at all in the procurement of weapons systems or whether the procurement should be under civilian control in an independent agency as it is in England and other places. And he noted that the outlook of the military is antithetic to prudent procurement in that the military is interested almost solely in the effectiveness of weapons systems, with little regard for their cost. Could you comment on this idea that procurement of weapons systems should be done outside of the Pentagon?

Mr. STAATS. I didn't interpret his suggestion to mean necessarily that it would be done outside the Pentagon, but rather separate and apart from the military controls in the three services.

Senator JORDAN. Under civilian control.

Mr. STAATS. Under civilian control. I think his suggestion is very clear. He has made this same suggestion before the House Government Operations Committee which is considering a proposal to establish a commission, a Hoover-type commission, to review Government procurement.

We would certainly go so far as to say that it is a matter which a commission of that type or any similar review ought to include. Whether it be completely feasible to disassociate it entirely, I think we really haven't made enough study to be conclusive about it.

There is one aspect of the problem which he did not mention which I think bears on what he is suggesting, however. We do have great difficulty because of the rotation of military personnel in and out of procurement positions. A man's military career very frequently is dependent upon the variety of assignments that he holds rather than necessarily in the particular field in which he becomes a specialist. This area has become so technical and so difficult that continuity is required, and the greatest expertise is required. We do not believe that this is consistent with the military rotation system in many cases.

We are looking at this problem currently in connection with the Sentinel program at the request of the Joint Committee on Atomic Energy.

And the conclusion so far—and I think we can document it—is that the rotation of the military personnel in and out of that program has been a handicap to it.

We would like to see certainly as much centralization of this type as you can feasibly make. But the reason that I am a little cautious about it is that if you divorce, particularly in the R. & D. stages, in the development of your contract definitions, too much from your military missions, then you may be getting a weapon that is not going to supply the military need. There has got to be an interphase, an interplay here between the military need and the development of the weapon systems as it proceeds. And this is going to require the involvement of military personnel, you cannot avoid it.

Senator JORDAN. There is no question that it requires the involvement of the military personnel. But we seem always to be operating in a climate of crisis. Probably one of the greatest causes of escalation in prices is the fact that frequently development and production have to go along simultaneously. We never get a chance to do the develop-

ment and build a prototype upon which we can base an accurate estimate of cost.

Do you have any suggestions as to how we might get this on a more businesslike basis, more on the kind of basis that we operate on in a civilian economy?

Mr. STAATS. Yes, I would be happy to comment on that. I would like to break it down into two parts.

One is that I think the comments we have made here this morning on the single package procurement bear directly on your question. We have very serious reservations about the total package procurement concept. When you are either making a major advance in the state of the art or, say, a first of a kind effort, or second, where you have a procurement where the R. & D. plus production is going to extend over a long period of time, as was in the case of the C-5A, in that case between 7 and 8 years, the question is whether or not there should not be a more definitive development. And we believe that there should be before you actually enter into a firm contract for production.

This is one part of the answer I would give to your question.

The other part of it is that we need better information. I think the committee's report is well taken here that we need better information, not only in the hands of the top officials of the Defense Department, but also in the hands of the committees of Congress, as to developments along the way at different milestone points. And the recent action by the Secretary of Defense to establish a defense systems acquisition review council I think is a desirable step in this direction, where he is proposing to review developments at three different points, at the beginning of the contract definition, as to how much, for example, of an increase in the state of the art you might want to undertake on a given weapons system. Do you want to develop the F-14? This is a crucial point of decision.

And second, when the proposal is made for full-scale development of a weapons system. That is another crucial point.

And then, third, when you get to the point where you are ready to enter into a production contract.

These are certainly three vital points along the way that there needs to be information on, both to the committees of Congress and to the top officials of the Defense Department. And our view is that this information in the past has not been made available.

Now, there is another type of information which should be made available in our opinion. And that is whether there have been important departures from performance specifications as originally intended, whether there have been significant slippages, or whether there have been significant increases in cost. It may well be that the decision will be to continue those programs in spite of those difficulties. But the information certainly should be in the hands of the committees and the top people in Defense in order that that judgment can be made.

Senator JORDAN. Thank you, sir.

Chairman PROXMIRE. Mr. Moorhead?

Representative MOORHEAD. Thank you, Mr. Chairman.

Mr. Chairman, in the executive branch of the Government I think there is only one institution that crosses jurisdictional lines and is in a position to advise the Chief of the executive branch, the President, as to the relative costs and benefits of various tradeoffs between

departments and programs of the executive branch. And that is the Bureau of the Budget. And I was shocked to learn for the first time this year that the Bureau of the Budget treats the military budget in a different way from the way they treat the civilian budgets. I made a statement critical of those procedures in the hearings before the Military Operations Committee. The representatives of the Bureau of the Budget did not entirely agree with me at that time. But when former BOB Director, Mr. Schultze came before this committee he confirmed exactly what I had said. And yesterday before this committee the present Director of the Bureau of the Budget indicated that he had received a memo from the President himself directing him to treat all agencies in the same way and with the same kind of scrutiny. In effect, he said that he had gotten his marching papers.

What I hope, General, is that the Congress can in effect give you the same kind of marching orders so that you can also give the military budget intense scrutiny.

I was pleased to see in your statement that you said you had 50 percent of your budget related to defense programs. But later in your statement you indicate that only 16 percent of your auditing staff would be assigned to the Defense Department. This disturbed me, but maybe there is an explanation.

Mr. STAATS. Yes; the explanation is that we are attempting to break out the part which relates solely to procurement and the 16-percent figure, whereas the other figure relates to all the work we are doing in the Defense Department, say, in the field of communication, or in manpower utilization, or in other aspects of the Defense Department. There are installations, and many aspects of the defense work—we could give you a breakdown of that by category. But we can't put all of our staff in the procurement area.

We think it would be wrong, of course, to do that. We have recently increased by 10 percent the staff allocated to the procurement area, representing a judgment on our part as to feasible, productive work that we could do in the procurement area as contrasted with what we have done in the past. We have just made that as a recent decision.

Representative MOORHEAD. The total professional audit staff of GAO is 2,585, what percentage would be assigned to defense?

Mr. STAATS. I will give you the exact figures here. This is based on our 1970 budget which we have not received from Congress yet. But we would have a total of 1,100 man-years for the work we do in the defense area out of 2,585 man-years.

In the international area we have 210—

Representative MOORHEAD. Could you do it in just rough percentages of total man-years?

Mr. STAATS. 1,100 man-years out of 2,585 in the defense area.

Representative MOORHEAD. Something under half.

Mr. STAATS. Roughly 40 percent.

Representative MOORHEAD. Thank you, Mr. Staats.

You have said that the Bureau of the Budget is the best arm to advise the President. And yet I think that the GAO is the only institution in the legislative branch that the Congress can turn to that cuts across departmental lines. And one of the problems, of course, is the decision, unrelated to the efficiency of procurement, but the decisions

the Congress must make as to whether or not to procure a particular weapons system. And I think you and I have talked about this before. I wonder whether GAO is developing a systems analyst capability so as to be able to give Congress some advice on whether or not to procure some of these very sophisticated and complex weapons systems.

Mr. STAATS. We do not feel that it would be an appropriate role for the GAO to attempt to say whether or not a particular airplane ought to have a certain performance capability to perform a military mission. We do think that we have a capability and should have an increasing capability to review the analyses which go into that decision so as to give the Congress the best advice we can give it with respect to whether or not the cost effectiveness studies have been adequately documented and whether or not there may have been differences along the way, and how those differences were resolved, and for what reason.

This we do feel that we can do. But we do not think—if I may say so, I don't think the Bureau of the Budget should second guess the Joint Chiefs of Staff as to what kind of performance capability you need to have in a particular weapon, as to whether or not you need a certain speed or a different speed. This, it seems to me, is a different kind of analysis and a different kind of judgment.

Representative MOORHEAD. When former Budget Director Schultze was before us he testified about the ASW system, not as to whether the plane should be able to fly to this altitude or be able to have this range or what not, but he said that one of the things that the Bureau of the Budget should be able to do, or one of the questions they should have asked was, "Was this system necessary at all?"

According to him there were some serious questions of whether we needed to procure some system at all because they were, in some cases, designed to counter a threat that many felt would never materialize.

This is the kind of questioning certainly that Congress should do. And we need your help in asking rational questions and making rational judgments before voting these large sums of money.

In this connection, Mr. Staats, I understand that you have obtained from DOD several development concept papers pertaining to things like AWACS, F-15, and others. What do you plan to do with these development concept papers? What is GAO's function in this area?

Mr. STAATS. We are interested in reviewing these from the standpoint of making a judgment if we can on whether those papers include all of the elements that should go into a decision on a new weapons system. This is primarily what we are interested in at the moment. We think the idea of a development concept paper is a good idea. But it is a question really of whether or not they are covering all of the issues, all the points that should be reviewed before the top management of the Defense Department goes ahead with the decision.

Do you all have anything to add?

Mr. RUBIN. Mr. Moorhead, I think I should mention that one of the objectives will be to determine how accurate the input to the development concept paper is; in other words, what was the source of this information, and not only is it complete, but is it accurate?

Representative MOORHEAD. General or Mr. Rubin, four months ago the GAO drafted an excellent report on the Sheridan weapons system. Why hasn't this report been released yet?

MR. STAATS. Of course, we did testify in detail on the Sheridan weapons system before the House Armed Services Committee. I might just say here as a footnote that this is an area that we got into almost 2 years ago, in an effort again to try to bring out some of the same points that the committee has developed in the course of these hearing, namely, the question of whether or not they had not gone ahead too rapidly with production before they solved their R. & D. problem. I think the evidence bore out our views on that subject.

Now, on the status of our report. I am informed, Congressman Moorhead, that we have asked the Defense Department for formal comment as we do on all the GAO initiated reports. And we have not yet received them. And I am afraid I do not have the story this morning as to when we expect those comments to come in.

MR. RUBIN. Mr. Moorhead, I should add again that that is a classified report. Consequently, we are not in a position to release our report without comment which will authorize that release. And we have not yet received comments primarily because the Department of Defense is awaiting the results of hearings, at which we have testified, and the committee report on these hearings.

Representative MOORHEAD. I didn't raise this to be critical of you on this point, I was just trying to give a little gentle nudge to the forces in general to see if we couldn't get that report.

MR. STAATS. We will appreciate that. And we will follow up on it.

Representative MOORHEAD. My time is up.

MR. STAATS. Mr. Chairman, if I may, it appears to me that this question of our work in the R. & D. and the weapons system is so central to the interest of the committee that it might be helpful if we could just give you the result of some of the work that we are doing in this area.

Mr. Gutmann can outline this for you in just a matter of a few minutes. And we can supply additional information for the record. But I believe this is quite evident from the questions that you and Senator Jordan and Congressman Moorhead raised of your interest in this work in this general area.

Senator PROXMIRE. Congressman Conable has graciously permitted us to go ahead with that before we recognize him. He is next in line. So you may go right ahead.

MR. GUTMANN. Mr. Chairman, I would like to elaborate a little bit on our plans for using in the defense division the additional manpower that has been made available to us by Mr. Staats. We have in the past done work in the weapons system area on a selective basis. We have, for example, worked on the Pershing missile system. We did work on the light observation helicopter (LOH) program. We have worked, as Congressman Moorhead mentioned, on the Sheridan reconnaissance vehicle. We have work underway right now on several others. However, we have felt that with the interest of this committee and the Congress in general in the weapons system area that we should move more aggressively into applying more of our resources to the problems in that area.

Now, as to your recommendation for the development of an acquisition status reporting on weapons of \$10 million or more. The preliminary work that we have done with this additional staffing and our planning for the utilization of this additional staff that we have,

will concentrate on what we call major weapons system acquisition. By major we mean those where \$25 million or more of R. & D. funds are involved and/or \$100 million or more of production funds are involved, as distinguished from the \$10 million covered by your recommendation.

So far we have identified—and of course we have had this type of information before, and we are just updating it—we have approximately 70 major weapons systems in this category of major that I have defined. And we think there probably are more.

If we were to put two men on each major weapons system, 70, let's say, of course this would take 140 of the approximately 175 men that have been made available to us. And this would simply be gathering information that would be necessary for a status report. Two men, as you can imagine, are not nearly enough to do any kind of an audit at a contractor's plant. There is a significant distinction between the development of a status report and an audit. If we were to try to do an audit at 70 contractors' plants, I would estimate that we would utilize a minimum of 350 to 400 men.

So it is a task of sizable magnitude.

We are planning at this time, therefore, to make maximum utilization of the data gathering system in use by the Department of Defense and currently being developed by the Department of Defense. This is why in Mr. Staats' statement he mentioned such a management information system. We think it is very important for us to be familiar with this system. We have done some work in it, and we need to do some more work in it, in order to avoid any possibility of wasteful duplication of the Department's effort and our efforts in simply gathering information with respect to those systems.

Now, the planning for the utilization of the additional staff in actual auditing as distinguished from gathering data is something that must be undertaken very carefully. We cannot simply say to these 175 men, go out to these plants and look around and get some data. We first have to note precisely what it is that we want them to do. And we have to know what type of information is already available to us through the Department of Defense. A selection will then be made of a number of weapons systems to receive concentrated audit attention. Only in this way can we utilize that staff most efficiently.

So to sum up really, what I am saying is that I think the watchdog is watching. With 2,500 people we have 5,000 eyes, and they are all watching pretty hard.

Representative MOORHEAD. Mr. Chairman, could we get a list of those weapons systems that he is studying for the record?

Chairman PROXMIRE. I think that is an excellent suggestion. Will you give us that?

Mr. GUTMANN. I would be glad to do that.

Chairman PROXMIRE. Thank you very much.

(The material promised was subsequently received and appears as appendix in this volume. See p. —.)

Congressman Conable?

Representative CONABLE. Thank you, Mr. Chairman.

First of all, a housekeeping matter. I wonder if we could get for

the record a list of all the witnesses that were asked to appear at these hearings.

Chairman PROXMIRE. Yes, indeed.

Representative CONABLE. Senator Jordan and I weren't privy to the invitations that were issued—we are not at all critical of them, we have had a fine array of witnesses, and it has been a very instructive set of hearings—but in view of the fact that some people have not accepted I think we ought to have a list of all those who were invited so that we can see just who didn't come and draw our inferences from that.

I understand that Secretary McNamara did not want to come because of the policy of the World Bank, and that Secretaries Laird and Packard said that some of the people working under them who had participated in the previous administration would be able to furnish all the information that they would be able to furnish, and probably from direct knowledge. And anything else in that line I think would be helpful in assessing the work of the committee with respect to the witnesses who have or have not appeared.

Chairman PROXMIRE. Gentlemen. I might just say in general the situation is this, that we, of course, asked the Pentagon to appear, and they sent witnesses. We asked the people from the academic community to appear, and they did. We asked "doves" and "hawks" to appear and they did. The one group that did not appear and refused consistently and unanimously to appear were the people who represent the big corporations in this country who do the defense contract work, the military work. They consistently said no.

Representative CONABLE. Was it made clear to them also that they could send their controllers, if they would be willing to, other than coming themselves?

Chairman PROXMIRE. Yes, indeed; there was no demand that they send a specific person; they could send whoever they wished.

Representative CONABLE. I think it would be helpful to have all that in the record. I would appreciate it.

Mr. STAATS, you have testified here, as Congressman Moorhead pointed out, that roughly half your operating budget goes into defense investigation. Has that been true over the years since 1960, for instance, or have you had an increasing amount of your effort placed in the military area?

Mr. STAATS. I do not have a year-to-year—

Representative CONABLE. From your own knowledge, what do you recall?

Mr. STAATS. You understand, I have been with the GAO just a little more than 3 years. But in the 3 years that I have been I can testify with direct knowledge, and the others can testify, in addition. What we have been attempting to do has been to cover some of the areas we had not previously covered. This has been part of our objective.

For example, Mr. Rubin's area in the research and development area, we have done practically nothing in previously. I did not see how you could effectively deal with the procurement of weapons systems unless you got more directly involved in the research and development aspect of it.

So that we now have in the R. & D. area a sizable staff working in that area.

In the support services area, such as communications, where we are spending \$3 or \$4 billion a year, we have done very little, and we are now trying to cover that area.

In supply management area, we have emphasized that a great deal more, particularly in view of the great problems of Vietnam. We have expended a great deal of our efforts in improvement of the supply management area.

Now, another area that we do not think you can divorce from procurement and production is the area of financial controls, and the committee itself has pointed this out, and the need for improved information on the status of developments on contracting.

So we have increased our efforts in that area.

But in terms of the total allocated to the Defense Department in proportion to the total prior to 1966, I would either have to supply that for the record or ask one of the other gentlemen here to comment on it.

Representative CONABLE. What has been the trend? Have you been putting more emphasis on defense or less? Have you always tried to relate the total amount of your operating budget to the percentage that particular Department received from the total Federal budget?

Mr. STAATS. Only in this way. We have a very carefully developed system within the GAO to try to review periodically every 6 months and on a full-scale basis once a year the allocation of all of our resources from the standpoint of the varying requirements placed upon us. For example, we have a number of statutory requirements that we have no discretion on. I have mentioned here earlier our desire to increase our work with the committees of Congress. And we have more than doubled that in 3 years.

Representative CONABLE. Has that had a tendency to throw out the proportion of effort that normally would be allocated to defense, for instance? Have you had more requests in the defense area?

Mr. STAATS. If anything, it has increased the amount of work that we are doing in the procurement and military area. I do not have a separate breakdown of those congressional requests, but speaking from my own firsthand requests, we have done a lot more work with the Armed Services Committee and with the Appropriations Committee in the military area now than we were doing 3 years ago.

Representative CONABLE. And so Congress has been exhibiting a special interest in this field as reflected in the requests to you for auditing, hasn't it?

Mr. STAATS. Yes. We have currently about 35 men who are spending full time on the Sentinel program in the work that we are doing with the Joint Committee on Atomic Energy. And we have had them on that for more than a year now, and part on progress reporting of the type we have been discussing here this morning looking at the rotation of military personnel on the work that is involved in the ABM.

So that I would say on an overall basis probably the trend of work on defense as against nondefense hasn't probably changed significantly, but the composition of it has changed. We think it is much more effective now than it was a few years ago.

Representative CONABLE. Inevitably if you are going to get more requests in this area it is going to affect your operating budget.

Mr. STAATS. Yes, indeed.

I might add here, though, that our budget over all has increased

only about half as fast as the budget for the Government as a whole. If you want to go back to 1961, or any other base point, it has increased only about half as rapidly as the Government as a whole.

Representative CONABLE. Is this the result of cost consciousness or lack of available manpower, or what is the reason?

Mr. STAATS. We think that our resources are always going to have to be a product of two things. One is that we have to have high quality people. And numbers as such are of little importance to us. These have got to be well-trained people. We select only from the top one-third of the classes when we recruit out of the universities. And we have been trying to bring in more specialists of the type Congressman Moorhead was referring to. We have been devoting roughly 5 to 6 percent of our total budget just to training for people, the universities, the business schools, and various types of institutes, automatic computer training, actuarial analysis, programs of this kind where we are trying to improve our analytical capability.

But the other part is that we are under a great difficulty of recruiting from the outside because of the difference between the salary levels that we can pay and those paid outside.

Representative CONABLE. I would think it might require special skills to audit defense matters generally, and I should judge that it would be rather more difficult to audit the Defense Department than many of the civilian agencies.

Mr. STAATS. Well, they are both tough. But if you get into something like the research and development area, for example, it is an extremely difficult and complicated problem to draw judgments in an area which is involved so heavily with engineering talent and scientific talent.

Representative CONABLE. I would like to follow up on some of your comments to Mr. Moorhead's questions on single package procurement. It hasn't been completely successful in its initial application with respect to the C-5A. And I understood you to say that the biggest problem you had, arose out of contracts that involved development and production in large amounts.

Mr. STAATS. That is correct.

Representative CONABLE. And that was certainly true in the C-5A situation.

What kind of systems do lend themselves to this contracting technique?

Mr. STAATS. I wonder if I might ask Mr. Gutmann or Mr. Hammond to respond to your question?

Mr. HAMMOND. I believe it would be systems that are already developed, for the most part. It would be smaller systems. Possibly the total package concept would have been more effective, if this had been tried out on smaller systems at the outset, where the chance of success was greater, and costs could be predicted with more certainty. Maybe another thing that would help in the total package concept is not trying to get too much in a single package.

Predicting 7 or 8 years in the future is very difficult. It is difficult on the part of the Government and on the part of the contractor.

I think the total package concept, or some type of package concept, will have some benefit in the future. It is a matter of when you exercise the total package. For example, in a new aircraft, if you have gone

along and two companies have built this, and maybe you have a prototype arrangement, and you have selected the one that you think you need, the one that you can develop, possibly getting a package arrangement at that time might be good, a package arrangement for possibly the additional development required, plus a portion of the Government's needs, plus committing the contractor to service or maintain the aircraft. It might encourage him to develop an aircraft that could be maintained more economically.

I think the package concept has some real potential. But it is a matter of how it was used. And possibly it was used on such a big system at first, bigger than it should have been.

Representative CONABLE. Let's look at patent matters again, sir. Just where are we headed on this? I wonder if you know of any situations where the patent rights that have accrued to a contractor have been more valuable to him than the profits he got? It seems to me that we have a remarkable situation here where a contractor can develop an invention under one of these independent research grants, and have something of considerable value to him with very little risk capital involved.

Mr. STAATS. We are making two points here essentially in our study. One is that the patent rights under I.R. & D. are different than they are with project or sponsored research. And we are raising the question really whether or not, if the Government is paying for it, whether that distinction is a valid distinction. I would say it is a policy question, to be sure. But there is not now a policy which is really seriously considered this—

Representative CONABLE. Surely this comes up very clearly where you have a situation where the company involved is doing almost entirely Government business?

Mr. STAATS. That is correct. And it shades down to situations where the company may be doing a relatively minor portion.

Representative CONABLE. And the Government's portion to the I.R. & D. contracts has been a very modest one.

Mr. STAATS. That is correct. And that is part of the complication.

Representative CONABLE. But are we going to have some legislation proposed on this?

Mr. STAATS. We have a report in process which we now have—we hope to have for the Congress—not just on the patent question solely, but the patent question is included. We have a fairly broad based report on the whole subject of independent research and development, not only bringing up the problems that arise because of the difference of approach between the AEC on the one side and NASA and Defense on the other, but also the question of what type of review is made with respect to the adequacy of the plans made by the contractor for utilizing the money which he receives as an I.R. & D. allowance, and also the question of whether or not it would be advisable to put this on a formula basis as the Defense Department is now proposing, and minimize the review as to how this money is spent. And they are preparing comments for us now based on our draft report. And as soon as we receive those we will try to incorporate them in a report to the Congress.

The policy question on patent rights is an extremely difficult one. The Office of Science and Technology and the Budget Bureau, which

are most deeply involved in the patent policy issuance of 1963, both indicated that they feel that this is a legitimate area that ought to be covered by executive branch policy.

The Congress has not, I think it is fair to say, looked at the patent policy question as a whole, in recent years, at least.

Representative CONABLE. It sounds as if we ought to. I can conceive of situations where the patent property rights can be considerably more valuable even than the profit that the company receives on the contract.

My time is up, Mr. Chairman. Thank you.

Chairman PROXMIRE. Mr. Staats, let me just give you some example of why I differ from what seems to be the approach which the GAO has now, and maybe we can get on common ground as to what ought to be done in the future.

The C-5A overrun, was disclosed to this committee in November of 1968, if you recall, by Mr. A. E. Fitzgerald of the Defense Department, when he appeared before this committee. You have over 2,000 professional staff people. Don't you have professional staff people in field offices who are responsible for auditing the C-5A contract?

Mr. STAATS. Yes; as you know—

Chairman PROXMIRE. Should you have discovered that overrun, shouldn't you have reported on that overrun?

Mr. STAATS. It is possible that we would have gotten into that on the basis of a review of the type we made on the Sheridan where we did issue it.

Chairman PROXMIRE. It was so big. It was \$2 billion, or close to \$2 billion. It seems to me that that is the kind of thing that the GAO should have been able to uncover and disclose and alert us to.

Mr. STAATS. We think an improved status report system on weapons acquisition would be helpful to us as well as to Congress and to the agencies. And we would expect to use it in attempting to identify situations where we could move into it.

Now, we did go into the C-5A question, Mr. Chairman, in early January. But you are quite right, the first indication of overrun did come as a result of those hearings before this subcommittee.

Chairman PROXMIRE. Apparently in your statement you think the responsibility should be with the Defense Department, that they ought to give us this report. And we want an independent agency. That is what we think the GAO can do.

Let me give you an example. The other day this committee learned that there is about a \$4 billion overrun on the Minuteman II program. Secretary Shillito confirmed this to us. Did the GAO know about that enormous overrun?

If not, shouldn't you have known that? That is what we are going to see—

Mr. STAATS. I don't quite know how you got the impression that we weren't going to be interested in developing information.

Chairman PROXMIRE. I am sure you are, but I am asking why the GAO wasn't able to close some of these things that have been occurring apparently over a long period of time and let Congress know about it, and let the public know so that we could act.

Mr. STAATS. It is just a question of how many contractors can you cover at any one time.

Chairman PROXMIRE. Apropos of that I have a final report from the GAO. And again I note that some of your reports are requested by Congressmen. And I am just reading the ones that are requested and reported to the Secretary of the Air Force or the Secretary of Defense or a report to Congress, which I think in this instance was on the initiative of the GAO.

The first is a letter report to the Secretary of the Air Force—Administrative policies, procedures, and controls relating to the travel of military members of the Air Force who are assigned temporary duty (TDY) for the purpose of attending formal courses of instruction or training.

The second is a final report to the Congress—Need for improvement in procuring and stockpiling jewel bearings, Office of Emergency Preparedness.

The next is letter report to Secretary of Defense—Withdrawal of funds in advance of need by the Joint U.S. Military Advisory Group (JUSMAG), Philippines.

The next is a letter report to Secretary of Defense—Operations of the Per Diem, Travel, and Transportation Allowance Committee, DOD.

The next is a draft report to the Secretary of Defense—Pricing of MB-5 generator sets purchased from Libby Welding Co., Inc.

The next is a draft report to the Congress—Opportunities for improving management of Government-owned household furnishings overseas.

While some of these may be of significance to some persons or some committees, it seems to me that the immense amounts being spent on these weapons systems have such a much higher priority that to have your valuable personnel working on what seems to be minutiae and trivia would seem to be a misallocation of your resources.

Mr. STAATS. We would have to go into each one of those cases one-by-one.

But I believe in fairness to us, Mr. Chairman, that you ought to also read into the record some of the reports that we have done on weapons systems.

Chairman PROXMIRE. You have done excellent reports. I don't mean, as I said at the beginning, to in any way impugn you and your staff. I think you are right to say that this should be put in perspective. But when you say you don't have the personnel or you don't have the numbers to do the kind of job that our recommendations would require, it seems to me that it is appropriate to point out that you are doing some things that seem to have a far lower priority.

Mr. STAATS. Of course, not all people have the same capability to deal with some of the problems that you get into on major weapons systems. I know that you appreciate this point. And you have to use people sometimes for other work that may be productive and may not be the highest priority work. We recognize that this exists.

However, having said that, we do feel that the question of identifying the overruns, the slippages, and the shortfalls on performance specifications is an area that would be useful to us in identifying areas where we can most usefully employ our audit effort.

Chairman PROXMIRE. I think that is absolutely true. And on the basis that you have done in the past, would you agree that the GAO,

for various reasons, has not done this job that you say now it would be useful to do?

Mr. STAATS. That is a matter of degree. I would like to read you, though some of the areas that we are involved in here, apparently, which I do believe are exactly the kind that you refer to.

Chairman PROXMIRE. When you say you want to do it, do you want to do it for Congress, do you want to be able to report to Congress.

Mr. STAATS. All of our reports to the Congress, even the letter reports, you referred to generally we regard as of lesser importance, and, therefore, not of such importance that we ought to meet them as public reports, although we do make them available to committees of Congress.

Chairman PROXMIRE. I think our differences can be clarified by this. Your written statement reflects a misunderstanding in my judgment of what Congress wants and what this subcommittee is recommending in the way of information about military spending. We specifically asked GAO to provide additional information so that Congress could obtain it from an independent agency, not from the Department of Defense. We have learned that often we can't depend upon the Department of Defense for information about the Department of Defense, for obvious reasons. They protect themselves, they won't want to disclose their mistakes. If I were in the DOD with their responsibility I wouldn't want people to know about my mistakes. That is why the GAO exists, to provide independent information and analysis about executive programs.

Senator Goldwater testified that while the GAO used to audit the Pentagon, the GAO now only audits the Pentagon's audit. Is that essentially correct?

Mr. STAATS. No, sir; it is almost 100 percent incorrect. We always try to use whatever information is available from any source in the conduct of our audit, but we do not simply audit the Defense Department's auditing. This would be a complete misunderstanding of how we work. We don't take anybody's word as the final word. And if we have information in an audit report prepared in the Defense Department, obviously we are going to want to use it, it would be wasteful to not use it.

Before you leave this question of independent reporting from the GAO, in the last sentence of our comment on the weapons system acquisition report in our statement, maybe we could have spelled this out further than we did, have been more explicit on it, what we were attempting to—

Chairman PROXMIRE. Exactly what I was going to bring out.

Mr. STAATS. What we are attempting to say there is that we ought to be sure that the report which will serve the purpose will be an adequate report. And if we do not think so we will either get them to modify it or make one of their own.

Chairman PROXMIRE. We want it independent, that is the point.

Mr. STAATS. We don't want to set up a whole duplicate machinery here for the Defense Department to go into each contractor's plant—and this is the point Mr. Gutmann was trying to make—set up a duplicate system to report information which can be developed on a joint basis and which we can audit and to which we can call the attention

of you or any other committee of Congress if we don't think it is doing the job.

Chairman PROXMIRE. We can get information from the Defense Department on the Defense Department's own operations.

Mr. STAATS. But the thing is, you don't have—

Chairman PROXMIRE. You say you think the responsibility for a report of this nature should be with the DOD, which has or should have the information necessary for its preparation. We would be glad to cooperate with Defense to develop an adequate status supporting system, and so forth. But you would rely on the Defense Department?

Mr. STAATS. Not necessarily.

Chairman PROXMIRE. We think the whole purpose of the GAO is to make an independent study.

Mr. STAATS. I think our difficulty here in this exchange we are having is perhaps one of coming to an understanding of the meaning of terms. It may be a semantic problem.

What we feel is feasible from our standpoint, that we think would accomplish your objective would be, to assure the Congress that the reporting system that is being developed by the Defense Department will be an adequate system to supply the information. And secondly, that we would make spot checks and audits against that system to be sure that it is producing that information. And thirdly, that we would call to the attention of Congress any particular occasion where in our opinion the system isn't producing that information.

We can do these three things.

On the other hand, if what is intended here is that for every contract in excess of \$10 million the GAO have personnel located in these plants to supply the information which is desired, then you are talking not only about the staff we have allocated to the Defense Department, you are talking about more staff in total than we have in the whole organization.

Chairman PROXMIRE. Certainly I think you can make a very proper dispute on the arithmetic. Perhaps it should be, as you defined it, \$100 million for the production and \$25 million for R. & D. I think that is probably very reasonable. Again, we want to get away from minutiae, we want to get one really big operation.

And you think this would include some of the seven biggest weapons systems. And I think this would be a great improvement, I wouldn't differ with you on that. We wouldn't expect you to duplicate the Defense Department and have another several thousand employees. But I would think that in order to get this information straight and clear it on a timely basis, that there should be a much greater concentration than I am afraid it comes through in your initial statement to us.

Mr. STAATS. This may be our fault, Mr. Chairman, in not having spelled it out further than we did in our statement, as long as it was. But I am happy for this clarification.

I think it is important that we do have a meeting of minds as to what we feel that we can feasibly do. And I don't think we are quarreling with the objectives the committee has in any respect.

Chairman PROXMIRE. Senator Jordan?

Senator JORDAN. No more questions.

Chairman PROXMIRE. Mr. Moorhead?

Representative MOORHEAD. No more questions.

Chairman PROXMIRE. Mr. Conable?

Representative CONABLE. No more questions.

Chairman PROXMIRE. Thank you very much, gentlemen.

We deeply appreciate this. And I hope you will respond to the few written questions that we will send to you when you correct your remarks.

(Questions subsequently sent to GAO by Chairman Proxmire and the agency's responses follow:)

Questions submitted to General Accounting Office for hearing record of June 13, 1969, and GAO's responses:

Question 1. In your discussion you address the Subcommittee's recommendation concerning a weapons acquisition status report. You imply that DOD is now undertaking the collection of the kinds of information which we requested through its cost information reports.

Would you describe in some detail for the Committee the composition of the cost information reports and the extent to which information in them would conform to that desired by the Committee?

Answer 1. The reporting requirements for Cost Information Reports (prescribed by DODI 7041.2 dated June 13, 1966) are designed to collect cost and related data on major programs in excess of \$25 million RDT&E or \$100 million cumulative production. The systems are subject to reporting on a semiannual basis and, at this time, are limited to aircraft, missile, space systems, and their related components. Reporting is in process on 74 contracts. Their primary purpose is to assist the Department of Defense in estimating and analyzing the costs of proposed weapon system development and production.

The data collected are intended to provide background information for performing feasibility and predesign studies and making choices among competing development or production alternatives, and negotiating systems development and production contracts.

The reporting requirements are applicable to that portion of the life cycle of a weapon system program from the final approval for engineering development through completion of production. While the reporting requirements are not designed to provide detailed management information, they provide contract value (including profit or fee), contract ceiling, actual contract costs to date and estimated contract costs to completion of contracts. The reporting requirements also provide estimated costs by fiscal year for support of the Five-Year Defense Program.

For your further information, in addition to the Cost Information Reports, DOD has developed the Selected Acquisition Report and the Contractor Performance Evaluation Report.

The Selected Acquisition Report (prescribed by DODI 7000.3 dated February 23, 1968) is to be used on major acquisitions selected by the Assistant Secretary of Defense (Comptroller). This system, which is still in the implementation stage, is a quarterly report of data on technical performance, schedules and quantities, program costs, and contractor costs. The technical performance, schedules and quantities are reported in terms of original plan, current approved plan and current estimates. The program costs are reported in terms of original plan at the original quantity, original plan at the current quantity, the current approved program, and the current program estimate. The contractor costs are reported in terms of cost to date of report (scheduled, budgeted and actual) and price at completion (budgeted and estimated). The price includes profit or fee whereas the cost does not.

The variances in the above data between the original plan, current approved program, and current estimates, are required to be explained in the report.

Selection of major acquisitions for reporting under this system is limited to programs in excess of \$25 million RDT&E or \$100 million cumulative production. Not all programs above these minimum limits are required to be selected, but 53 systems have been assigned for reporting as of July 11, 1969.

The Contractor Performance Evaluation Program (prescribed by DOD Directive 5126.38 dated December 3, 1965) is designed to provide a uniform method of determining and reporting the effectiveness of defense contractors in meeting their contractual commitments. It is not designed for the management of contracts

or programs although data produced in the evaluation process may be used in the on-going supervision of a project. Reports under this program, which are submitted every 6 months, show comparisons of contractual commitments with actual performance in the cost, schedule and technical areas under the more significant development and production contracts (365 contracts during fiscal year 1969). Cost data is in terms of the total contract rather than in terms of work performed to date. Known reasons for significant variances are required to be explained.

In the technical performance area, the performance actually achieved for selected performance characteristics as of the reporting date are compared with the applicable original and current contractual commitments. The same reporting format is used with respect to selected key schedule requirements, such as completion of first test unit. Cost performance is evaluated in two ways. First, by comparing original and current target price with the most recent estimate of final price and second, by comparing contractor's planned cost, as most recently revised, for the work performed to date with the actual costs of work performed and also by comparing similar planned cost for complete performance of the contract with the latest revised estimate for complete performance.

None of the reports provide for a comparison of actual costs incurred to date with the amount originally planned or provided in the contract for such work. The latter two reports would appear to provide necessary information for comparing the revised or most recent planned cost estimate of work completed with the actual costs incurred in performing the work. However, we have not evaluated the information obtained to ensure that it does in fact accomplish this, but plan to do so.

Question 2. On page 7 of your C-5A report you say you used the contractors estimate of September 1968. Why didn't GAO make its own estimate?

On the same page, you talk about cost increases. Can you tell us what the actual overruns on the work performed so far have been? I mean actual figures not estimates.

Answer 2. The task of preparing an independent estimate for a program as large as the C-5A would entail an extensive and costly effort. It has not been our practice to prepare independent estimates of total program costs, because of the dependency on engineering and other technical skills which it would involve.

For example, in connection with C-5A estimates, Lockheed obtained from engineers estimated man-hour and material requirements and other technical input and also obtained technical information from subcontractors and vendors. Lockheed obtained from forecasting specialists and economists, estimates of labor cost growth, future material costs, aerospace market conditions and general inflationary trends. Tool specialists provided information on new tool and tool maintenance costs. Quality and production specialists furnished data on technical problems, production techniques, and learning curve experience. These skills would have to be acquired by GAO from outside sources.

We have, from time to time, verified certain portions of estimates. In this case we did examine, to a limited extent, labor rates used and certain material and subcontract costs.

However, when we undertook the review of the C-5A program in February 1969, we had decided to concentrate on identifying the areas where costs had increased, and to explore the reasons for increases. We discussed these objectives with the Subcommittee staff at the time our review work was initiated.

With respect to your question on actual cost overruns on work performed so far, we assume you mean the excess of actual costs incurred to date over the target cost. In this connection it should be noted that the target costs are established on the basis of complete performance of the contract work and thus, strictly speaking, overruns would not occur until actual costs exceeds the target for contract performance. The actual costs incurred to date have not exceeded the originally established target cost for complete performance.

We are not able to compare the actual cost incurred for work performed to date with the amount provided therefor in the contract price since we are unable to determine the amount included in the target for that work originally or as adjusted by subsequent revision to the contract. The reason for this is that the original proposal and subsequent revisions were not in sufficient detail to permit us to analyze progress in relation to cost incurred.

We have, however, included below a schedule showing total target and billing prices and cost to perform as reported by Lockheed as of June 1, 1969, for DDT&E and each fiscal year increment of run A. It should be noted that in the

schedule the only firm target figure is the aggregate of \$1.279 billion. The detailed amounts for the various items are identified in the contract but it is emphasized that they are set forth solely for billing purposes and each such billing price shall not be considered as a firm target price.

| | Air-planes | Total target and billing prices (millions) | Cost to perform | | | Excess of estimated cost for complete performance over billing price or target |
|---------------------------------|------------|--|--|--|---------------------------------|--|
| | | | Actual cost incurred to date ¹ (millions) | Estimated additional cost to complete (millions) | Total estimated cost (millions) | |
| D.D.T. & E..... | 5 | \$468 | \$668 | \$132 | \$800 | \$332 |
| Fiscal year 1967 increment..... | 8 | \$287 | 448 | 123 | 571 | 284 |
| Fiscal year 1968 increment..... | 18 | \$244 | 137 | 297 | 434 | 190 |
| Fiscal year 1969 increment..... | 27 | \$280 | 16 | 494 | 510 | 230 |
| Total..... | 58 | \$1,279 | 1,269 | 1,046 | 2,315 | 1,036 |

¹ Represents actual cost as reported by Lockheed as of June 1, 1969. This cost does not include common materials obtained but not consumed in the manufacturing process and cost of work in process at subcontractors plants. Determination of the amount of these excluded costs involves estimates of future consumption of common material and final prices for subcontractors, including the value of changes not negotiated, and the amount of subcontract overruns to be absorbed by Lockheed. These costs are included as a part of the estimate to complete shown above.

² As previously indicated, the values assigned to the individual items are for billing purposes and only the total is a firm target.

As can be seen Lockheed has incurred costs of \$1.269 billion for the work performed to date against a target cost of \$1.279 billion for completion of the contract. Actual costs shown above will continue to increase as additional work is performed and are subject to adjustments when overhead rates and final prices are negotiated. The current estimated overrun for DDT & E and run A at completion is the difference between total estimated cost and the total target. This amounts to \$1.036 billion.

Question 3. Let me ask you about the Uniform Accounting Standards study which Congress ordered GAO to undertake this year. This is to me a classic example of the inconsistencies that I have spoken about. In the first place, when the bill for Uniform Accounting Standards, which I introduced, was a subject of a hearing before the Banking and Currency Committee a year ago, the GAO opposed the measure. Your Deputy and other GAO officials testified against Uniform Accounting standards.

Yet, I believe that most people now concede that uniform accounting standards are a good idea. The testimony we have received in the past two weeks suggests the great need for uniform accounting standards. At the same time, I continue to get feed-back that the GAO feasibility study now underway is not being pressed very vigorously.

How many people have you assigned to this study? How many of these individuals are professionals? How many of them are full-time on this job?

What is the current status of the feasibility study?

Answer 3. Question 3 relates to the study on the feasibility of uniform cost accounting standards which we have undertaken pursuant to Section 718 of Public Law 90-370. The question mentions that representatives of this Office testified against uniform accounting standards and expresses the view that most people now concede that such standards are a good idea. Also, the question requests information as to the status of our feasibility study and on the number of individuals assigned to this study.

The testimony referred to is apparently that of the former Assistant Comptroller General, before the Senate Banking and Currency Committee on June 18, 1968 (pp. 60-9). The testimony was presented in connection with the Committee's consideration of S. 3097, a bill to amend the Defense Production Act of 1951. Section 718 of the bill dealt with the establishment of "uniform accounting standards."

The views expressed by us on S. 3097 were heavily influenced by the meaning to be attached to the term "uniform accounting standards" and the fact that the companion bill in the House of Representatives (H.R. 17268) did not provide an interpretation of that term. For example, in the hearings on the House bill, the participants frequently used the term "uniform accounting standards"

interchangeably with such terms as "uniform accounting systems," and "uniform accounting procedures." Other interested representatives of industry and the accounting profession appearing at the hearings on S. 3097 also had difficulty with the meaning of the term.

Because of the emphasis that had been placed on accounting methods, procedures and systems during the early consideration of section 718, we were reluctant to endorse this measure. We did, however, point out in our testimony that we were not unmindful of the need for firm and well-developed guidelines for contractors to follow in determining costs under Government contracts. Further, we suggested that:

"If the committee should feel that action needs to be taken in the direction required by the amendment to S. 3097, or H.R. 17268, we would suggest that a study group be established to consider the advantages and disadvantages of establishing uniform accounting standards for Government contractors as well as what standards might be appropriate, with a reasonable time period, say not less than 18 months, to complete its work. We would suggest that this study be made by representatives of the agencies primarily concerned with procurement as well as representatives from the Bureau of the Budget and the General Accounting Office. Such a study should include appropriate consultation with industry and the accounting profession. The result of the study should be submitted to the Congress for its consideration."

Also, in our report, dated June 11, 1968, which was filed with the Senate Banking and Currency Committee, we stated that the establishment of certain accounting standards may be beneficial.

In our opinion, the legislative history compiled during and subsequent to our testimony on S. 3097 did much to clarify the Congressional intent with respect to "uniform accounting standards," including the addition of the word "cost" to that term. Accordingly, for purposes of our feasibility study we are considering "cost accounting standards" to be general guides to practice aimed at obtaining comparable, consistent cost accounting data with due recognition of different circumstances. Such standards are directed to accounting results, not to accounting methods, procedures or systems. They will be regarded as "uniform" only where—through their application—reliable, consistent, and comparable cost data can be obtained with due regard for fairness to all parties.

In addition to my personal attention and interest in this project, you are undoubtedly aware that Mr. William A. Newman, Jr., has been assigned to my office as my Special Assistant to work full time on this project. Mr. Newman was the Director of our Defense Division at the time Public Law 90-370 was enacted, and as such, is one of our most experienced men in the defense contracting area.

The feasibility study is dealing with a broad range of subjects and is being participated in by representatives of Government, industry and the accounting profession. For example, we have and are continuing to work closely with Vice Admiral Rickover and the Defense Contract Audit Agency (DCAA) and to consult with members of professional accounting organizations and trade associations. Also, we have retained several consultants to perform a variety of research tasks. All of this effort is in addition to that being expended by our own professional staff.

Although it is too early for a firm conclusion as to the feasibility of uniform cost accounting standards, we are enthusiastic about the results of our progress to date. We are receiving inputs from the many participants which are now being carefully evaluated by us preparatory to drafting our report. We have, for example, used a questionnaire to survey cost accounting practices in industry and to test industry attitudes and opinions on a few illustrative uniform cost accounting standards. Preliminary results show that at least 60 percent of the more than 1,400 Defense contractor plants receiving the questionnaire responded and that, in general, the responses were constructive.

Other work which is nearing completion is a survey by this Office of contractor cost records maintained for negotiated Defense contracts to determine among other things, the need for standards related to record-keeping. We are also analyzing a series of cases involving cost accounting matters arising under Government contracts to ascertain the extent to which uniform cost accounting standards are needed. Vice Admiral Rickover's staff and DCAA have been most helpful in this endeavor.

In addition to our personal efforts, we are receiving and/or awaiting inputs from consultants, accounting organizations, trade associations, and the Depart-

ment of Defense. These include research into the cost principles and criteria contained in Section XV of the Armed Services Procurement Regulation, studies of the nature of uniform cost accounting standards, and a study of cases heard before the Armed Services Board of Contract Appeals and the Federal Courts which indicate a need for standards to guide the legal profession in the settlement of Defense contract accounting disputes.

At various times during fiscal year 1969, about 170 members of our professional staff, both in Washington, and the field, expended over 25,000 hours on this study. We estimate that about 10,000 hours of additional time will be required to completion. Other participants have also given generously of their time. For example, DCAA advises us that they devoted about 6,000 hours of effort during fiscal year 1969 on this project.

In summary, we would like to stress that this important task has been assigned a top priority within our Office, that it is being pressed vigorously, and that sufficient resources are being applied to bring it to a timely and meaningful conclusion.

Question 4. As an example, I would like to discuss a little bit the C-5A report which you transmitted to committees of Congress, including this subcommittee, a while ago.

First, let me say that my overall impression of this report is that there is very little new information. There is very little indication that the GAO conducted its own audits or made its own analysis.

For example, on page 5 of your report, you talk about estimates of program costs prepared by the Air Force in 1964. The fact is that so far as the C-5A is concerned these estimates have very little relevance.

Isn't it true that the 1964 estimate was just a rough one for a so-called "parametric airplane" and not an estimate for a C-5A as we know it today?

Wouldn't it have been more appropriate for GAO to refer to the Air Force estimates of April 1965 or October 1965 on the C-5A?

Wouldn't this have removed the rationalization of increased size of the airplane as a cause of cost growth?

Wouldn't it also have placed the alleged abnormal inflation in better perspective?

In fact, didn't the basic contract prices taken into account some growth in labor, rates, overhead, and material rates?

Answer 4. With respect to the scope of our audit and analysis work supporting our recent report to Committees of Congress on the C-5A program, we performed considerable detailed analysis work on the contractor's September 1968 study. These analyses included an examination into proposed and actual costs of labor, materials, overhead and subcontracts, for the purpose of identifying where and why costs have increased. We analyzed proposed direct labor hours and actual hours by year to determine how much and why direct labor is increased. We also examined subcontractor's proposed and actual costs and subcontract changes after award of the subcontracts.

Our review included an analysis of how the contractor distributes costs and techniques employed by the Air Force to maintain surveillance over cost distributions. Our review also included an analysis of proposed and actual cost through 1967 to determine if costs had increased sufficiently to predict an overrun of work then under contract.

With respect to the Air Force 1964 estimate referred to on page 5 of our report, we agree this estimate is of little relevance. The reference to this estimate was included in the background section of the report which also included a schedule comparing this estimate with the October 1965 contract prices and current estimates of total program costs. This 1964 estimate was included as background information because it was the original Air Force estimate for the program.

With respect to using the Air Force estimates of April and October 1965 as more appropriate to remove the rationalization of increased size and abnormal inflation, we believe we accomplished this by comparing the contract target price of October 1965 with the current estimate of cost of completion. We did not intend to compare the 1964 estimate with the current estimate because we did not believe that the 1964 estimates was valid for this purpose.

Recent testimony by Department of Defense officials indicated the larger airplane and inflation were the primary factors which contributed to increased program costs. Our report was intended to show the extent that costs are expected to increase in excess of any consideration for the larger airplane and normal inflation which were considered in the contract. The section of our report where cost

increases are identified shows that actual cost is expected to exceed target cost by more than \$1 billion. This amount represents cost increases after consideration for the larger airplane and expected normal inflation growth throughout the life of the program.

Question 5. Did the GAO conduct any investigation of the C-5A prior to November 1968? In fact, it's true, is it not, that GAO made an investigation and drafted a report on some aspects of the C-5A?

I have been informed of the contents of this report. It seems to be to be an amazing document, the gist of which is to admonish the Air Force team which was attempting to get information about the C-5A and to tell them to stop getting so much information from the contractor.

I am informed hat this report concludes that "the increased responsibilities assumed by the contractor under the C-5A program have not been accompanied by an appropriate and corresponding reduction in data requirements or in the number of personnel used for contract administration."

You also recommend that greater consideration should be given to using the contractors on internally generated information.

Has this report ever been released? Will you provide the Committee with a copy?

How do you explain the strange conclusions that I have cited?

Answer 5. Prior to November 1968, a review which involved selected aspects of the procurement of the C-5A aircraft was performed. The examination was "directed primarily to evaluating the application of certain aspects of the new total package procurement concept to the acquisition of the C-5A aircraft system as it relates to (1) the need for and management of data being acquired from the contractor and (2) the number of Government personnel engaged in administration of the contract and in monitoring the contractor's activities."

A preliminary draft report was prepared in September 1968. The findings and conclusions contained in this preliminary draft report were those of personnel associated with the assignment at the contractor's plant and did not represent an official GAO position. They were concerned with the relatively new total package procurement (TPP) concept and the need for guidance for determining data and personnel requirements when TPP is used. The findings and conclusions were based on the contention that under the TPP concept, as envisioned by its advocates, a contractor accepts total responsibility for the development and ultimate performance for the system, and the Government's participation in the technical direction and control over the contractor's day-to-day activities is reduced from that control necessary under other type procurements.

The draft report tentatively concluded that "the increased responsibilities assumed by the contractor under the C-5A program have not been accompanied by an appropriate and corresponding reduction in data requirements or in the number of personnel used for contract administration." It also stated that the Air Force could make greater use of data developed by the contractor for its own internal management purposes. These tentative conclusions, however, were directed mainly towards future TPP awards and the amount and types of data needed by the Government to obtain the visibility required under the TPP concept.

The draft also recognized that actions had been initiated by the Department of Defense relative to management control systems. Some of the objectives intended to be achieved from these actions were to (1) regulate data demands with the intent of reducing the volume of data being procured, (2) make maximum use of the contractor's management system when the system will provide the data needed by the project manager, even though it may not be in the specific format desired, and (3) minimize mandatory features of data information for effective management.

The preliminary draft was used during discussions with OSD and USAF representatives. These discussions which involved data needed by personnel not located at the plant where detailed information was available brought out that there was not adequate information being reported to provide the Air Force with the visibility needed over cost, schedule, and performance under the contract. In addition, we were advised that an Air Force study indicated that an increase in the number of personnel over that used in the C-141 program was justified. In view of this information and because of the actions initiated by the Department of Defense to improve management control systems it was decided that the tentative conclusions reached in the draft were subject to question and that a final report would not be issued by the GAO on this review.

As you know we are giving increased attention to defense procurement generally including the area of major weapon system and DOD and contractor management control with respect to these systems. In this latter area we will be interested in determining whether significant changes in cost, schedule, and performance will be identified by the contractors and by the Department of Defense promptly. As we advised you, we plan to prepare an annual report to the Congress on our findings in this area, as well as individual reports as information comes to our attention which we believe may be of interest to the Congress.

Chairman PROXMIRE. Our next witness is Mr. A. E. Fitzgerald, who has been before this committee a couple of days ago. We asked him to return today to give us some additional information. And we ask him to come forward for that purpose.

May I just say once again, Mr. Fitzgerald is a deputy for management systems in the Department of the Air Force. By education, he is an industrial engineer, and from 1951 through 1957, was employed with manufacturing companies doing defense and other Government business. From 1957 to 1965, he was a management consultant for both the defense industry and the Department of Defense. He has been in his present position since 1965.

We again welcome you to the subcommittee, Mr. Fitzgerald.

STATEMENT OF A. E. FITZGERALD, DEPUTY FOR MANAGEMENT SYSTEMS, DEPARTMENT OF THE AIR FORCE

Mr. FITZGERALD. Thank you, Mr. Chairman and members of the subcommittee.

In testifying here this morning I have a problem which I would like to describe to you by reading two memoranda. The first is the memorandum from me to Secretary Nielsen, the Assistant Secretary of the Air Force for Financial Management:

Subject: Items for Senator Proxmire.

The enclosures are the items I have put together so far in response to Senator Proxmire's request. Attachment A is a copy of the memorandum which I sent to Secretary Whittaker requesting the Mark II should cost study and the impact of C5A contract changes. Due to the shortage of time, I have accepted the information in enclosure 1 as an interim reply on the specification impact of changes. I will try to get more time on the submission of the should cost study.

Enclosure 2 is the letter which I wrote outlining the attitude problem—

This is the management attitude problem we discussed the day before yesterday—

as it affected the Mark II. I have requested that Major Rose, who succeeded Mr. George in the Analysis group, delete the confidential portions of Mr. George's letter so as to declassify it.

Parenthetically, Mr. George's letter is an attachment to my own memorandum on the subject of the attitude problem on the Mark II.

I was told late last night by Major Rose that Mr. George's letter had been declassified.

To continue:

Enclosure 3 is the information requested on SRAM. If possible, it also should be declassified for presentation to the subcommittee.

This was primarily the cost track comparison, as we call it, depicting the growth of estimates of the SRAM program.

The second memorandum I wish to read to you is one that I received just a few minutes before this hearing began, a memorandum to me from Mr. Nielsen:

Subject: SRAM and MK II Cost Data.

Attached are letters from Senator William Proxmire to Secretary Shillito and Secretary Shillito's interim response of 23 May 1969. As testified before Senator Proxmire on Wednesday, OSD will submit its response to his questions in approximately thirty days. Pending the Secretary's response, your response to questions concerning these matters should acknowledge the efforts now underway to assemble complete information on these subjects for the committee.

In view of the efforts underway by OSD to response to Senator Proxmire's request, I believe it would be inappropriate for anyone from this office to release additional information concerning the programs mentioned in Senator Proxmire's letter of May 14, 1969, especially in open hearings.

Chairman PROXMIRE. When did you receive this memorandum dated June 13?

Mr. FITZGERALD. I received it shortly before 10 o'clock. I had a very brief telephone conversation prior to that which I assumed related only to the SRAM information which was secret, and which as of last night I understood was going to be forwarded to you through the GAO. But the letter was somewhat broader.

I will furnish these documents for the record. But in view of the written directions I have received only a few minutes, before coming into the hearing, I would like to ask your permission to have my instructions clarified before responding in detail to your further request. If I cannot give you additional information as directed in the letter, I don't want to waste your time. I will respond fully in writing to all the questions you asked me, and will attempt to forward the written report to you through my superiors. I will give particular emphasis in this report to your request to document the management attitude problem as it affected the Mark II Avionics cost.

I am very much embarrassed by this development, and I apologize to the subcommittee.

Chairman PROXMIRE. Let me ask, is Col. Clifford LaPlante or any other representative of the Air Force Legislative Liaison present in the hearing room?

Colonel LAPLANTE. I am Colonel LaPlante.

Chairman PROXMIRE. Will you please come forward and answer a few questions.

You are Col. Clifford LaPlante?

STATEMENT OF COL. CLIFFORD LAPLANTE, U.S. AIR FORCE

Colonel LAPLANTE. That is correct.

Chairman PROXMIRE. Who gave the order to prevent Mr. Fitzgerald from giving information to this committee?

Colonel LAPLANTE. I am not aware of it, sir.

Chairman PROXMIRE. You are not aware of it?

Colonel LAPLANTE. No. I told Mr. Fitzgerald that before coming in here.

Chairman PROXMIRE. Is there any other person from the Air Force who would have authority to give us this information.

Colonel LAPLANTE. Not that I know of in the room, sir.

Chairman PROXMIRE. You can't tell us why Mr. Fitzgerald has been muzzled and told not to supply this committee other than that he has read in the memorandum?

Colonel LAPLANTE. I certainly cannot.

Chairman PROXMIRE. You don't know whether Secretary Seamans gave this order, or whether Secretary Laird gave the order, or would know about it?

Colonel LAPLANTE. I think Mr. Fitzgerald has the memo, and he should read it.

Chairman PROXMIRE. Well, he has read the memo to the committee, and it is signed by Thomas Nielsen, Assistant Secretary of the Air Force.

Colonel LAPLANTE. Mr. Chairman, understand that it is not within my purview to judge this sort of matter. I hope you understand that.

Chairman PROXMIRE. I understand that. But you are the legislative liaison man, and you are an able person, and you represent the Air Force. I just wonder if you can explain to the committee what Mr. Fitzgerald can and cannot tell the committee, what questions he is permitted to answer and what he is forbidden to answer.

Colonel LAPLANTE. Thank you for your compliment, but I certainly wouldn't be in any position to judge that.

Chairman PROXMIRE. Then I will just say that I am shocked by the unexplained refusal of the Department of Defense to permit you, Mr. Fitzgerald, to release to this committee information which should be a matter of public record and as to which I can't see that there is any classification matter involved other than what you have explained. I can't see that it will give any comfort or assistance to any potential enemy of this country. The information which both you and Mr. Gordon Rule presented to us earlier this week was among the most helpful and enlightening information that this committee has yet obtained.

And I want to say that the information you gave to this committee last November 13 was enormously significant for the Congress and the country. I think it first alerted the Congress to the nature of our procurement problem.

In this series of hearings, every member of this subcommittee has stated that the Congress must do a far better job in scrutinizing and appraising the military budget and procurement contractor practices.

There is no way that Congress can do this required job if the cloak of secrecy which has for many years pervaded and which now appears to still pervade the Pentagon is not to be lifted. It is my hope that we can tear down the paper curtain which the Pentagon has for years raised between it and the Congress, and between it and the citizens of the United States.

I intend today to draft a letter to Secretary Laird and I am sure that the Secretary is not aware of this refusal from the Pentagon.

I think you are right, Mr. LaPlante, when you say that the authority came from Secretary Nielsen and not from Secretary Laird or Secretary Seamans. And I will certainly make that assumption.

I am sure that Secretary Laird, on the basis of what he said in his previous statements, intends to end these practices of shackling witnesses. I intend to object to this blatant muzzling of a most competent and concerned Department employee to request that the Secretary designate a high-ranking Pentagon official to appear before this subcommittee next Tuesday morning at 10 a.m., to present the information which the subcommittee has requested from Mr. Fitzgerald, or other-

wise give good reason why this information should be retained in the Pentagon's little black box.

The Legislature of this Nation cannot carry out its constitutional mandate if it does not get the open cooperation of the executive branch. From his statements, I am sure that the Secretary of Defense, as opposed to some in the bureaucracy, believes this also. If the weapons of secrecy and classification are used without warrant to cover the tracks of embarrassing or wasteful or inefficient decisionmaking or management, this Nation places in serious jeopardy its reputation as a free and open society.

Mr. Fitzgerald, I would like to ask you to give us your judgment on why the Pentagon has reacted this way to our request for information.

Mr. FITZGERALD. Mr. Chairman, first off, I am a little bit unclear as to the exact nature of my instructions. It is certainly a prohibition on giving additional information on the programs mentioned in your letter. But the major uncertainty in my mind is the releasability of the examples of the attitude problem. And I believe that this is probably the primary obstacle to release of all the data that we requested. I think it is a very, very serious problem. It is not a pretty problem. It is a very ugly sort of thing to have documented the kind of attitude that I have described. However, I feel very strongly about it, and I think that it should be a matter of public record. I want to assure you and the other members of the subcommittee that I will do everything that I can to get the information released, but I am going to do it through official channels, since I still work for the Defense Department.

Chairman PROXMIRE. We certainly don't want to change that or do anything to put pressure on you to make you not comply with your proper sense of duty. But what is this attitude problem? Is there any national security involved here, anything that should be used from the standpoint of classification that prevents you from speaking out?

Mr. FITZGERALD. I don't believe so, Mr. Chairman.

Certainly in my mind it is advantageous to reveal these attitude problems. People who hold them obviously are entitled to their point of view. But I think their points of view should be known, especially when they have the responsibility for the stewardship of vast amounts of money which they do.

Chairman PROXMIRE. I think maybe other members of the committee might also want to ask you about this attitude problem. Again, I don't want to pursue it if you feel it might compromise your order or instructions. I would like to ask you simply about what you have in mind by an attitude problem, because many of us up here and others are confused by what you mean, the attitude of the people in the Defense Department toward the contractor, the attitude of the contractors, and that kind of thing.

Again, as I say, if you feel that this might compromise your instruction, by all means let's wait, but if you feel you can clarify it, it would be helpful, so that we would be in a better position to think about this and have proper questioning on Tuesday.

Mr. FITZGERALD. I have mentioned in my statement the day before yesterday that one of the principal obstacles to the capture of the vast amounts of improvement potential we have in the acquisition budget is the attitude of acquisition managers, both in Government and in the contracting community.

I mentioned that the attitudes of indifference to costs, of hostility toward those who would reduce costs or who would attempt to do things which would bring about reduction in cost, were major obstacles.

I pointed out further that there were some managers in our acquisition community who held the view that excessive costs were desirable from the standpoint of promoting social goals and from the standpoint of maintaining capability; that is, keeping the large contractors in business.

This is the sort of thing that I had in mind. Your question to me was to document this, particularly as it had impacted some specific program. And you mentioned the Mark II.

Chairman PROXMIRE. Did you also have in mind a switchover of personnel that had been working as acquisition managers, working for the Federal Government in procurement, and were switched over to the military contractors?

Mr. FITZGERALD. I have long been concerned about this, and have mentioned it in my written statement. I brushed over it rather briefly in my verbal presentation because of the length of the statement; yes, sir.

Chairman PROXMIRE. Then I would hope that on Tuesday you would be able to return before this committee in the event that the Defense Department agrees that you can return at that time, and, of course, in the event that they can give you an explanation at that time also.

Representative CONABLE. Mr. Chairman, I wonder if we could have a copy of the letter that you have sent to the Defense Department.

Chairman PROXMIRE. I haven't sent any letter—you mean the original letter?

Representative CONABLE. The original letter.

Chairman PROXMIRE. The copy of the letter is right here.

Representative CONABLE. Is that part of the record? We are uninformed about this.

Chairman PROXMIRE. This is the May 14 letter that we wrote.

Mr. FITZGERALD. Yes, Mr. Chairman.

Representative CONABLE. And that was something from this committee to the Defense Department, is that correct?

Chairman PROXMIRE. Yes.

While Senator Jordan and Congressman Conable are looking this over, if they will defer, Congressman Moorhead would like to put something in the record.

Representative MOORHEAD. Mr. Chairman, since it seems that we can't establish much of a case today in oral testimony, I think, however, we can move this hearing forward with some documentary evidence which I would like to present to the committee for the record.

I made a request to the Department of the Air Force for a copy of a letter from Mr. Fitzgerald, a letter dated December 15, 1967, to Lt. Gen. J. W. O'Neil. In this letter Mr. Fitzgerald at the request of General O'Neil made certain comments about the climate and the attitude involved in the procurement of the Minuteman. And the Air Force transmitted a copy of this letter and attachments to me. And because the letter of transmittal in part attempts to rebut the original letter, I think that the record should be complete and contain both the letter of transmittal with the Air Force comments and the original

letter. However, there is one paragraph involving me personally in that letter that I would like to have straight. The letter of transmittal to me has a little paragraph—

* * * previously you requested a briefing by the Air Force on the Minuteman program. On February 24, 1969, the Air Force offered to provide such a briefing. Our offer has never been taken, but the briefing is still available.

I think this was sort of a gratuitous insult to me. And I have checked into it, and apparently it was made in error, because the request was made by another Member of Congress.

But with that caveat, I will put the full letter in the record.

Chairman PROXMIRE. Without objection it will be printed in the record.

(The document follows:)

DEPARTMENT OF THE AIR FORCE,
Washington, June 12, 1969.

Congressman WILLIAM S. MOORHEAD,
House of Representatives.

DEAR MR. MOORHEAD: Forwarded in accordance with your oral request is a copy of Mr. A. E. Fitzgerald's letter of December 15, 1967 to Lt. General J. W. O'Neill. Mr. Fitzgerald's letter represents one person's opinions of MINUTEMAN program management and, although these are informed opinions, they are based on observations of actions taken at least 18 months and up to 6 years ago.

During the course of the mid-1967 MINUTEMAN survey, when General O'Neill was newly assigned as Commander of the Air Force Space and Missile System Organization (SAMSO), General O'Neill discussed MINUTEMAN program management with Mr. Fitzgerald. General O'Neill asked for any suggestions which Mr. Fitzgerald might wish to make to assist in insuring sound management practices. This request was made because of Mr. Fitzgerald's earlier association with MINUTEMAN while he was president of Performance Technology Corporation and because of his criticisms of MINUTEMAN management since coming to the Pentagon. Mr. Fitzgerald's letter of December 15, 1967 was a result of that request. Its contents were carefully reviewed and thoroughly considered in the application of SAMSO management practices for the MINUTEMAN program. In addition, the issues raised in the December 15, 1967 letter were discussed in depth in a meeting attended by General O'Neill and Mr. Fitzgerald at Norton AFB, California on December 21, 1967.

In his letter, Mr. Fitzgerald commented that it appeared General O'Neill had not read his trip report of June 21, 1967 and indicated that Section VI, parts A, D, E, F, G and I (pp. 10-15) had been disregarded. General O'Neill says that neither of these are true.

Comments by General O'Neill on each of these parts of the trip report are as follows:

Part A. "Define the program and keep it defined."

The MINUTEMAN program is thoroughly defined in 64 project elements. No work is initiated nor contracts negotiated except in accordance with system management directives. Contrary to the comments in the trip report, TRW and Aerospace Corporation cannot authorize contract or program changes of any kind. The entire cost change and contract change environment is managed by a unified Contractual Actions Request (CAR) system rigidly adhered to and controlled by the MINUTEMAN system program director. The program director serves as the president of the MINUTEMAN change control board. For the program director to initiate any major change, he needs a Secretarial determination and findings, a system program directive and program and budget authorizations from Hq USAF. This procedure is rigidly followed to keep the program defined. In addition, General O'Neill personally reviews each major program change for conformance with program direction.

Part C. "Introduce competition into the MINUTEMAN program."

Competition has been used in the MINUTEMAN program from its inception. All associate contractors with the exception of TRW were selected on the basis of competitive proposals. Since that time competitive procurement has been utilized in every instance where program integrity and schedules would not preclude it. Since the inception of the program there have been over \$2 billion worth of work completed over and above the original competitions by which

the associate contractors were chosen. This included contracts for: force modernization, re-entry vehicles, third stage motors, post boost propulsion systems, NS-20 guidance systems, trainers, and transporter erectors. Since August 1967 there have been 16 competitive or breakout procurements for \$225 million present contract dollars with a potential for \$650 million additional awarded in competition as clearly defined options to the Government. Mr. Fitzgerald's allegations are neither current or accurate.

Part D. "Place greater emphasis on identification and elimination of inefficiencies in price proposals."

The MINUTEMAN SPO does exactly as is suggested. For instance, independent cost estimates are made of the price of the work to be accomplished before industry proposals are solicited. In FY 1967 independent cost estimates revealed that for 28 contracts the should cost value was \$392.8 million and industry proposals totalled \$111.8 million higher at \$1004.6 million. The final negotiated prices were \$399.3, within less than 1% of the independent cost estimate.

Part E. "Identify and eliminate inefficiencies in on-going contractor efforts."

Obviously, every agency charged with the responsibility for expenditure of public funds has this difficult and continuing task. The MINUTEMAN SPO is vigorously pursuing every known avenue to increase contractor efficiency and to assure economic performance. One of the most effective methods of controlling less than optimum efficiency is to introduce competition. As indicated above, the MINUTEMAN SPO has done this. In the case of the third stage procurement, the contractor proposed to build motors for \$188,000 per motor. With a second source competition, the contractor did institute efficiencies which reduced the negotiated cost to \$121,000 per motor.

Part F. "Make full use of 'subsidy' funding included in MINUTEMAN program."

Apparently, this refers to the use of independent research and development funds and other like type funds. Contractors' use of these funds is in accordance with Armed Services Procurement Regulations and is monitored and audited by Government accountants for legality and propriety.

Part G. "Clarify Air Force policy regarding cost control."

General O'Neill stated that no doubts exist in SAMSO as to the Air Force policy regarding cost control. The earned value specification, forerunner to the Cost/Schedule Planning and Control Specification (C/SPCS) was developed on the MINUTEMAN program.

Part I. "Revitalize performance measurement activities."

The MINUTEMAN SPO was first in DOD to have the C/SPCS on contract with all associate contractors. The MINUTEMAN SPO was also first in DOD to have a contractor's management system validated as meeting the specification in day-to-day management. Performance measurement against contracts is a vital part of MINUTEMAN SPO management.

The foregoing are General O'Neill's comments on those parts of Mr. Fitzgerald's trip report which Mr. Fitzgerald identified in his letter to General O'Neill. In addition, in his letter Mr. Fitzgerald states that in general, the SPO recommends one of two solutions to an imbalance of money and requirements. This is definitely not the case. Some of the other management actions that have been taken include the imposition of expenditure ceilings, manpower reductions, competitive procurements, review, and modification of contractor proposals.

Because the issue of cost control was discussed in the letter, it appears relevant to comment that the MINUTEMAN program has lived within its budget and accomplished the tasks directed in each of the fiscal years 1967, 1968 and 1969. Mr. Fitzgerald alleges that there is no control over the pressures exerted by the associate contractors and TRW to escalate the program. The MINUTEMAN project element package system was initiated in 1967 and gives the program director and the program control division strict control over all the allocated funds and contract changes.

Effective cost control does, as Mr. Fitzgerald points out, depend upon a feedback system to "close the loop". The MINUTEMAN management system can be and will be improved in this respect. It is not, however, an "open loop" system as described by Mr. Fitzgerald. Weekly and monthly reviews of the program include detailed analysis of the program and comparisons of projected versus actual contractor commitments, expenditures, man-loading, obligations, milestones and performance parameters. The cost performance report information is presented by contract, by contractor and by appropriation to ascertain if any cost performance index is varying significantly. Variances are described and

examined for corrective action. As necessary, potential problems are identified to allow initiation of management actions, which, in a number of cases, rectified the condition before cost overruns were incurred. All of the above takes place in weekly SPO reviews and again in the monthly program review conducted by General O'Neill.

No MINUTEMAN program funds are used for "economic support of the industrial base". There is neither any active effort or belief by General O'Neill or the program director that "tight cost control hurts quality". They affirm that tight cost control is absolutely essential in any orderly system of resource management.

In commenting on Mr. Fitzgerald's letter, General O'Neill stated that the MINUTEMAN management system is an excellent system and as better management tools become available, every effort will be made to use them immediately.

Previously, you requested a briefing by the Air Force on the MINUTEMAN program and on February 24, 1969, the Air Force offered to provide such a briefing. Our offer has never been taken, but the briefing is still available.

Sincerely,

JOHN R. MURPHY,

Major General, USAF, Director, Legislative Liaison.

Colonel LaPLANTE. Excuse me, Mr. Congressman. Could I clarify that with you? It wasn't intended in any way to be an insult. And it was a mistake. The committee did ask for a briefing, and the briefing was offered to the committee. Originally the letter of instructions was to go to the chairman. And then it was decided that the letter should appropriately go to you. And that last paragraph was in there then, for the chairman's information.

And I want to say that it was not intended to be an insult in any way whatsoever. And it is clear. And I think there are letters available that Mr. Stark is aware of, that ask for a Minuteman briefing and our offer for such a briefing.

Representative MOORHEAD. Let the record also show that I was concerned. I thought maybe I had requested this briefing and forgotten about it, and when we checked, as Colonel LaPlante pointed out, there had been this error made. So with his cooperation I can say that it is not my memory that went astray, and I did not, in fact, request this briefing.

I think, Mr. Chairman, in view of the questions that you have raised particularly about the movement of personnel back and forth between the Air Force and industry, that there are a few sentences in the letter that I should read into the record, because it does bear directly on the point that you are making.

The letter of December 15, 1967, to General O'Neill says:

In formulating a broad management improvement plan for the Minuteman I believe you should consider the problem posed by the mass migration of Air Force officers into the management ranks of contractors with whom they have dealt. The AFPP Q.Q. I will go back and decode these things—"the AFPR who revoked our clearance at Autonetics is now a division manager at Autonetic. His predecessor, equally protective of the contractor's interests, is also now employed by North American Aviation. The procurement officer who blocked access by the Minuteman program control office to Autonetics contract negotiation record is now employed by North American Aviation. The immediate superior of the project officer who was excluded from Autonetics plant is now employed by Autonetics. The officer cited to me as responsible for killing the cost reduction project I contracted to perform at Autonetics is not employed by North American Aviation.

The letter is very fair on this point, because he says:

Let me accuse me of being unfair to North American, and the officers they employed, I conceded that the condition I have described is not unique, indeed

it is common enough to be our next national scandal. However, the fact that it is so widespread makes it imperative that the practice and its corrosive effect on our stewardship be controlled.

Representative CONABLE. From whom and to whom is this letter?

Representative MOORHEAD. This is the letter from the witness, Mr. Fitzgerald, Deputy for Management Systems, to General O'Neil. General O'Neil at that time was commander, SAMSO.

Now the letter of transmittal to me which—

Chairman PROXMIRE. Would the Congressman yield at this point?

Representative MOORHEAD. Certainly.

Chairman PROXMIRE. You didn't get this document from the witness, Mr. Fitzgerald?

Representative MOORHEAD. No, sir.

Chairman PROXMIRE. Those were documents made available to the Government Operations Committee of the House, as I understand it; is that correct?

Representative MOORHEAD. No; not exactly. There was a document made available to the House Military Operations Committee. It made reference to the letter to General O'Neil. Because of the curiosity aroused by that I then asked the Air Force to provide me with the letter referred to and its enclosures. Yesterday afternoon that letter was delivered.

Now, the letter and attachments do make some criticism. The letter to me from General Murphy answers—purports to answer some of those criticisms. So that is why both letters should be made part of the record. But I do say that this matter of Air Force officers going to the employment of the contractor is not denied in the letter of transmittal to me. And that is why I particularly read that.

And the others, I think the two letters should be read together so that there is no question of giving a one-sided slant to this story. So I submit these letters for the record, Mr. Chairman.

Chairman PROXMIRE. Without objection those letters will be placed in the record.

(The letters follow:)

DEPARTMENT OF THE AIR FORCE,
Washington, December 15, 1967.

Lt. Gen. J. W. O'NEILL,
Commander, SAMSO, Air Force Unit Post Office,
Los Angeles, Calif.

DEAR GENERAL O'NEILL: As we discussed, I am sending along some of my thoughts on needed Minuteman management improvements.

Prior to reading the Minuteman Task Force Study Summary Report, I had assumed that you had reviewed the June 21, 1967, trip report which Gene Kirschbaum and I prepared. After reading the Summary Report, it appeared to me that you had not read our trip report. Consequently, I am sending along (Attachment 1) a copy of the June 21 trip report. I have gone over the document again, and I believe the recommendations it contains (Section VI) are as pertinent today as when they were written.

I want to elaborate on Section VI of our trip report, especially parts A, D, E, F, G and I (pp. 10-15). Taken together, the activities suggested in these parts would constitute a mechanically sound cost control function. However, as you might expect, there are problems.

To begin with, Minuteman cost problems are not generally recognized as such. In common with a broad segment of the weapon system management community, such problems on the Minuteman program are termed "funding problems." In general, one of two solutions to an imbalance of money and requirements for money is recommended by the SPO: one, more money; two, cut or "stretch" the program. With rare exceptions, this is true even when the cost of items in the

program has escalated wildly, and avoidable inefficiencies are well documented. Some documentation of this type is contained in the reports Gene Kirschbaum and I had hoped to discuss with you during our September trip. I hope you have had an opportunity to review the reports in the interim, since I intend to discuss them during our visit next week.

In one instance, existence of a cost problem was acknowledged, and CMD made a commitment to take corrective action. Unfortunately, nothing came of it (see Attachment 2).

As we have discussed, financial people on the Minuteman are pre-occupied with fiscal year funding. Given this orientation, combined with the limited recognized solutions to funding imbalances, it is not surprising that most program financial efforts are directed toward justifying more money. This direction is supported and given impetus by pressures from the associate and SETD contractors who have a community of interest with the SPO in obtaining more money. In a commercial business situation, similar pressures are usually countered by a combination of top management restraint and the built-in awareness that excessive costs mean disaster to the business and those dependent on it for livelihood. They are no comparable countervailing pressures in our situation. Indeed, the opposite is true; more costs and, hence, more funds mean increased personal security as long as the increases are tolerated.

In such an atmosphere, the would-be cost reducer, not high costs, is the problem to the military manager. The cost reducer offers a difficult, even unpleasant solution to the money/requirements imbalance. More money is an easy solution which makes nearly everyone happy.

If this situation could be reversed, that is, if managers could be convinced that success in their careers depended, at least in part, on their ability to achieve difficult cost goals without sacrifice of quality, schedule or program content, most would view cost reduction and control practices as aids rather than annoyances. Some of them might even invent improved practices.

I believe that you can establish the cost goals for Minuteman and supply the motivation to assure their accomplishment.

Another major problem, or perhaps it is merely a symptom of the problem I have just discussed, is the extreme shortage of people who understand tight cost control, who are motivated to work at it and are equipped to work at it. I say this may be only a symptom because I suspect that the problem would be greatly alleviated if the current poor atmosphere for cost control were to improve. It is likely that effective cost control people, experienced and skilled in the art, would be eager to join you if more opportunity were offered for exercise of their talent.

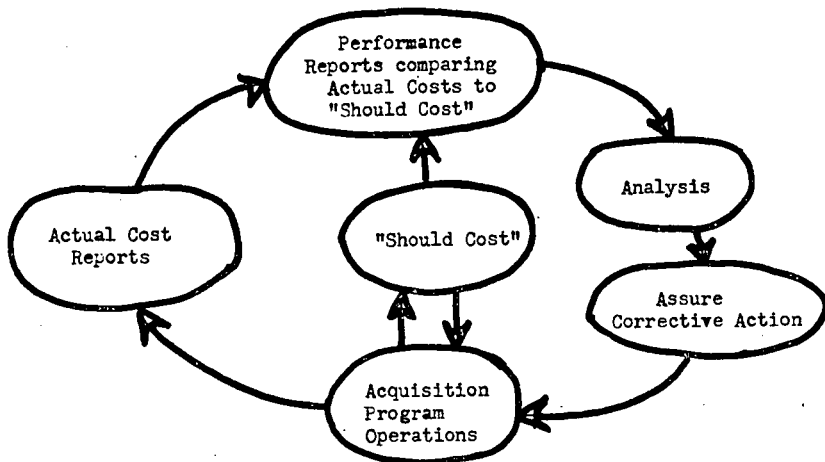
In any event, I believe these people will continue to be in short supply for some time to come. Therefore, it would appear desirable to provide an organizational home for cost control people and their function such that they can be concentrated for maximum effect. As I mentioned earlier, I do not believe cost problems and, hence, cost control, are recognized. Certainly the function of cost control is not understood. Let me explain.

Effective cost control, like any other form of control, is a closed-loop function. Starting with the operation we are seeking to control, we identify significant variables or characteristics of the operation which we wish to measure in order to evaluate the operation. Typically, in cost control we arrange reports of actual and anticipated costs to flow to SPOs and to various headquarters. Unhappily, some of our managers assume that such an arrangement constitutes a cost control system. Others, more astute, recognize that an effective control system must include provision for comparing actual costs to meaningful benchmarks. However, few if any appear to recognize the need for searching analyses of deviations from plan, followed by aggressive, timely corrective actions.

In short, the need for the feedback portion of the closed-loop system is not recognized. It is not surprising, then, that there is no organizational responsibility for closing the loop.

I suggest that an organization be established to establish "should cost" levels for acquisitions, to perform variance analyses, and to assure that corrective actions are taken. Graphically, the suggested organization should be responsible for the shaded portion of the control system schematic shown below :

COST CONTROL SYSTEM SCHEMATIC



This control cycle should begin to operate in a program's concept formulation stage, and should continue, with progressive refinement, throughout the program's life cycle. In addition, certain non-program functional expense areas, such as major contractor overhead, should be continually evaluated through the cyclic process.

The suggested cost control organization could be domiciled at the level of deputy SPD, as we have discussed, or in your immediate office. The latter location might be useful for spreading the concept and its application to programs other than Minuteman.

With all the suggested improvements, your cost control efforts could go for naught if the problems of folklore are not dealt with. Principal among these are the notions that

1. economic support of the industrial base is of paramount importance, and
2. tight cost control hurts quality.

The first of these arguments has wide currency just now. I hear it from many quarters, including the Minuteman SPO. In my last visit to Minuteman, I was told that Boeing personnel could not be cut because of our fear of labor union and Congressional reaction. In the last few days, "industrial impact" arguments were used as justification for adding millions of dollars to the Minuteman budget.

The military have little difficulty selling such propositions to certain politicians. Many endorse the concept wholeheartedly. Even those who do not endorse it believe a prime purpose of our spending is to support a massive, middle-class WPA. In a recent attack on the military-industrial-academic complex, Senator Fulbright said of our industrial base,

"Together all these industries and employees, comprising 10 percent of the labor force, will earn their living from defense spending. Together all these industries and employees, drawing their income from \$75 billion defense budget form a *giant concentration of socialism* in our otherwise free enterprise economy." (Underlining is mine.)

We have convinced Senator Fulbright, among others, that we are running a latter-day WPA. The dangerous thing, politics aside, is that many of the important people in our management group are similarly persuaded, and their actions are converting their belief to reality.

Meanwhile, as you know, Minuteman cost increases are being financed, at least in part, by cutting other programs, including those for new weapons needed by our operational forces.

You can do a great deal to alleviate this situation by your actions.

The second major folklore problem is the assertion now being bruited along that reduced funding caused the Antenetics quality problems. Even the Inspector General recently cited underfunding as one of the contributing causes of our Minuteman problems.

The facts do not support this contention. If you will review the document I cited in my December 14, 1967 note to you, I believe you will agree that the basic cause of our difficulty was the gross error in technical judgment in 1963. Many of our top scientists and engineers were parties to this error. I feel free to be extremely critical of this error because I am not doing so in hindsight. I reported the dismal outlook to the Minuteman SPD in September of 1963. I do not know whether he had prior knowledge of it.

Subsequently, far from starving the program financially, massive infusions of additional money were made in attempts to buy our way out of the technical difficulty. I believe that much of this money was wasted, but nevertheless, large amounts of money were available, and, so far as I know, minimal constraints were placed on the contractors in its use.

I have even heard the 1965 Minuteman overhead review and subsequent cuts blamed for the technical problems. This is absurd on the face of it, of course. The problem had existed for at least two years, and the overhead activities under attack had nothing to do with the problem anyway.

Attachments 3 and 4 provide some significant funding and cost comparisons. I believe that the near-automatic assumption that the cure for poor quality is more money is the most dangerous misconception now current in our business. It is true that we can absolutely ruin quality by failing to provide necessary resources. At the same time, I believe we can hurt quality with a superabundance of some resources, especially manpower.

In particular, I believe that underloading of factory personnel is a major cause of poor product quality and low yields. Underloading, that is, more people than the work requires, reduces concentration and attentiveness to a level detrimental to good workmanship, and rework soars. Some of the scrap produced invariably passes subsequent screening and shows up in field failures. Field failures too often result in the near automatic reaction I referred to earlier. More money is "turned on," more supernumeraries are hired, discipline is reduced, more failures occur, and the vicious cycle continues.

The cyclical process just described inflates the work force and reduces the apparent need for prudent, disciplined management of manpower resources. In the C/SPCS tests we have conducted to date, management discipline problems have proven to be the primary causes of failure. The contractors caught up in the fail-spend cycle, including Autonetics, have all failed our tests. The worst feature of this process and of the philosophy underlying it is that we tend to believe the theories, and therefore do not adequately examine fundamental causes of our difficulty. Let me illustrate this point with an example from my own experience.

Many years ago, when I was a young industrial engineer, fresh out of college, I was serving as quality control engineer in a manufacturing company. I was extremely interested in the business, and I studied incessantly. I took all the pertinent courses offered in the evening schools of the local universities, attended seminars and conferences and hounded all the recognized experts for scraps of knowledge. As a consequence, I learned a great deal about my specialty. Unfortunately, some of the things I learned weren't so.

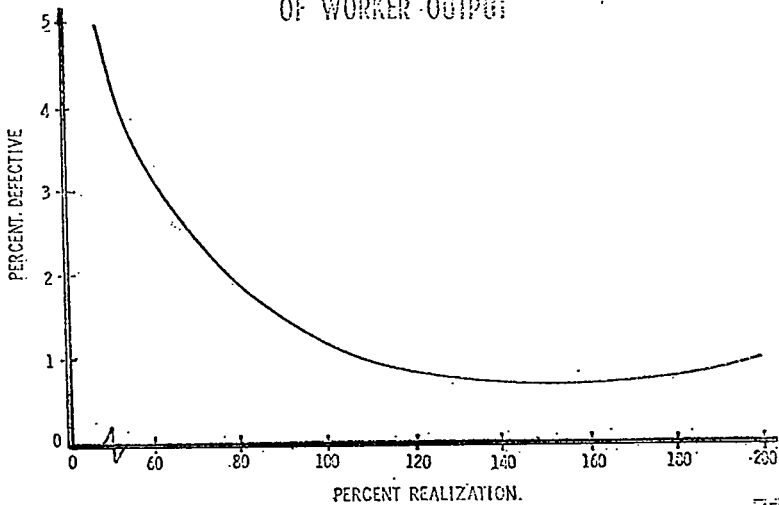
One of my theories at that time was that my company's wage incentive system drove the workers so hard that quality was degraded. In order to support my theory, I compiled records of the output and quality performance of several hundred individual workers for a period of several months. I expected that this compilation would show conclusively that the faster the people worked, the poorer the quality of their product.

Exhibit 1 summarizes my findings. As you can see, the facts were just the reverse of my theory up to an extremely high level of output. *The inefficient workers were producing the scrap.*

Much sobered, I then began to study the people. It quickly became obvious that the individuals possessed of superskill, the high-output, high-quality workers, were highly disciplined people. They had learned their trades well, they knew their jobs, and they did their work with a sure hand. The best prepared, best disciplined people did good work quickly.

The lengthy example just given has direct application to Autonetics. In April, 1965, I wrote to my project officer at BSD:

PRODUCT QUALITY AS A FUNCTION
OF WORKER OUTPUT



AEF 11/1/67

"At this point in our survey, the available analytical data for Autonetics factory labor is not as extensive or as well developed as compared to the overhead area. However, the data which is available indicates that factory labor utilization is extremely poor. Planned factors of actual to standard hours are in the range of 6-20 to 1, and actual recorded hours per unit are exceeding planned hours by a substantial margin. Even allowing for a high incidence of unrealistic time standards and low yields, all available data indicates that output per worker is less than one-half that being realized in manufacturing activities of other weapons of comparable complexity. Observations on the factory floor confirm the low labor utilization indicated by the control data.

"In our experience, under-loading of factory personnel is a major cause of poor product quality and low yields. We recognize that this statement flies in the face of currently popular trade-off theories, but experience supports our view. Under-loading of factory workers reduces concentration and attentiveness to a level detrimental to good workmanship, and rework soars. Every instance of dramatic improvement in factory unit hour cost we have been associated with has been accompanied by, and in part, caused by reductions in rework and improvement in product quality.

"Therefore, we are proposing a coordinated attack on the problems underlying high unit hours and high incidence of rework."

Corrective action taken as a result of this report consisted of revocation of the plant visit clearances of the BSD Project Officer, who endorsed the recommendation, me, and all of my associates.

Attributing the Autonetics quality problem to a shortage of money is, in my opinion, deceitful and hypocritical. In actuality, the experience illustrates the shallowness and lack of substance inherent in the unlimited funds theory. The real problem lies in quality of people and organization and in management discipline.

Because of the importance of the funding/quality misconception, particularly as it has affected Minutemen, I intend to give maximum publicity to my point of view and to the facts supporting my view. I solicit your assistance.

In formulating a broad management improvement plan for Minuteman, I believe you should consider the problem posed by the mass migration of Air Force officers into the management ranks of contractors with whom they have dealt. The AFPR who revoked our clearances at Autonetics is now a division manager at Autonetics. His predecessor, equally protective of the contractor's interest, is also now employed by North American Aviation. The procurement officer who blocked access by the Minuteman Program Control office to Autonetics contract negotiation records is now employed by North American

Aviation. The immediate superior of the project officer who was excluded from Autonetics' plant is now employed by Autonetics. The officer cited to me as responsible for killing the cost reduction project I contracted to perform at Autonetics is now employed by North American Aviation.

It is of course impossible to assess the effect of impending employment by contractors on the actions of officers still on active duty. I am sure that many of the individuals I have cited had no idea of going to work for North American at the time they were so vigorously protecting the interests of that company vis-a-vis the Government. On the other hand, it is perfectly clear to me that these same officers studiously avoided any action which might offend their ultimate employer.

Lest you accuse me of being unfair to North American and the officers they have employed, I concede that the condition I have described is not unique. Indeed, it is common enough to be our next national scandal. However, the fact that it is so widespread makes it imperative that the practice and its corrosive effect on our stewardship be controlled.

I believe publicity is the solution to the problem just cited. However, I do not have strong convictions on this point. I should like to discuss it with you further.

Finally, I think the Minuteman program has suffered and is suffering from its own credibility gap. Some time back, lying was a way of life in the program. Financial figures were plucked from thin air, and deceptive technical information was presented as a matter of course. I believe this practice has done immeasurable harm to the program. A more serious and lasting effect is the example set for young officers and the damage done to the image of the Air Force.

The solution to this problem is ultra simple: Tell the truth, no matter how painful.

Please excuse the length and bluntness of this memorandum. I want to make sure that we share a common understanding of the back-ground environment of the Minuteman program. As you know, many of us here have high hopes for your success. However, I believe it essential that you have a complete understanding of the genesis of the problems you now face. My reading of your Summary Report leads me to believe that you have not been fully informed on all aspects of the background problems. I intend to continue presenting my views on the situation as vigorously as I know how. In so doing, I hope I can help you in your difficult assignment.

Sincerely,

A. E. FITZGERALD,
Deputy for Management Systems.

[Attachments.]

JUNE 21, 1967.

CONSOLIDATED BSD TRIP REPORT WITH RECOMMENDATIONS

I. INTRODUCTION

This report consolidates the findings and opinions of the representatives of Headquarters AFSC, AFSPD and SAF-FM regarding their visit to the Ballistic Systems Division on June 5, 1967. Because of the difficulty of arriving at a co-ordinated position on certain issues, this report does not contain all the points covered in individual reports of members of the group. In addition, all points included are not agreed to unanimously. Other findings and impressions of individuals are considered too delicate for inclusion in this report.

The Minuteman's program management disciplines appear to have collapsed. Hence, the strong tone of this report and recommendations.

II. PURPOSE OF TRIP

The purposes of the trip were:

A. To discuss action taken and planned with Minuteman contractors in placing C/SPCS specification on the Minuteman contract and posturing contractors for system demonstration;

B. To examine selected Boeing contracts to determine status of the contracts and to assess the ability of Boeing to account for cost of work completed, estimates for work yet to be completed, and to identify funds spent to appropriations; and

C. To examine problems, if any, inhibiting cost control actions on the Minuteman program. Since we learned quickly that nothing had been done to implement C/SPCS, and that CFRE was essentially dormant, cost control failures and underlying problems became the focus of our attention at BSD.

III. SYMPTOMS OF TROUBLE

A. Lack of definition

Lack of definition of work to be done appears to be the most fundamental symptom of trouble in the Minuteman program. This is traceable to inadequate original definition compounded by what appears to be a relaxation of controls over technical direction of contractors. Since, in many cases, definitive work statements do not exist, changes are obviously being generated without knowledge of the baseline from which changes are being made. The apparent lack of definition of work is carried forward to the contractual situation. For example, data shown during our visit indicated that only \$6.02 million of Boeing's estimated \$90.4 million of FY 67 RDT&E requirements have been definitized. Apparently, Boeing is accomplishing work and being paid. Subsequently, the work accomplished is defined and negotiated. A particular example is contract -791. This contract was originally established as a letter contract with an estimated total of \$70 million and 70% progress payments. While only \$18.7 million of the initial contract, plus \$5.5 million in CCN's have been definitized, an amendment has been added raising the estimated total to \$100 million with 90% progress payments. Thus, it appears that this contract is being used merely as an instrument to transfer funds to Boeing rather than as an instrument to exercise control. (This contract now has additional authorized changes raising the estimated total to \$181.2 million. Boeing anticipates an additional \$83 million over that.)

B. Decline in internal administrative effectiveness

The failure to maintain the CFRE (Contractors Financial Requirements Estimate) reporting system indicates a decline in the effectiveness of BSD and Minuteman internal administration. The CFRE procedures, providing as they do an orderly array of funding status, are essential to the internal administration of the Minuteman program. The CFRE presented at BSD as the latest available readout was dated December 1966. Questioning revealed that contractors had submitted reports in the interim, but that tabulating cards on which the reports are submitted had not been processed. No one seemed particularly disturbed by this omission. Furthermore, the Boeing CFRE, which was the focus of our funding interest, was improperly prepared. Again, while it was acknowledged that the preparation was improper and that the subject had been informally discussed with Boeing, no one seemed motivated to take official action to correct the reporting or report the discrepancy to higher headquarters.

C. Ineffective external administration

As noted previously, major portions of contractual effort are accomplished prior to definitization of contracts. SPO personnel readily admit the obvious fact that contractual restraints are ineffective as cost control devices in situations such as noted at Boeing. Despite this, no concerted activity to control or inhibit cost growth through contract administration was detected. The Minuteman SPO states that "Minuteman contractor manpower loading has not been seriously worked since 1965 and needs a critical review to assure that R&D manpower is phased down commensurate with R&D effort." To the credit of the Minuteman SPO, they have made efforts to enlist the support of AFSCMD in improving external administration. The Minuteman SPO has initiated past efforts to analyze contractor cost outlooks. Reviews and valuations of the sore needed by Minuteman, however, were regarded as the responsibility of the CMD. It appears now that there is some question as to placement of this responsibility and that the CMD currently is doing little to directly attack the Minuteman problem.

D. Inability or unwillingness to comply with performance measurement and reporting requirements of Air Force Headquarters

As mentioned in an earlier section of this report, nothing has been done in recent months to further the performance measurement effort by Minuteman contractors. As will be recalled, AFSC, with the concurrence of Hq USAF, directed that all major contractual efforts be covered by the Air Force C/SPCS specification in March 1967. BSD, it appears, used this direction as an excuse to stop most of the effort on their Earned Value program, but, as of the time of

this visit, had taken no steps to require conformance with the C/SPCS specification. As of the visit date, the specification had not been placed on any contract at BSD. The foregoing conditions have contributed to the difficulties of the Minuteman SPO in complying with the direction from the Vice Chief of Staff dated February 8, 1967. At the date of our visit, there were no definite plans to do anything in the areas of performance measurement and reporting.

UNDERLYING PROBLEMS

A. Personnel turnover

The most readily apparent underlying problem in the Minuteman program has been the incredible mismanagement of personnel turnover. In a space of a few weeks last summer, the Program Control Director and his two principal assistants left this complex program. At about the same time, the Director of Procurement and his principal assistant also left the program in quick succession. During the same period, a new System Program Director was assigned, and numerous changes took place in the project offices responsible for the management of portions of the program. Management of the complex Minuteman program was always characterized by some degree of the symptoms noted in the previous section. However, the abrupt dismantling of the management organization has caused the previously existing problems to increase greatly in degree.

B. Supposed Air Force policy

As stated previously, contractual restraints are inadequate to control contractors' costs in major portions of the Minuteman program, and nothing is being done to provide alternative or supplementary controls. BSD procurement people told us that Air Force policy prohibits any other form of contractor cost control or restraint.

C. Degradation of discipline

To those of us who have been close observers of the Minuteman program for long periods of time, the degradation of discipline in the program appears to have reached serious proportions. The lateness of contractual and other administrative actions is, we believe, symptomatic of a general decline in discipline and attention to duty. Furthermore, compliance with direction from higher headquarters, up to and including the office of the Chief of Staff, is delayed indefinitely.

D. Ethical situation

Although it is impossible to quantify its effects, the ethical situation in the management of the Minuteman program has a derogatory impact on program management. There are many examples of failure by BSD and Minuteman management personnel to exert maximum effort in the government's interest, compounded by strenuous efforts to cover up problems and stifle criticism. A glaring example is the manner in which attempts to pinpoint responsibility for failure have been dealt with in recent months. It is generally believed that the System Program Director is being relieved of his responsibilities because he told the truth regarding failure of one of the Minuteman contractors to deliver as promised. Citing the failure of this contractor is viewed in some quarters as a reflection on the System Program Director's superiors. It is very difficult to envision anyone conveying an unpleasant truth to the headquarters in these circumstances. The outlook for full visibility by higher levels of management is dim indeed. Worse, the ethical and moral climate makes it nearly impossible to motivate people properly.

E. Intermingling of "subsidy" requirements with hard program requirements

In 1965, the Minuteman program control office compiled a set of figures showing the growth of "subsidy" accounts on the Minuteman program which was most alarming. This compilation was quickly buried and lost from sight. Presumably, the cleanly identified subsidy accounts have been diffused, thereby making more difficult any reconstruction of such a compilation. However, it appears still that the true Minuteman program requirements are inflated by excessive amounts of subsidy or maintenance of capability. This problem is closely related to the absence of definition of work to be done. Further, the disguising of subsidy items as true program requirements contributes heavily to the ethical problem just cited.

F. Non-competitive environment

Although there have been some isolated examples of competition in the Minuteman program, notably the Improved Third Stage and the Mark 17 re-entry system initial contracts, the program as a whole is characterized by lack of competitive acquisition. Many of the contractors in the Minuteman program have operated in a sole source environment for nine years. The situation cannot fail to engender complacency and disregard for management controls.

V. RESULTING OUTLOOK

As a result of the problems and environment with which the Minuteman program is encumbered, there is no visible cost control on the program. Unless some of the problems are solved, and the environment changed, there is little chance of gaining control in the future.

VI. RECOMMENDATIONS

A. Define the program and keep it defined

1. Review systems requirements, compare to contracts and make necessary adjustments. This review should be performed by a highly qualified group including representatives of SAF-RD, SAF-I&L and SAF-FM. In those situations in which definition of work to be done is very poor, and the responsible contractor resists attempts at definition (e.g., at Boeing), existing contracts should be cancelled, and new ones written for only that work which can be defined.

2. Establish controls over "technical direction." The apparent ability of TRW and Aerospace Corporation to authorize changes without adequate review, justification or specific evaluation of impact must be controlled.

3. Institute a comprehensive program for the improvement of contract and cost change management.

4. Interface the technical direction contracting pricing and cost management responsibilities to preclude unilateral actions by any or all of these areas.

B. Firm up plans to "buy out" the Minuteman program

In our opinion, management problems in the Minuteman program are so severe and deep-rooted as to necessitate a new start in our strategic ballistic missile development and deployment effort. The new start should be initiated soon enough to provide an overlap with the existing Minuteman programs sufficient to give continuity to this vital mission. New efforts should be initiated at a different location, using a new Air Force organization and, if warranted by competition, new contractors. Since any buy-out plan is likely to require several years, interim management improvement actions should be taken.

C. Introduce competition into the Minuteman program

As mentioned previously, some major Minuteman contractors have been favored with sole source contract awards for nine years. The Air Force Staff is planning a program aimed at producing and capturing documentation which should enable us to compete sizeable portions of Minuteman production work. This effort should be pushed forward as rapidly as possible.

D.¹ Place greater emphasis on identification and elimination of inefficiencies in price proposals

In common with pricing at most other locations, BSD price analysis is heavily dependent on extrapolation of trends of actual costs as their primary price analysis tool. Current procedures should be supplemented by "should cost" analyses of price proposals and tougher negotiations. In addition "subsidy" items should be identified for review by higher levels of management. Escalate price analysis, fact finding and price negotiation as necessary. Practically, it would appear that most escalations would be settled by AFSC Headquarters. Accordingly, consideration should be given to strengthening analytical capability of AFSC Headquarters either by consolidation of scarce talent or addition of new people.

¹The following substitute for paragraph VI.D is suggested by Mr. Gordon Arthur: "D. Identify 'subsidy' items in price negotiations. 'Subsidy' items should be identified for review and approval when fitting, by higher authority rather than the present informal direction, or SPO acceptance of responsibility without authority for standby manpower."

E.² Identify and eliminate inefficiencies in ongoing contractor efforts

1. Restart the 1965 Minuteman cost studies aimed at identifying large areas of inefficiency and overstaffing at contractor plants.

2. Conduct reviews in depth at the contractor plants of inefficient areas identified in the cost studies. Sufficient facts should be gathered to make logical cases for corrective action by contractor management. As in the case of contract price negotiations, these persuasive efforts should be escalated to a level in the Air Force sufficient to bring about corrective action. Examples of demonstrable inefficiency allowed to go uncorrected by contractor management should be disseminated as considered appropriate by OSAF.

F. Make full use of "subsidy" funding included in Minuteman program

If any "subsidy" funding is approved by higher headquarters, BSD and the minute SPO should assure that plans exist for efficiently utilizing such funding, and that these plans are followed.

Clarify Air Force policy regarding cost control

Air Force policy with respect to cost control should be clear enough following Secretary Brown's memorandum to the Chief of Staff dated May 18, 1967. However, the messages contained in the Secretary's memorandum might be specifically emphasized for the benefit of BSD and Minuteman.

H. Work the personnel problem

1. The level of management competence on Minuteman must be upgraded. Inexperienced or otherwise unqualified personnel in key positions should be replaced.

2. Stabilize SPO manning of key management positions. Once qualified personnel are placed in key spots, they should be left in place for a full four-year tour (or until completion of the program in the event of an early buy-out) unless they fail to perform satisfactorily.

3. Re-establish discipline. It is our opinion that one reason for the failure of Minuteman SPO and BSD to follow established procedures and new direction is that they are burdened by inexperienced or otherwise unqualified personnel. Temporary help should be provided by higher headquarters to assist in the re-establishment of basic Minuteman business procedures. Further, if responsibilities are unclear regarding new direction, assistance should be given in these areas also. However, once the excuses are removed, failures to follow direction promptly should be dealt with through disciplinary procedures. Failures in carrying out basic stewardship responsibilities should be dealt with now.

I. REVITALIZE PERFORMANCE MEASUREMENT ACTIVITIES

As recorded earlier, the Minuteman Earned Value program has been killed, nothing has been done on C/SPCS, and performance reporting requirements of Headquarters USAF are not being met. Efforts to comply with USAF performance measurement requirements have been actively subverted by BSD Air Force officers. These officers should be relieved, and compliance with USAF policy should be required of their successors. Headquarters AFSC has reaffirmed their instruction to BSD repeatedly. The latest such example is included as Attachment 1.

G. B. ARTHUR,
Technical Assistant, Pricing and Financial Division.
 LARRY KILLPACK,
Colonel, USAF, AFSPDMC.
 A. E. FITZGERALD,
Deputy for Management Systems, SAF-FMM.
 E. L. KIRSCHBAUM,
Technical Adviser, DCS/Comptroller, AFSC.

²The following additional change was proposed by Mr. Arthur: In E.2. eliminate "as in the case of contract price negotiations."

DEPARTMENT OF THE AIR FORCE,
Washington, D.O., June 16, 1967.

— Implementation of the Cont./Scheduled Planning and Control Specification BSD (BSC)

1. This refers to meeting at BSD on 5 June 1967 on the above subject.
2. Confirming the request made at subject meeting, it is requested that a copy of your plan for implementation of the C/SPCS be furnished this Headquarters (SCC) at your earlier convenience. Such plan should include:
 - a. Schedule for incorporation of the specification in contracts of the various development and acquisition programs under the cognizance of BSD.
 - b. Action items, strategy, and timetable for completion of actions culminating in posturing affected contractors for team validation/demonstration of the contractors C/SPCS.
 - c. Schedule for validation/demonstration.
3. During the review at BSD, it was pointed out that as a part of your planned actions for the C/SPCS implementation that orientation briefings were being and would continue to be given contractors, especially Minuteman contractors. It is requested that a copy of the narrative and viewgraph content of such orientations be furnished.
4. While at Boeing on 7 June, we discussed briefly the need for the WPS level of reporting required for CFRE. There was a feeling that the level was too low and the reporting level was not being effectively utilized. Also, with regard to the various Project Elements, there was a question as to the intended use of the Project Element break and their relative value since most of the elements were commingled on contracts, were not identified and separately priced, and Boeing did not identify actual costs with the elements. Accordingly, the Project Elements, in effect, represented an estimated delta cost in much the manner as an ECP with no real capability of ascertaining the actual cost during intermediate points of completion or at completion. It would be appreciated if you would pursue this matter further and provide your comments and recommendations.
5. The cooperation of the BSD troops during our visit there and at hearing was excellent and sincerely appreciated.

For the commander :

E. L. KIRSCHBAUM,
Technical Advisor, DCS/Comptroller.

PROJECTIONS OF AUTONETICS OVERHEAD RATES COMPARED WITH ACTUAL EXPERIENCE COMMITMENTS OF JULY 6-7, 1965

| | 1964 | | 1965 | | 1966 | | 1967 | | Actual | | |
|-----------------------|--------|------------------|-------------|------------------|--------|-------------|------------------|--------|--------|-------------|------------------|
| | Actual | AFPR commitments | Con-tractor | AFPR commitments | Actual | Con-tractor | AFPR commitments | Actual | | Con-tractor | AFPR commitments |
| Manufacturing..... | \$3.42 | | \$3.50 | \$3.42 | \$3.49 | \$3.64 | \$3.42 | \$3.68 | \$3.78 | \$3.42 | \$3.78 |
| Engineering..... | \$5.28 | | \$5.57 | \$5.57 | \$5.80 | \$5.88 | \$5.29 | \$5.56 | \$6.19 | \$5.02 | \$5.88 |
| MPC (percent)..... | 10.1 | | 10.7 | 10.8 | 11.5 | 10.8 | 10.4 | 9.9 | 10.8 | 10.0 | 9.8 |
| G. & A. (percent).... | 15.2 | | 13.9 | 13.9 | 14.3 | 13.9 | 13.1 | 14.7 | 13.9 | 12.3 | 14.5 |

¹ Per DLH.

Note: Base, 15,000,000 manufacturing hours; 10,000,000 engineering hours.

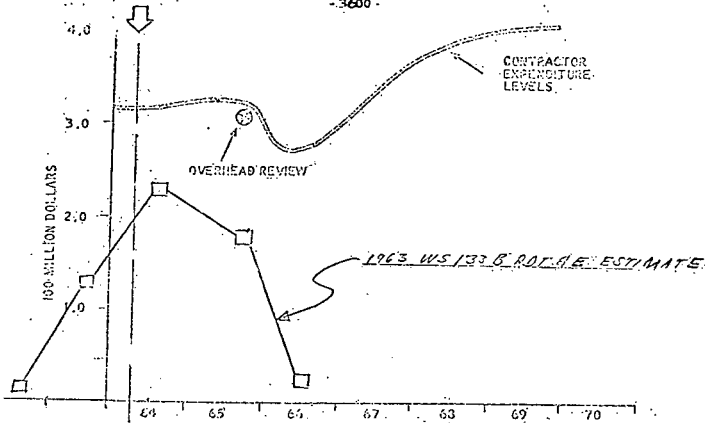
SAVINGS IF AFPR RATES HAD BEEN ACHIEVED

[In thousands of dollars]

| | 1965 expense | | | 1966 expense | | | 1967 expense | | |
|--------------------|--------------|-----------|--------------|--------------|-----------|---------------|--------------|-----------|---------------|
| | Actual | AFPR rate | Difference | Actual | AFPR rate | Difference | Actual | AFPR rate | Difference |
| Manufacturing..... | 56,400 | 55,269 | 1,131 | 54,040 | 50,222 | 3,818 | 59,880 | 54,177 | 5,703 |
| Engineering..... | 54,1E2 | 52,014 | 2,148 | 58,498 | 55,657 | 2,841 | 79,421 | 67,805 | 11,616 |
| MPC..... | 14,127 | 13,267 | 860 | 13,377 | 14,053 | (676) | 16,835 | 17,179 | (344) |
| G. & A..... | 52,185 | 50,725 | 1,460 | 53,002 | 47,233 | 5,769 | 66,700 | 56,580 | 10,120 |
| Total..... | | | 5,599 | | | 11,725 | | | 27,095 |

| Summary (in millions): | |
|-------------------------|-------------|
| 1965..... | 5.6 |
| 1966..... | 11.8 |
| 1967..... | 27.1 |
| Grand total..... | 44.5 |

NOTIFICATION TO SPOD OF ADVANTAGES TECHNICAL PROBLEM. RDT&E Program Levels -3600-



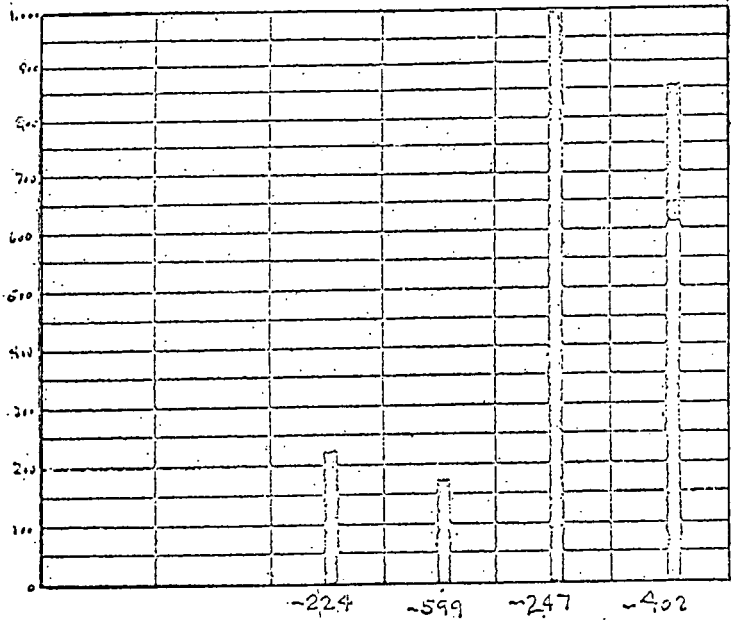
| | | FISCAL YEARS | | | | | |
|-----|--------|--------------|---------|--------|--|--------|-------|
| 7.9 | 4125.0 | 4190.0 | 4167.57 | | | 4190.9 | ALL |
| 7.9 | 4125.0 | 4166.8 | 4166.8 | 4172.2 | | 4166.8 | 59.6 |
| 7.9 | 4125.0 | 4166.8 | 4166.8 | 4172.2 | | 4150.2 | 156.7 |

1963 WS 133 B RDT&E ESTIMATE
12F12/1/67

Excerpt from letter to General Officer, Commander, SPOD, Dec. 15, 1960
11-5-67

MINUTEMAN GUIDANCE - UNIT COST COMPARISON

Guidance and Control



| | MM I | | MM II | |
|----------------|-------------|------------|------------|------------|
| | -224 | -599 | -247 | -402 |
| | NS-10 | NS-10 | NS-17 | NS-17 |
| Equip. Units | 583.0 | 452.0 | 64.0 | 36.0 |
| Total Cost | 129,003,160 | 80,755,000 | 69,155,194 | 30,120,920 |
| Est. Unit Cost | 221.4 | 177.7 | 1,111.1 | 832.2 |

DATA SOURCES:

- Computer
 - Gyro.
 - Assembly
 - Other
- 244

Chairman PROXMIRE. Senator Jordan?
 Senator JORDAN. Mr. Fitzgerald, I have in my hand this memorandum for you on the subject SRAM and MK II costs data dated June 13, 1969, in which Mr. Thomas H. Nielsen, Assistant Secretary of the Air Force, said he believes and I quote—

*** it would be inappropriate for anyone from this office to release additional information concerning the programs mentioned in Senator Proxmire's letter of May 14, 1969, especially in open hearings.

At what time did you receive this memorandum yourself?

Mr. FITZGERALD. Approximately a quarter of 10 this morning, Senator.

Senator JORDAN. And what time did you deliver this memorandum to the chairman of the committee?

Mr. FITZGERALD. I spoke with the Senator just before the hearings opened, and I gave a copy of it to one of his assistants shortly after that.

Senator JORDAN. I just want to submit, Mr. Chairman, that we on this side are just as eager to be participants in these hearings as you and the members of the majority. But we would like to respectfully request that when information is available to the committee it be made available to both sides at the same time.

Chairman PROXMIRE. Well, I certainly agree. Mr. Fitzgerald came to the Chair at almost exactly 10 o'clock, just before Mr. Staats was testifying, as a matter of fact, one of the reasons we delayed him was because he said he was embarrassed, and he had this memorandum, and it was a puzzle as to how to proceed. At that time I didn't receive the memorandum. Later a member of the staff did get it. And I would certainly agree that that information should be made available. I think the Senator can understand, in view of the fact that it was just given before the hearings and we were deeply involved in the hearings, it was hard to distribute it simultaneously, but it would have been much better to have done it that way.

Senator JORDAN. The chairman has had time to have prepared for his introduction into the record a very fine statement, in which I am quite eager to concur, but I would just like to raise the point that we would like equal treatment.

Chairman PROXMIRE. I respect that.

Representative CONABLE. May I ask what Mr. Nielsen's relation to Mr. Fitzgerald is? Has he been Assistant Secretary of the Air Force for some time?

Mr. FITZGERALD. Since January of last year.

Chairman PROXMIRE. January of 1968?

Mr. FITZGERALD. Yes.

Representative CONABLE. And before that was he in your office?

Mr. FITZGERALD. No, he was a Presidential appointee newly at the Pentagon at that point.

Representative CONABLE. Appointed by President Johnson?

Mr. FITZGERALD. Yes, sir. His replacement, I believe, has been announced.

Representative CONABLE. He has personal knowledge of this matter, though; he is not someone who has arrived just recently on the scene?

Mr. FITZGERALD. That is correct. I would like to emphasize that I have no personal quarrel with Mr. Nielsen. The instructions are unclear. I didn't have time to clarify them. It does limit what I can say, but I don't want to make it appear that Mr. Nielsen or Mr. Nielsen alone is doing anything to limit my—

Representative CONABLE. But on the other hand you have no information from which to assume that Mr. Nielsen is acting on anyone else's order?

Mr. FITZGERALD. You are absolutely right; I just don't know.

Chairman PROXMIRE. Congressman Moorhead?

Representative MOORHEAD. I don't know if I am clear on this. You are familiar with this letter of December 15 that I have referred to, Mr. Fitzgerald?

Mr. FITZGERALD. Very much so.

Representative MOORHEAD. Do you understand that your instructions are such that you cannot testify as to the contents of this letter? I took it originally that you were muzzled on this letter. But maybe the way the memo was written you were not.

Mr. FITZGERALD. That is correct. The letter says that anyone from this office, meaning the financial management office, should not release additional information concerning the programs mentioned in Senator Proxmire's letter. And those do include all three versions of Minuteman.

Representative MOORHEAD. I see. So that as you construe the memorandum you are not to testify to the matters contained in the letter I have referred to; is that correct?

Mr. FITZGERALD. That is my impression, Mr. Moorhead.

Representative MOORHEAD. I wonder, Colonel LaPlante, did you have any different instructions on the memorandum?

Colonel LAPLANTE. I still haven't read it. And furthermore, I would think that it wouldn't be my role to judge that sort of thing.

Representative MOORHEAD. I didn't mean to ask you to overrule the memo; I just wondered if you could interpret it in any way?

Colonel LAPLANTE. I don't think I would be the one to judge that, Congressman Moorhead.

Representative MOORHEAD. When I read that portion of the letter I used some initials. AFPR is the Air Force plant representative. And I guess that is the only one that needs to be clarified. I think I am correct in that.

Chairman PROXMIRE. Very well.

Thank you, gentlemen. Under the circumstances it seems that what we will have to do is to wait. We may or may not have you back on Tuesday, depending on the decision of the Defense Department.

Mr. FITZGERALD. Thank you very much.

Chairman PROXMIRE. Thank you very much for handling an embarrassing situation very well.

The committee will stand in recess subject to that call. And if we do not reconvene on Tuesday, we will reconvene a week from Monday to hear experts on Russia.

(Whereupon, at 12:50 p.m., the subcommittee was adjourned, subject to the call of the Chair.)

APPENDIX E

DEPARTMENT OF THE AIR FORCE,
OFFICE OF THE ASSISTANT SECRETARY,
July 9, 1969.

MEMORANDUM FOR MR. FITZGERALD, SAFFMM

Attached hereto is Mr. Jackson's report to me concerning all of the C-5A contract changes. I trust this will satisfy your request of June 24 covering additional information to be forwarded to the Joint Economic Committee.

PHILIP N. WHITTAKER,

Assistant Secretary of the Air Force (Installations & Logistics).

Attachment.

DEPARTMENT OF THE AIR FORCE,
Washington, D.C., July 7, 1969.

Memorandum for Secretary Whittaker
Subject: C-5A Contract Changes.

In verbal communications with Mr. Fitzgerald during June 1969, my office provided him certain information in response to his inquiry regarding performance changes made to the C-5A contract. Specifically, on June 12 he was advised that there had been three changes effecting the C-5A which were within his definition of "contract changes effecting the aircraft."

Mr. Fitzgerald apparently had some misgivings about this definition and in his memorandum of June 16, he stated that in the light of subsequent events and a possible difference of interpretation of "changes," it is important that we clarify the subject.

Your answer of June 17 stated that we would have a complete audit made by the SPO of all changes, by category, so that there could be no misunderstanding by either party. This has now been done and should satisfy Mr. Fitzgerald's obligation to furnish some additional information to the Joint Economic Committee per his June 24 memorandum to you.

The C-5A SPO audit identified a total of 3,445 contractual actions through June 6, 1969. These actions were effected by a total of 1,078 separate contractual documents such as Contract Change Notices (CCN), Change Orders (CO), and Supplemental Agreements (SA). For ease of understanding and analysis, these documents and actions were sorted into one of eleven different categories as shown and briefly defined below.

| Category | Number of documents | Number of actions |
|--|---------------------|-------------------|
| 1. Design/performance: Covers changes directly affecting the physical characteristics or performance of the system or its parts..... | 38 | 46 |
| 2. Specification (over 23 percent of total): Modifies program/planning documents or updates applicable specifications..... | 145 | 789 |
| 3. Funding: Reflects allocation of funds to the contract..... | 25 | 25 |
| 4. Administrative/paper: Represents nothing more than an administrative function involving a word change or clarification..... | 141 | 206 |
| 5. AGE-identification (over 50 percent of changes): This involves the identification of specific items of field and depot AGE which were not able to be identified in the original contract..... | 506 | 2,047 |
| 6. Data: Consists of changes to the C-5A data requirements manuals, Loadmasterchecklists, crew comfort list, etc..... | 77 | 184 |
| 7. Delivery: Authority to deliver certain equipment with shortages and/or variations..... | 42 | 42 |
| 8. New work: Includes change in scope or additional and revised effort on the part of the contractor..... | 18 | 18 |
| 9. GFP/CFE: Items which were to be provided by the Government which were not available through that source..... | 27 | 27 |
| 10. GFP repair: Provides for repair of GFP by contractor..... | 39 | 40 |
| 11. Test: Testing of equipment to be used on or associated with the aircraft..... | 20 | 21 |
| Total..... | 1,078 | 3,445 |

The three changes confirmed by myself on June 12 to Mr. Fitzgerald are included in Category 1, "Design/Performance". None of these, or any other changes effect the contractual mission performance in the airplane. It should also be noted that, in consideration for these changes, the contractor provided an expanded fatigue test program and a number of other design improvements which will either increase the aircraft performance, decrease the cost, or both.

I trust that the foregoing information will clarify our definition of changes and will fulfill Mr. Fitzgerald's obligation to the Joint Economic Committee for "a complete list, a balanced picture of all the changes effecting the C-5A aircraft."

DONALD R. JACKSON,
Deputy Assistant Secretary.

Memorandum for Secretary Nielsen

Subject: Request for Information from Mr. Roback, Military Operations Subcommittee.

This memorandum is in response to the request of Mr. Roback of the Military Operations Subcommittee for information on the Minuteman program.

During 1967, a number of groups and individuals reviewed the Minuteman II program with heavy emphasis on reliability problems which had been reported both through internal DoD channels and in the public press. Most of these reviewers concluded that the reliability problem was caused, or at least its recognition was delayed, by a shortage of money on the Minuteman II program. This view was strongly encouraged by the Minuteman System Program Office. Exhibit 1 is a reproduction of a visual aid used by the Minuteman SPO to illustrate to visitors the timing of the allegedly disastrous cut in money. The "overhead review" in the Spring of 1965 and the ensuing cut in the FY 1966 financial program was presented as a forerunner and possible cause of the reliability problems reported in the second half of calendar year 1966 and aired in 1967.

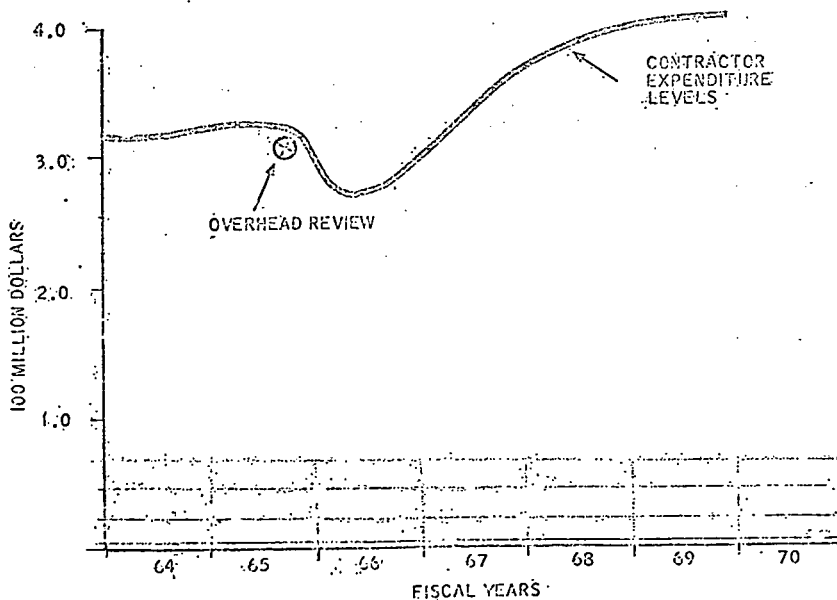
Other reviewers attributed the reliability problem to alleged earlier cuts in the program for component reliability testing. In 1963, the Air Force decided not to direct on Minuteman II contractors the full component reliability testing program employed on Minuteman I. There were three principal reasons for this decision:

1. The basic design policy for Minuteman II directed contractors to design for maximum use of the high reliability parts developed under the WS 133A (Minuteman I) Reliability Improvement Program (RIP) except when new parts of inherently greater reliability could be substituted.

2. The Minute II guidance set and other electronics were to be designed under a concept of greater simplicity than Minuteman I. In addition to building on already proven parts and adding only parts with inherently greater reliability, fewer parts overall were to be used. Under the inferential methods of reliability projections in general use, reduction in parts count in itself was expected to improve reliability.

RDT&E-Program Levels

- 3600 -



FIGURE

(773)

3. New contracting methods shifted more reliability responsibility to the contractors. In the Minuteman I program, the contractors were *directed* by the Air Force in their reliability efforts. With the incentive contracting employed in Minuteman II and the accompanying "disengagement" philosophy, contractors were to be given more flexibility in specific methods they employed to meet their contractual objectives. It was said at the time that contractors were to be paid through incentives to do the job well rather than being paid just to work at it as in the Minuteman I program.

Another point of view on the fundamental causes of the Minuteman II reliability problem is that they were caused primarily by poor technical judgment early in the program and were compounded by poor management discipline. Supporting this point of view are a number of reports which indicate that the technical troubles in Minuteman II preceded any alleged cuts in money, and indeed may have been aggravated by a superabundance of money.

Enclosure A is an excerpt from a consulting report submitted on September 30, 1963. This report, based on data collected in July and August of 1963, demonstrates that indications of technical trouble were present long before the allegedly damaging financial cuts in FY 1966 and at the same time the component test program was under discussion. In the opinion of the consultants who submitted the report, the fundamental cause of the poor outlook for mean time between failure (MTBF, a prime factor in reliability calculations) was selection of components. While the component selections may have been justified on other bases, the consultants believed that the selections mitigated against attainment of the MTBF objectives. The redesign of the guidance system in 1964 did not alter the bases for predicting that MTBF would be lower than expected.

This was very much a minority view, and remains so at this time, even though subsequent events have borne out the accuracy of the prediction. In passing, reported MTBF figures subsequent to 1967 are not directly comparable to earlier figures because of a change in the method of calculating MTBF.

At the time of the September 1963 consulting report, there were also indications of financial control shortcomings in the Minuteman program. The minority view at that time was that poor cost controls were eroding the value of the Minuteman program dollar. Huge increases in financial requirements, especially those to finance increased contractor overhead expenses, added little or nothing of technical value to the program.

Later, in early 1964, a further analysis of the financial status of the Minuteman II guidance development contract was made. This analysis took into account the planned cost of accomplishment of contract objectives in addition to the usual comparison of planned and actual rates of expenditure. This approach, called "earned value" at the time, gave indications of substantial cost increases. Examples of the analyses performed under this approach are shown in Exhibits 2A and 2B. These analyses indicated that cost of the development contract would escalate to about 360 million dollars (approximately 100 million above the estimates current in early 1964) on the basis of contractor performance alone. This estimate was substantiated by the steady growth of contractor estimates depicted in Exhibit 3.

The group holding the minority view that poor technical judgment was the fundamental cause of MTBF difficulties also contended that poor management disciplines allowed by a superabundance of money were compounding the difficulty. This view is discussed in the consulting report which is included as Enclosure B. The consulting report also examines some causes of cost increases unrelated to technical problems and proposes corrective action.

Appendix B of Enclosure B contains some interesting comparisons of unit costs of guidance hardware used on the Minuteman I and Minuteman II programs. The effects of neither the "simplified" design approach nor the alleged money squeeze are apparent in the unit cost comparisons.

Finally, the minority rebuttal to the contention that FY 1966 financial cuts contributed to the Minuteman II reliability problems is illustrated in Exhibit 4. This chart superimposes the Minuteman II original program estimate and the date of the first known report of technical difficulty on the chart (Exhibit 1) used to illustrate the timing of the allegedly damaging FY 1966 financial reduction. The minority view was that the Minuteman II experience illustrated the poor results of attempting to "buy out" of technical trouble with vast amounts of money rather than the effect of a shortage of money. The minority contends that the

"money cure" was especially ineffective on the Minuteman program because much of the cost increase went to finance gross inefficiencies and increased discretionary expenses.

A. E. FITZGERALD,
Deputy for Management Systems.

[Enclosures]

EXHIBIT 2A

AUTONETICS CONTRACT AF 04(694)-247—TASK 2 REALIZATION

| Item task 2 | Actual to date (millions) | Earned value (millions) | Realization (percent) |
|-------------------------------|------------------------------|----------------------------|--------------------------|
| Total, as of Mar. 1, 1964 | \$50.297 | \$34.532 | 68 |
| Minuteman Division: | | | |
| Total | 6.417 | 5.780 | 90 |
| Labor | 5.856 | 5.074 | 87 |
| Material | .141 | .141 | 100 |
| Fee ¹ | .420 | .365 | 87 |
| Navigations Systems Division: | | | |
| Total | 17.050 | 13.052 | 77 |
| Labor | 11.978 | 8.264 | 69 |
| Material | 3.934 | 3.934 | 100 |
| Fee ¹ | 1.138 | .854 | 75 |
| Data Systems Division: | | | |
| Total | 26.830 | 15.700 | 59 |
| Labor | 17.920 | 7.518 | 42 |
| Material | 7.155 | 7.155 | 100 |
| Fee ¹ | 1.755 | 1.027 | 58 |

¹ Fee calculation at 7 percent.

EXHIBIT 2B

AUTONETICS CONTRACT AF 04(694)-247 TASK 2 EARNED VALUE VARIANCE, ANALYSIS (AS OF MAR. 1, 1964)

[Dollar amounts in millions]

| Item | Actual | Earned | Variance | Percent |
|--|----------|----------|----------|------------------|
| Total | \$35.754 | \$20.856 | \$14.898 | 100.0 |
| Total for task 2 | | | | |
| Variance due to schedule slippage | | | 3.050 | 20.5 |
| Variance due to increase/application of manpower | | | 5.932 | 39.8 |
| Variance due to increase/rates | | | 5.916 | 39.7 |
| Total | 5.856 | 5.074 | .782 | 100.0 |
| Minuteman Division | | | | |
| Variance due to schedule slippage | | | | (¹) |
| Variance due to increase/application of manpower | | | (.907) | (115.9) |
| Variance due to increase/rates | | | 1.689 | 215.9 |
| Total | 11.978 | 8.264 | 3.714 | 100.0 |
| Navigation Systems Division | | | | |
| Variance due to schedule slippage | | | .627 | 17.0 |
| Variance due to increase/application of manpower | | | .929 | 25.0 |
| Variance due to increase/rates | | | 2.158 | 58.0 |
| Total | 17.920 | 7.518 | 10.402 | 100.0 |
| Data Systems Division | | | | |
| Variance due to schedule slippage | | | 2.423 | 23.3 |
| Variance due to increase/application of manpower | | | 5.910 | 56.8 |
| Variance due to increase/rates | | | 2.069 | 19.9 |

¹ No schedule slippage shown since task 2; MMD treated as LOE.

Excerpt from Trial Implementation of
 Management II, R&D Program Management
 Reporting System, 1 November 1964

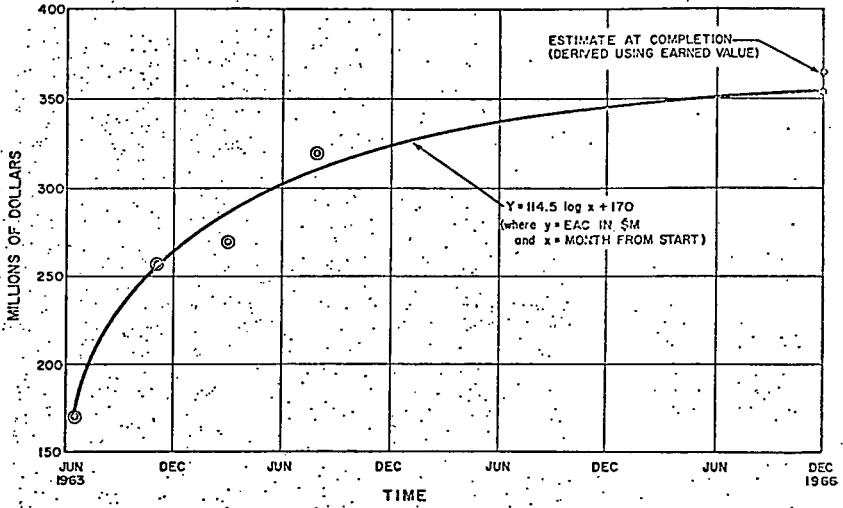
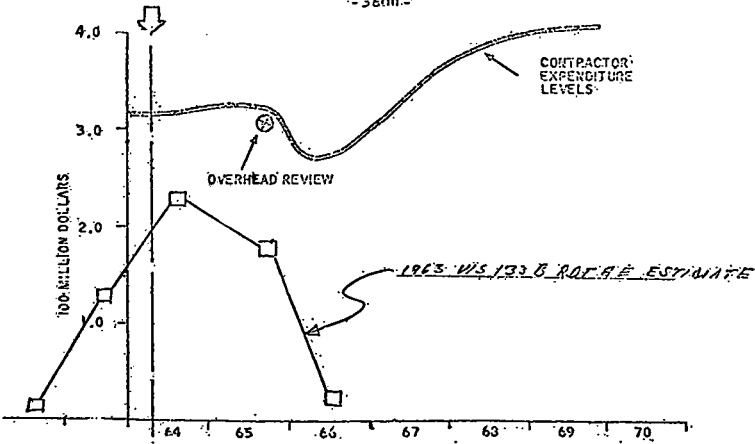


EXHIBIT 6 — AUTONETICS CONTRACT AFO4(694)-247 ESTIMATE AT COMPLETION
 DERIVED THROUGH PROJECTION OF CFRE ESTIMATES

NOTIFICATION TO
 SPO OF AUTONETICS RDTEE Program Levels
 TECHNICAL PROBLEM

- 3600 -



| | | | | | | | | | | | |
|------|--------|--------|--------|------|--|--|--|--|--------|--------|--------|
| 4.79 | 4125.0 | 4100.0 | 4167.5 | | | | | | 4490.7 | 4551.6 | 4550.7 |
| | | 23.8 | 16.3 | 4172 | | | | | | | |
| 4.79 | 4125.5 | 4213.8 | 4165.8 | 4122 | | | | | | | |

1965 VS 1966 RDTEE ESTIMATE

JEFF 1/14/67

THE MILITARY BUDGET AND NATIONAL ECONOMIC PRIORITIES

TUESDAY, JUNE 17, 1969

CONGRESS OF THE UNITED STATES,
SUBCOMMITTEE ON ECONOMY IN GOVERNMENT,
OF THE JOINT ECONOMIC COMMITTEE,
Washington, D.C.

The Subcommittee on Economy in Government met, pursuant to adjournment, at 10 a.m. in room G-308 (auditorium), New Senate Office Building, Hon. William Proxmire (chairman of the subcommittee) presiding.

Present: Senators Proxmire and Jordan; and Representatives Moorhead and Conable.

Also present: John R. Stark, executive director; Richard F. Kaufman and Robert H. Haveman, economists, and Douglas C. Frechtling, minority economist.

Chairman PROXMIRE. The subcommittee will come to order.

Before I read my opening statement I would like to say that I want to thank Senator Jordan and Congressman Conable. I think they have been very diligent members of this committee. And I want to apologize again for the failure on the part of the chairman—it was entirely my fault—in not providing the minority with the memorandum which was delivered to Mr. Fitzgerald when he appeared on Friday. I didn't have it until the last minute, and I gave it to the staff, and they prepared a statement in response to that action by the Pentagon, but I should certainly have immediately turned it over to the minority, because they are just as eager as I am to pursue this matter.

I think the statement by Senator Jordan at that time was absolutely correct. I want to make it clear publicly right now to the staff that whatever information we do get should be immediately shared with all members of the committee, majority and minority.

We are going to follow that policy completely. We hope if we are in any respect at fault members will immediately call it to our attention.

Senator JORDAN. Thank you, Mr. Chairman. All is forgiven.

Chairman PROXMIRE. Last Friday, June 13, Mr. A. E. Fitzgerald, Deputy for Management Systems, Department of the Air Force, was scheduled to provide information to the subcommittee in response to specific requests made by it on June 14, 1969. A few moments before 10 a.m., June 13, Mr. Fitzgerald received a memorandum from Thomas H. Nielsen, Assistant Secretary of the Air Force, in effect informing Mr. Fitzgerald that it would be inappropriate for him to provide the requested information to the subcommittee.

The subcommittee had asked Mr. Fitzgerald to supply it with cost growth information on the C-5A and SRAM contracts, a copy of the "should cost" study of the Mark II avionics program, and copies of certain memorandum letters written by Mr. Fitzgerald relating to "the attitude problem" which pervades the procurement process.

The reasoning of the Air Force in denying the subcommittee the opportunity to obtain this information from Mr. Fitzgerald on June 13 was that since the chairman of this subcommittee had requested certain information on a number of major weapons systems programs from Barry Shillito, Assistant Secretary of the Department of Defense, and since Secretary Shillito had agreed to supply information on some of these programs, including SRAM and Mark II, it would be inappropriate for anyone from this office to release additional information concerning the programs mentioned in Senator Proxmire's letter of May 14, 1969, especially in open hearings.

This, of course, was a lame attempt to justify the gagging of a witness who had been invited to testify before a congressional committee. This subcommittee met similar resistance by the Pentagon to the same witness' invitation to testify in earlier hearings in November 1968. It was important then to clarify the right of a congressional committee to invite any person to testify in open hearings and to respond freely to questions. The mere fact that an individual happens to be an employee of the Federal Government or of the Defense Department should not be raised as a barrier to his appearance before a congressional committee. I thought the question had been settled last November. Apparently it was not.

I hope, however, that the Pentagon has finally gotten the message. For on Friday afternoon, June 13, I sent a letter to Secretary Laird explaining the situation to him and requesting that a Pentagon official be designated to appear before the subcommittee this morning to present the information which the subcommittee has requested from Mr. Fitzgerald, or explain why it cannot be disclosed. The same evening, I received a response from John L. McLucas, Acting Secretary of the Air Force, stating that Mr. Fitzgerald had been advised he is free to testify before this subcommittee. I am happy that the Air Force reversed its earlier position with respect to the appearance of this witness.

I must comment, however, on some of the remarks made by Secretary McLucas. He apparently still believes that it would be better for the subcommittee to await the receipt of detailed, correct information from Secretary Shillito in a complete and orderly fashion. We on the subcommittee certainly look forward to this kind of a presentation on matters relating to the procurement of the programs inquired about.

I must say, however, that if we receive detailed, correct information in a complete and orderly fashion in response to our requests to the Pentagon, it will represent a welcome first. We eagerly look forward to the presentation by Secretary Shillito.

In the meantime, it is most appropriate, in my judgment, for this subcommittee to receive the information requested from Mr. Fitzgerald. This individual has shed a great deal of light on the procurement process in his appearances before us thus far. Of course, we understand that he is not prepared to speak on every weapons system program. I don't know of anyone in the Pentagon who can. On the

other hand, he has had much experience and direct responsibility for several of the largest Air Force weapons systems and we are most gratified that he has had the candor and the sense of responsibility to speak out.

Before I call on Mr. Fitzgerald, Congressman Conable has a statement he would like to make.

Representative CONABLE. Thank you, Mr. Chairman.

And thank you for your remarks about our anxiety for full participation in the committee. We do approve of the goal of this committee, and we do want to add our interest and our enthusiasm to furthering that goal in any way we can.

Let me say, also, that I called the Defense Department, the Office of the Secretary of Defense, immediately after last Friday's hearings, and I was assured by phone that Mr. Fitzgerald would be permitted to appear this morning. I was informed by the Secretary's aide—the Secretary was then out of the city—that he had no knowledge of the unfortunate memorandum that Mr. Fitzgerald brought in here.

Mr. Chairman, the interest which this committee is showing in the escalation of the costs of military equipment cannot be satisfied without testimony from several former officials of the Department of Defense. I know of no instance of ballooning costs cited before this committee which did not occur while a prior administration was in office.

If our inquiry is to yield an understanding of the decisionmaking process in the case of military equipment in which sharp cost increases have occurred, we must hear from those who made the decisions.

I have asked the Department of Defense to furnish certain information about cost increases and reprogramming actions relating to equipment which has been the subject of testimony before this committee.

The information readily available this morning relates to the C-5A and Minuteman II/III. It is my understanding that the Defense Department is also making available, as a result of correspondence, you, Mr. Chairman, have had with Assistant Secretary of Defense Barry J. Shillito, the cost summaries on some 32 major programs that these will be available later.

With regard to Minuteman, the Department advises me that the accounting system established by the previous administration cannot speedily segregate the costs of Minuteman II from those of Minuteman III. The Department also advised me that the current estimates for total costs of these two major systems are under review by the new administration at this time.

This information which I submit for the record shows the original estimate of cost and current estimate, the reprogramming actions ordered, the official of the Defense Department who ordered them, and the effect of these actions on the cost of the program. I suggest that the chairman invite the officials, or as many of them as are available, whose names appear in connection with reprogramming actions to testify before this subcommittee. They are in a better position than anyone else to provide reliable information about the history of these programs.

In the case of both the C-5A and Minuteman, which the chairman brought to our attention, the most important witnesses would be former Secretary of Defense Robert S. McNamara and former Air Force Secretary Harold Brown. In the case of the deep submergence rescue

vehicle, which the chairman brought to our attention, the principal witness would be, again, Secretary McNamara and former Navy Secretary Paul Ignatius. They are the men who made the basic decisions on the programs about which we have been receiving testimony.

With respect to former Secretary McNamara, I recall your statement that he would not be available because of World Bank policy. On the summary sheets I am enclosing, however, you will find listed the names of many Secretaries, Under Secretaries, and Assistant Secretaries who took reprogramming actions of some significance and who, therefore, would be able to provide the best evidence as to the reasons for the cost overruns.

In fairness to Secretary Laird and Deputy Secretary Packard, it should be pointed out that they discovered and announced serious cost overruns as soon as they began to examine the operation of the Department of Defense. It should also be pointed out that they are putting into effect tightened and drastically overhauled procedures to detect and prevent overruns in the future. Secretary Laird has said, "It is our objective for the future to require realistic pricing at the outset and then to insist that the contractor remain within established ceilings or absorb any overrun."

I think the new team in the Pentagon deserves the approval and support of this subcommittee for prompt action to end loose practices which they found when they assumed office.

And I have, Mr. Chairman, to submit for the record a summary called the "C-5A Fact Sheet" and several pages, including "C-5A Reprogramming Actions," and, as I mentioned, the extent of the reprogramming. Also I have a fact sheet on Minuteman II and III, which, of course, includes, as I said, not any accurate segregation between the two, because of the accounting procedures used by the previous administration on this, and several sheets again showing the reprogramming actions and by whom they were ordered.

I think these would be valuable additions to the record, Mr. Chairman, and I would like request that they be included.

Chairman PROXMIRE. Without objection, all the tables will be printed in the record. I believe they are very valuable additions to the record. (The documents follow:)

MINUTEMAN II/III—REPROGRAMMING ACTIONS

[Amount in millions]

RESEARCH, DEVELOPMENT, TRAINING, AND EVALUATION

| | Amount |
|---------------------------------------|--------------|
| 1969 program total..... | 0 |
| 1968 program total..... | + \$107, 100 |
| 1415 No. 68-89..... | |
| ASAF (R. & D.) (Flax), Dec. 29, 1967. | +69, 594 |
| DSD (Nitze), Feb. 1, 1968. | |
| 1415 No. 68-166..... | |
| ASAF (FM) (Nielsen). | +37, 506 |
| DSD (Nitze), July 30, 1968. | |
| 1967 Program total: 1415 No. 67-150. | |
| ASAF(FM) (Marks), June 27, 1967. | +18, 600 |
| DSD (Vance), June 30, 1967. | |
| 1966 program total..... | +41, 340 |
| 1415 No. 66-153..... | |
| ASAF (FM) (Marks), June 27, 1966. | -32, 960 |
| DSD (Vance), July 25, 1966. | |
| 1415 No. 66-110..... | |
| ASAF (FM) (Marks), Apr. 25, 1966. | +2, 000 |
| DSD (Vance), May 2, 1966. | |

MINUTEMAN II/III—REPROGRAMING ACTIONS—Continued

[Amount in millions]

RESEARCH, DEVELOPMENT, TRAINING AND EVALUATION—Continued

| | Amount |
|---|-----------|
| 1966 program total—Continued | +\$61,600 |
| 1415 No. 66-57 | ----- |
| ASAF (FM) (Marks), Dec. 27, 1965. | ----- |
| Sec Def (McNamara), Dec. 30, 1965. | ----- |
| 1415 No. 66-26 | +10,700 |
| ASAF (FM) (Marks), Oct. 19, 1965. | ----- |
| DSD (Vance), Nov. 10, 1965. | ----- |
| 1965 program total | +41,400 |
| 1415 No. 65-141 | +7,800 |
| ASAF (FM) (Marks), June 29, 1965. | ----- |
| DSD (Vance), June 30, 1965. | ----- |
| 1415 No. 65-133 | 0 |
| ASAF (R. & D.) (Flax), May 12, 1965 | ----- |
| DSD (Vance), June 16, 1965. | ----- |
| 1415 No. 65-100 | +2,000 |
| ASAF (FM) (Marks), Mar. 12, 1965. | ----- |
| DSD (Vance), Mar. 26, 1965. | ----- |
| 1415 No. 65-62 | +14,800 |
| ASAF (McMillan), Dec. 29, 1964. | ----- |
| DSD (Vance), Dec. 31, 1964. | ----- |
| 1415 No. 65-33 | +16,800 |
| ASAF (R. & D.) (Flax), Oct. 8, 1964. | ----- |
| DSD (Vance), Oct. 15, 1964. | ----- |
| 1964 program total | +89,064 |
| 1415 No. 64-99 | +36,000 |
| ASAF (R. & D.) (Flax), May 28, 1964. | ----- |
| DSD (Vance), June 16, 1964. | ----- |
| 1415 No. 64-47 | +9,000 |
| ASAF (FM) (Harlan), Dec. 31, 1963. | ----- |
| Sec Def (McNamara), Jan. 27, 1964. | ----- |
| 1415 No. 64-26 | +8,564 |
| ASAF (FM) (Harlan), Dec. 9, 1963. | ----- |
| DSD (Gilpatric), Dec. 20, 1963. | ----- |
| 1415 No. 64-18 | +35,500 |
| ASAF (FM) (Harlan) Nov. 13, 1963. | ----- |
| DSD Gilpatric Dec. 6, 1963. | ----- |
| PROCUREMENT | |
| 1969 program: 1415 No. 69-72 | +3,100 |
| ASAF (FM) (Nielsen), Dec. 31, 1968. | ----- |
| DSD (Nitze), Jan. 18, 1969. | ----- |
| 1969 modifications | 0 |
| 1969 advance procurement: 1415 No. 69-72 | +19,400 |
| ASAF (FM) (Nielsen) Dec. 31, 1968. | ----- |
| DSD (Nitze), Jan. 18, 1969. | ----- |
| 1968 program | -118,100 |
| 1415 No. 68-67 | -3,500 |
| ASAF (I&L) (Charles), Dec. 27, 1967. | ----- |
| DSD (Nitze), Jan. 22, 1968. | ----- |
| 1415 No. 68-63 | -7,000 |
| ASAF (FM) (Marks), Dec. 21, 1967. | ----- |
| DSD (Nitze), Dec. 27, 1967. | ----- |
| 1415 No. 68-60 | -92,100 |
| ASAF (FM) (Marks), Nov. 9, 1967. | ----- |
| DSD (Nitze), Dec. 20, 1967. | ----- |
| 1415 No. 68-17 | -15,500 |
| ASAF (FM) (Marks), Oct. 5, 1967. | ----- |
| DSD (Nitze), Nov. 3, 19 7. | ----- |
| 1968 modifications total 1415 No. 68-60 | +73,300 |
| ASAF (FM) (Marks) Nov. 9, 1967. | ----- |
| DSD (Nitze) Dec. 20, 1967. | ----- |
| 1967 program total | -24,100 |
| 1415 No. 67-63 | -14,600 |
| ASAF (FM) (Marks), Dec. 30, 1966. | ----- |
| DSD (Vance), Jan. 18, 1967. | ----- |
| 1415 No. 67-53 | 9,500 |
| ASAF (FM) (Marks), Dec. 30, 1966. | ----- |
| DSD (Vance), Jan. 14, 1967. | ----- |
| 1967 modifications | 0 |
| 1966 program total: 1415 No. 66-67 | -31,900 |
| ASAF (R. & D.) (Flax), Dec. 29, 1965. | ----- |
| DSD (Vance), Jan. 5, 1966. | ----- |
| 1966 modifications total: 1415 No. 66-67 | +16,700 |
| ASAF (R. & D.) (Flax), Dec. 29, 1965. | ----- |
| DSD (Vance), Jan. 5, 1966. | ----- |
| 1965 program total: 1415 No. 65-69 | -143,000 |
| ASAF (R. & D.) (McMillan), Dec. 29, 1964. | ----- |
| DSD (Vance), Dec. 31, 1964. | ----- |

MINUTEMAN II/III—REPROGRAMING ACTIONS—Continued

[Amount in millions]

PROCUREMENT—Continued

| | Amount |
|---|-----------|
| 1965 modifications..... | +\$71,300 |
| 1415 No. 65-66..... | +98,800 |
| ASAF (R. & D.) (McMillan), Dec. 24, 1964. | |
| DSD (Vance), Dec. 31, 1964. | |
| 1415 No. 65-69..... | -27,500 |
| ASAF (R. & D.) (McMillan), Dec. 24, 1964. | |
| DSD (Vance), Dec. 31, 1964. | |
| 1964 program total..... | +255,300 |
| 1415 No. 64-58..... | +238,800 |
| ASAF (FM) (Harlan), Jan. 21, 1964. | |
| DSD (Vance), Feb. 17, 1964. | |
| 1415 No. 65-69..... | +16,500 |
| ASAF (R. & D.) (McMillan), Dec. 24, 1964. | |
| DSD (Vance), Dec. 31, 1964. | |

C-5A Fact Sheet

(\$ Millions)

(1) Original program estimate (120 aircraft) (October, 1965) :

| | |
|--|-------|
| RDT&E..... | \$980 |
| Procurement (Excludes \$283 million for initial spares)..... | 2,005 |
| Total..... | 2,985 |

(2) Current program estimate (120 aircraft) :

| | |
|--|---------|
| RDT&E..... | \$1,002 |
| Procurement (Excludes \$482 million for initial spares)..... | 3,346 |
| Total..... | 4,348 |

(3) Reprograming actions: Attached.

(4) Amount of congressionally approved and funded cost growth to date: \$23 million in RDT&E.

(5) Amount of funding requested for cost growth: \$225 million requested in President Johnson's Budget for FY 1970 (Nitze/Brown).

Basic program decisions: See AF Brown; Sec Def McNamara.

C-5A: Reprograming actions

Procurement:

| | |
|---------------------------------------|-----------|
| 1969 program (no change) | |
| 1969 advance procurement (no change) | Amount |
| 1968 program (increase)..... | +\$16,600 |
| 1415 No. 68-86..... | +16,600 |
| ASAF (I&L) Charles, December 30, 1967 | |
| DSD Nitze, January 30, 1968 | |
| 1968 advance procurement (no change) | |
| 1967 program..... | -20,000 |
| 1415 No. 67-73..... | -20,000 |
| ASAF (FM) Marks, December 30, 1966 | |
| DSD Vance, January 26, 1967 | |
| 1967 advance procurement (no change) | |
| RDT&E: | |
| 1969 program (no change) | |
| 1968 program..... | +40,000 |
| 1415 No. 69-89..... | +40,000 |
| ASAF (R&D) Flax, December 29, 1967 | |
| DSD Nitze, February 1, 1968 | |
| 1967 program total..... | +22,385 |
| 1415 No. 67-111..... | +22,385 |
| ASAF (FM) Marks, May 11, 1967 | |
| DSD Vance, May 12, 1967 | |
| 1966 program (no change) | |
| 1965 program total..... | +35,000 |

C-5A: Reprogramming actions—Continued

RDT & E—Continued

| | Amount |
|-------------------------------------|-----------|
| 1415 No. 65-51----- | +\$35,000 |
| ASAF (FM) Marks, December 18, 1964 | |
| DSD Vance, December 22, 1964 | |
| 1964 program total----- | +10,000 |
| 1415 No. 64-47----- | +10,000 |
| ASAF (FM) Harlan, December 31, 1963 | |
| Sec Def McNamara, January 27, 1964 | |

Minuteman II/III fact sheet

[Dollars in millions]

| | |
|---|---------|
| (1) Original program estimate (August 1966) : | |
| R.D.T. & E. ----- | \$2,612 |
| Procurement ----- | 4,798 |
| Total ----- | 7,410 |
| (2) Current program estimate : | |
| R.D.T. & E. ----- | \$3,141 |
| Procurement ----- | 5,803 |
| Total ----- | 8,944 |

(3) Reprogramming actions: attached.

(4) Amount of congressionally approved and funded growth to date: About \$300 million.

Basic program decision: Secretary of the Air Force, Brown; Secretary of the Defense Department, McNamara.

Chairman PROXMIRE. I might say also I am grateful to you for the suggestion. It is an excellent suggestion. We will certainly follow up on it. We will invite the men who are responsible for these overruns and who can give us the best information on it.

In addition, I intend to take Mr. McLucas and Mr. Shillito on their assurance that within 30 days they would be willing to give us information.

Representative CONABLE. Mr. Chairman, do we have in the record the list of those witnesses who were invited to attend and did not attend? Is that part of the record? It is something that I requested last Friday. We would be interested in knowing who have been invited.

Chairman PROXMIRE. This information has been furnished to the minority staff. And it will certainly be put in the record. I think that is a good point.

Representative CONABLE. We received copies of the letter to the contractors who refused to appear. But I am not aware of any other invitations that have been extended and refused.

Chairman PROXMIRE. That will certainly be made available to you.

Representative CONABLE. Thank you, Mr. Chairman.

(The list referred to follows:)

SUBCOMMITTEE ON ECONOMY IN GOVERNMENT "MILITARY BUDGET AND NATIONAL ECONOMIC PRIORITIES" HEARINGS JUNE, 1969—INVITED AND ACCEPTED

Honorable Dean Acheson, (Former Secretary of State), Covington and Burling, 888 16th Street, NW., Washington, D.C. 20006

Dr. Kenneth E. Boulding, Department of Economics, University of Colorado, Boulder, Colo.

Mr. Joseph A. Califano, Jr., 1229 19th Street, NW., Washington, D.C.

Professor James L. Clayton, Department of History, University of Utah, Salt Lake City, Utah 84112

- Mr. A. E. Fitzgerald, 1522 Forest Villa Lane, McLean, Va.
 Hon. J. W. Fulbright, United States Senate, 1215 New Senate Office Bldg.
 Dr. John Kenneth Galbraith, Department of Economics, Harvard University,
 Cambridge, Mass.
 Hon. Barry Goldwater, United States Senate, 240 Old Senate Office Building.
 Dr. Malcolm Hoag, RAND Corporation, 1700 Main Street, Santa Monica, Calif.
 90406
 Prof. William W. Kaufmann, Department of Political Science, Massachusetts
 Institute of Technology, Cambridge, Mass.
 Dr. Carl Kaysen, Director, Institute for Advanced Studies, Princeton, N.J.
 Dr. Leonard Lecht, Director, Center for Priority Analysis, National Planning
 Association 1250 Connecticut Avenue, N.W., Washington, D.C. 20009
 Dr. Paul McCracken, Chairman, Council of Economic Advisers, Washington, D.C.
 Hon. Robert Mayo, Director, Bureau of the Budget, Executive Office Building,
 Washington, D.C.
 Hon. Robert C. Moot, Assistant Secretary of Defense (Comptroller), Depart-
 ment of Defense, Washington, D.C.
 Mr. Walter Reuther, President, United Auto Workers, 8000 East Jefferson
 Avenue, Detroit, Mich. 48214
 Mr. Gordon W. Rule, Director of the Procurement Control and Clearance Divi-
 sion, Naval Materiel Command, Department of the Navy, Washington, D.C.
 Dr. Frederick Scherer, Department of Economics, University of Michigan,
 Ann Arbor Mich.
 Dr. Charles L. Schultze, The Brookings Institution, 1775 Massachusetts Avenue,
 N.W., Washington, D.C. 20036
 Professor Albert Shapero, Graduate School of Business, Business and Economics
 Building, Room 511, University of Texas, Austin, Tex. 78712
 Hon. Barry J. Shillito, Assistant Secretary of Defense for Installations and
 Logistics (I&L), Department of Defense, Washington, D.C.
 Hon. Elmer Staats, Comptroller General of the United States, General Accounting
 Office, Washington, D.C.
 Mr. Merton Tyrrel (Executive Vice President, Performance Technology Corpora-
 tion), 1152 Forest Villa Lane, McLean, Va.
 Hon. Stewart L. Udall, 1700 Pennsylvania Avenue, N.W., Suite 300, Washing-
 ton, D.C. 20006

SUBCOMMITTEE ON ECONOMY IN GOVERNMENT "MILITARY BUDGET AND NATIONAL
 ECONOMIC PRIORITIES" HEARINGS JUNE 1969—INVITED AND DECLINED

- Mr. Roy Ash, President, Litton Industries, 9370 Santa Monica Boulevard, Beverly
 Hills, Calif. 90213
 Mr. J. L. Atwood, President, North American Rockwell, 2300 East Imperial High-
 way, El Segundo, Calif. 90245
 Hon. John H. Chafee, Secretary of the Navy, Washington, D.C.
 Hon. Gerald R. Ford, House of Representatives, Washington, D.C.
 Mr. Daniel J. Haughton, Chairman of the Board, Lockheed Aircraft Corporation,
 P.O. Box, Burbank, Calif. 91503
 Hon. Melvin R. Laird, Secretary of Defense, Department of Defense
 Mr. Roger Lewis, President, General Dynamics Corporation, 1 Rockefeller Plaza,
 New York, N.Y. 10020
 Hon. Robert S. McNamara, President, World Bank, 1818 H Street, N.W., Wash-
 ington, D.C. 20433
 Dr. H. L. Nieberg, Department of Political Science, University of Wisconsin,
 Madison, Wis.
 Hon. David Packard, Deputy Secretary of Defense, Department of Defense
 Hon. John Stennis, United States Senate, Washington, D.C.
 Hon. Strom Thurmond, United States Senate, Washington, D.C.
 Mr. T. A. Wilson, President, The Boeing Company, P.O. Box 3707, Seattle, Wash.
 98124

Chairman PROXMIRE. Now, Mr. Fitzgerald, we have looked forward
 to this testimony. You may go right ahead.

**STATEMENT OF A. E. FITZGERALD, DEPUTY FOR MANAGEMENT
SYSTEMS, DEPARTMENT OF THE AIR FORCE**

Mr. FITZGERALD. Thank you, Mr. Chairman and members of the subcommittee.

I have a copy of a letter signed by Secretary McLucas in which he records that he has sent over the requested "should cost" study on the Mark II. And I believe that is available for the subcommittee now. This is one of the things that you requested, Mr. Chairman, on Friday.

The SRAM cost estimate track summary has been provided. And we can certainly discuss the nonclassified aspects of this program, including the two sheets of data which were furnished. Those are the SRAM cost performance data which record the current status of the contract with the Boeing Airplane Co., and in addition, the cost estimate track summary which will answer the question that you asked, Mr. Chairman, regarding the growth of the total program estimate.

I have also preliminary information from Secretary Wittaker's office on three of the changes to the C-5A airplane. I have requested that his office furnish a complete list of all important changes to the aircraft.

I have heard, as you mentioned, that there have been two relaxations of the requirements, but I have also heard that there have been some technical changes which would be advantageous to the Government. I am prepared to present the ones which I have this morning, but I would like to request that the record be held open on this point so that I can present at a later point in time when I do have the complete list, a balanced picture of all the changes affecting the C-5A aircraft.

Chairman PROXMIRE. The record will be held open for that purpose.

Mr. FITZGERALD. And finally, I have prepared a case study dealing with the attitude problem which I mentioned in my initial statement, and which you asked me, Mr. Chairman, to elaborate on, particularly as it applies to the Mark II avionics program. Completely on my own I removed the names of individuals who might be placed in an unfavorable light from several memorandums.

And I used quite a number of memorandums in the small case example that I put together.

Partly because of my desire to present a complete picture on this problem, I was not able to present the case example to the Secretary's office for review until yesterday. I have not yet received permission to use this case example even with the names removed. The Secretary expressed a desire not to make public the letters with the names on them. But if we could hold this until the end of the discussion, I think it may be possible to at least have a summary discussion of the case example.

So all the other things I believe are cleared, at least as far as we have them.

And I am available to answer your questions on any subject you might wish.

Representative CONABLE. Which Secretary are you referring to?

Mr. FITZGERALD. Secretary McLucas, Under Secretary of the Air Force, has this matter in hand, Mr. Conable.

Chairman PROXMIRE. Do you want us to proceed now to ask you questions in these various areas?

Mr. FITZGERALD. Yes, if you wish, Mr. Chairman. I am available to answer them.

Chairman PROXMIRE. I would be happy to follow any procedure that would be most useful to you in your judgment to present the information you have. If answering the questions would be the best way to bring it out, fine. Or if you want to make any additional statements before we do that, that will be acceptable, too.

Mr. FITZGERALD. I could present what I have on the C-5A. And I will present these memorandums for the record. And as I say, I hope to have a more complete picture later on.

The changes that I have so far are these to the C-5A aircraft; an increase in the weight, empty, of the aircraft; the weight of the aircraft without load from 318,469 pounds to 319,809 pounds—very small increase in total.

Second, a decrease in the maximum speed for lowering flaps on landing from 205 knots to 180 knots.

A decrease—

Chairman PROXMIRE. If you would indicate when you give us these whether you consider these to be an advantage to the Government or a retrogression in standards, it would be helpful. If you want to make any evaluation of these as we go along in appraising and analyzing them, I think we would be in a better position to ask questions than simply having the raw statistics.

Mr. FITZGERALD. All right, sir.

Chairman PROXMIRE. Will you go back and tell us what the weight increase means?

Mr. FITZGERALD. I am told on the weight increase—and it is a rather minor weight increase—that the increase was offset by a reduction in the drag counts on the aircraft, which meant that it would not impair the overall performance.

The second item, the decrease in maximum speed for lowering flaps on landing, 205 knots to 180 knots, the so-called flap speed, may or may not be important. I don't have a feel for that at all.

The third item is a decrease in the maximum allowable sink rate at landing gross weight from 10 feet per second to 9 feet per second. It is my understanding that the decrease in flap speed and the decrease in allowable sink rate can be offset in the handling of the aircraft. There is a limitation on how hard you can land it, or how rapidly you can allow it to descend.

Chairman PROXMIRE. But in each of these cases these represent a somewhat slightly low standard?

Mr. FITZGERALD. Yes, sir; without question.

Chairman PROXMIRE. In each of these cases it represents an economy perhaps from the standpoint of producing the plane, the cost should be less, to the extent the quality isn't as great.

This is the kind of thing I would like you to comment on. I don't mean to take too much time.

Mr. FITZGERALD. Yes. It does not necessarily mean that the aircraft would be cheaper. I suspect that these changes were made to protect the basic mission performance requirements of the aircraft. I may be corrected on this point when the complete picture of the changes and

their effect is in. But this would probably allow an aircraft of lighter structure to be acceptable—which may or may not be cheaper. The broad assumption that a lighter weight structure is necessarily cheaper doesn't necessarily follow for a given configuration of an airplane. The things that you do to decrease the weight do not necessarily make it cheaper. But it would appear that some relaxation of the strength of the aircraft has been made.

Now, again, I would like to add quickly that I have been told that there are offsetting advantages. I have not yet been given those. So this is a preliminary answer to your question. As I said before, I hope that we can provide very soon a more complete picture.

On SRAM, I don't know whether the committee was given this information in time to allow the members to review the figures or not. But we have two sheets of data that are provided by the air staff on the SRAM cost figures.

Mr. Chairman, you asked last Friday if it was true that the cost estimate for SRAM had doubled. It did in fact double last year, between track 21, which is the column heading on the cost estimate track summary, and track 22. Track 21 is an estimate made in January of 1968, and the track 22 estimate was made in December 1968. The first estimate was \$301 million, and the second estimate was \$636. So I can confirm your question that the estimate did double. There are many reasons for this. I am not prepared to talk about all of them here.

The second sheet contains a picture of the contract performance status to date, which is probably a little esoteric but I think contains one important statement, that being the note. The note reads:

"Actual cost to date exceeds the amount definitized by \$101 million, placing the contractor in a cost-plus environment." I think this is the most significant point on the cost performance data report, and is true despite the fact that we did have a total package contract let in competition. Due to numerous contract changes which have been authorized but not yet negotiated, the contractor is assumed to be now in a cost-plus environment. This assumption is an illustration of the point that I made in my statement that the procurement community generally considers it necessary to negotiate contract costs, including contract change costs, on the basis of actual costs incurred. So the contractor has now incurred more actual cost than the definitized value of the contract.

And it is assumed that the negotiation of the outstanding authorized but not yet negotiated changes will be based on whatever actual cost is incurred.

Are there any questions on the SRAM?

Chairman PROXMIRE. The practice in this committee, as you know, Mr. Fitzgerald, is to have the witness proceed to the extent he would like, and then each of us has 10 minutes of questioning, and we keep moving on that basis. So I thought you might like to present evidence on the SRAM, the Mark II Avionics and so forth, and then we will have questions.

Mr. FITZGERALD. All right, sir.

The final item which I have prepared, which I mentioned I have not received clearance to release—it includes a number of official letters, and I am hoping it will be released—is a case example illustrating the problems of attitude and intent on the Mark II Avionics program. I

have included as enclosures to this brief description of the problems a history of the Mark II Avionics program which is included as enclosure 1, and a chronological file of memoranda affecting the program which is included as enclosure 2.

Just to give you a very brief picture of the evolution of the program and this problem, I have recorded in this case example the very optimistic outlook reflected in the initial price, optimistic both in terms of the status of the articles being procured and the price to build them.

I have recorded next the growth of the suspicions of difficulties in the program.

Next, the attempts to withhold the true facts on the cost growth and the attempts by the Secretary of Defense's office to have a "should cost" study made on the program, and the attitudes that were then reflected in the resistance to the "should cost" study.

As I mentioned, I have not yet received permission to release that, although I have 10 copies available for the committee and the staff.

Secretary McLucas' letter expressed the desire not to make public the internal memoranda until there was a chance to make a thorough review of them.

Chairman PROXMIRE. May we proceed with our questions?

Mr. FITZGERALD. Yes, sir.

Chairman PROXMIRE. Your answer on the C-5A, when we asked you whether or not, the standards have been altered, the quality has perhaps changed, I take it was inconclusive. But let me ask you, are there revised standards less demanding than those required by FAA for commercial airplanes?

Mr. FITZGERALD. In the case of the landing sink rate, Mr. Chairman, on the face of it they are. They appear to be less demanding, although I should add that the FAA standards are heavily qualified, and there could be some obscure point that I have not recognized. But on the face of it, the answer is yes.

Chairman PROXMIRE. In what respects are they less demanding than those required by FAA for commercial planes?

Mr. FITZGERALD. In section 25 of the FAA regulations, which are the air worthiness standards for transport category aircraft, FAA has a statement requiring a 10 foot per second sink rate as being allowable at gross landing rate. Now, as I say, the qualifications which they place on that are a little bit unclear to me, as are the qualifications which may be on our specifications. But on the fact of it they are less demanding.

Chairman PROXMIRE. One of the reasons being given by those who champion and support the production of the C-5A is that it is breaking new ground, it represents something that hasn't been done before, that it is a new technology, and that consequently we should expect to have an enormous increase in costs. Does this really represent a new technology or new breakthrough? Does it differ that much from, say, the jumbo jet that is produced by Boeing?

Mr. FITZGERALD. I would say not a great deal. I would say that the technology involved is perhaps somewhat different, in that the C-5A was designed to be used on rough fields. But the difficulties of building extremely large aircraft are essentially the same, I would say, in the two programs.

Chairman PROXMIRE. You have told us that the estimates what we have had on the SRAM overrun are correct, inasmuch as the cost has doubled from its original estimate of \$300 million to \$600 million, is that correct?

Mr. FITZGERALD. The estimates that I have read to you, which show the doubling of the estimate, were between January 1968 and December of 1968. Some of the earlier estimates were somewhat smaller even than \$301 million which I gave you. It is not entirely clear, though, on the earlier estimates what the impact of the program content would be. But I do believe——

Chairman PROXMIRE. Is the \$600 million the correct estimate now, or is it lower than that?

Mr. FITZGERALD. The estimate is lower than that, but there has been a change in program content downward.

Chairman PROXMIRE. What is the present estimate?

Mr. FITZGERALD. \$438.7. But the comparable estimate——

Chairman PROXMIRE. You consider that a doubling for two reasons. One, because it was less than \$400 million; and two, there has been a change in program content so that dollar for dollar you are getting about the same as you would for, say, the \$220 or \$230 million estimate originally, is that correct?

Mr. FITZGERALD. Essentially, I think the best comparison, though, is the comparison of the two estimates which I read you, January 1968 and December 1968. As I remember, the program content was essentially the same, and the estimates grew from \$301 million to \$636 million. So your question on doubling of the estimate can be answered yes.

Chairman PROXMIRE. Now, you said something that concerns me very much. There is a note on this SRAM cost performance data which says that the actual cost to date, exceeds the amount definitized by \$101 million, placing the contractor in a cost plus environment. And then you said that this means that there is an expectation now on the part of the contractor, that whatever his costs are they will be covered, plus a profit for this particular weapon, is that correct?

Mr. FITZGERALD. That is the expectation, Mr. Chairman.

Chairman PROXMIRE. And why is that expectation a matter of this calculation? Why isn't this a matter of a change in the contract terms, in which it is explicitly stated it is on a cost plus basis?

Mr. FITZGERALD. The hope is that the authorized but not yet negotiated contracts can be negotiated, thereby placing a firm ceiling on the contract and retaining some degree of incentive for cost control. And I suppose this is the reason that they retain the label, fixed price incentive in these cases. It is not an unusual case. I think that this is very common in such programs as the Minuteman. As I mentioned the other day, the Minuteman contracts are subject to hundreds of changes a year. But the fact is that authorization of changes without firm prices proceed so rapidly that it outruns the ability of the contracting people to firm up the prices which would retain a firm ceiling and target for the program.

Now, an unfavorable aspect of this that I mentioned in my statement previously is the assumption that contract prices, including the prices of changes to contracts, must be negotiated on the basis of actual costs. If you were to remove that assumption, it would not necessarily

follow that the contractor was in a cost plus environment. But under this assumption with the picture we have here on SRAM, I would have to agree that the note is accurate. And this effectively removes our incentive for the contractor to hold costs down.

Chairman PROXMIRE. I want to ask you a little later about the Mark II avionics. But before I get into that I have something else to ask.

Mr. Fitzgerald, have you been relieved of any of your assignments and responsibilities since you testified before this committee in November and January, and if so, which ones?

Mr. FITZGERALD. I have been relieved of a number of responsibilities I previously discharged since November. Almost immediately I was effectively removed from direct contact with the major programs. It wasn't a formal sort of thing, I just wasn't invited to the meeting and reviews of the programs.

Subsequent to that I had been relieved of the responsibility formally on the cost control aspects of the major programs.

Chairman PROXMIRE. Give us the dates of that. You testified before this committee, as I recall, on November 13, 1968 first.

Mr. FITZGERALD. Yes, sir.

Chairman PROXMIRE. And it was at that time that you answered our questions on the overrun on the C-5A and told us that it would be close to \$2 billion, which has since been confirmed. Now, precisely when were you relieved of these responsibilities, and when were you cut off from consulting on any of these matters?

Mr. FITZGERALD. As I mentioned, the cutoff from contacts on these things was almost immediate, though informal. However, I suppose my formal relief from the major weapons system cost control duties came to me in the form of a new project list on the 4th of March 1969. Subsequently, I was relieved of my responsibilities to approve the reports on the examination of contractor cost control systems, or performance measurement systems, as we call them. I believe that date was the 27th of March.

Chairman PROXMIRE. Before that you had authority over the contractor's cost control systems, before the 27th of March 1969?

Mr. FITZGERALD. Yes, sir; I had the final approval authority for the reports which were made.

Chairman PROXMIRE. And that authority was taken away from you on March 27?

Mr. FITZGERALD. Yes, sir.

Chairman PROXMIRE. And was it transferred outside of your office? Or how was it handled?

Mr. FITZGERALD. Yes, sir; it was transferred to the Air Force Systems Command, which is a command subordinate to the Air Force Headquarters.

Chairman PROXMIRE. When were you given this authority for the first time?

Mr. FITZGERALD. This authority was a part of the function of my office when I joined the Air Force in September 1965. As a matter of fact, the program had been initiated by my predecessor, and I continued it.

Chairman PROXMIRE. How long had this authority resided in the office which you held?

Mr. FITZGERALD. In a broad sense, I suppose ever since the office was set up. And that goes back probably some 10 years. But specifically, the authority to review the performance measurement systems and to provide the direction from the Secretary's level had existed since 1963.

Chairman PROXMIRE. Did this in effect transfer the responsibility from a civilian to a military office.

Mr. FITZGERALD. Yes, sir.

Chairman PROXMIRE. It did?

Mr. FITZGERALD. Yes, sir.

Chairman PROXMIRE. Did this also mean that there was less review, less control?

Mr. FITZGERALD. Well, of course I think so. But the people who now have the responsibility would argue about that. They would claim that they are doing at least as strenuous a review as I did. But in my opinion I think the reviews are less demanding.

Chairman PROXMIRE. Let me see if I understand that. As of March 27 this authority for final review of—and how did you define this.

Mr. FITZGERALD. Performance measurement.

Chairman PROXMIRE. Performance management?

Mr. FITZGERALD. Yes, sir. This is the process whereby we attempt to assess the status of these programs, that is, how much work has been done, what the planned cost of that work was, and then compare the planned cost of work completed to the actual cost of the program incurred to date, thereby getting a measure of overrun or underrun on work done so far.

Chairman PROXMIRE. What was the scope of your responsibility to the Air Force? What weapons did this involve? Did it involve all of the Air Force's new procurement of major weapons systems?

Mr. FITZGERALD. Yes, sir; exactly, and all procurement as well.

Chairman PROXMIRE. Can you give us an idea as to what this would amount to in terms of dollars?

Mr. FITZGERALD. Well, the principal programs would have been the C5A, Minuteman, F-111, including Mark II—the Mark II is a portion of the F-111 program—the SRAM, the MOL, which has recently been canceled, although we are still spending a lot of money on it, certain of our large radar systems—all the major programs. The ones that are familiar to all of you were included in it.

Chairman PROXMIRE. An annual expenditure of billions of dollars?

Mr. FITZGERALD. Yes.

Chairman PROXMIRE. Can you give us an idea of how much? \$3, \$4, \$5 billion?

Mr. FITZGERALD. Approximately.

Chairman PROXMIRE. I will be back. I have some more questions in this regard.

Senator Jordan?

Senator JORDAN. Thank you, Mr. Chairman.

Following the line of questioning that the chairman has started here, what percentage of your time did you devote to these particular review board assignments that have been taken from you?

Mr. FITZGERALD. Senator, I would guess that on the major weapons system cost control activities in total, which would include the performance measurement activities, though not limited to them, I previously spent 90 or 95 percent of my direct assignment time.

Senator JORDAN. This would include your duties on the weapon systems cost analysis and control committee or board, or whatever it was.

Mr. FITZGERALD. Yes, sir.

Senator JORDAN. And also on the demonstration reviews?

Mr. FITZGERALD. Right, that is correct.

Senator JORDAN. Those two assignments required about 90 to 95 percent of your time?

Mr. FITZGERALD. That is correct.

Senator JORDAN. And you have now been relieved of those responsibilities?

Mr. FITZGERALD. I still have some procedural responsibilities in those areas, though no direct control over them. I have the responsibility to initiate, though not issue, final procedures to be followed in these areas, but I have no means of policing them whatsoever. And of course I have had other items added to my assignment list.

Senator JORDAN. We will get to that presently. But by whose specific order were you relieved of these more responsible assignments?

Mr. FITZGERALD. In the case of the performance measurement activity I was relieved of the assignment by Mr. Nielsen, in response to a request from the Air Force Systems Command and the air staff, the military portion of the Air Force Headquarters, that the Secretary's office be taken out of the review process. The action was initiated by Air Force Systems Command and the Air Force Headquarters, and was agreed to after quite a long time by Mr. Nielsen.

Senator JORDAN. Your being relieved of those particular responsibilities came over the signature of Assistant Secretary Nielsen?

Mr. FITZGERALD. Yes, sir. But in response to a request to him.

Senator JORDAN. In response to a request from the Air Force?

Mr. FITZGERALD. Yes.

Senator JORDAN. What duties were given to you in lieu of these previous duties which occupied 90 to 95 percent of your time? You weren't left sitting idle there, were you?

Mr. FITZGERALD. No, sir; not at all. I think that anyone at any responsible level in the Pentagon who is idle is idle because he wants to be. I have not been idle at all. I have had some unusual assignments which haven't really developed yet which I presume took the place of these two. One was to review the minor construction problems in Thailand. And the other was—

Senator JORDAN. Of what nature were these construction problems in Thailand?

Mr. FITZGERALD. The principal one that was brought to my attention was the cost increase on the construction of a 20-lane bowling alley.

I don't mean to make light of that, it is a very important thing, and someone must do it.

The other item that has been added which I have not yet gotten into at all is the problem of food service cost, that is, high cost in our mess halls.

Senator JORDAN. That is an important item too, is it not, of comparable weight with the bowling alley assignment?

Mr. FITZGERALD. Yes, sir, approximately.

Senator JORDAN. I get in over my depth, Mr. Fitzgerald, when we discuss all the technical aspects of these weapons systems. I am con-

cerned more with the attitudes of the people who have the responsibilities for passing on the change orders, the cost estimates, and all of these things that finally add up to the final bill that is presented to the Congress. Your testimony on previous occasions before this committee has brought an indictment, I think, with some justification, of the attitude of these people who engage in this exchange. They seemed to be more interested in getting the job done and less interested in any effort toward economy in getting that job done.

You have testified in your own language to that on numerous occasions. And I believe that you will agree with me that I am stating it fairly accurately when I repeat it new.

The chairman mentioned the Boeing 747 as the largest civilian plane. How does it compare in cost with the C-5A? Do you have any idea?

Mr. FITZGERALD. I have a rough idea, Senator, from reading the trade journals, and compared to what I know about C-5A costs. In the first place, it is necessary to make an adjustment in quoted costs of C-5A to make it comparable to the typically quoted cost of a commercial aircraft. Commercial aircraft are usually quoted at a price which would include a portion of the initial start up costs of the program, the amortization, if you will, of the development and tooling costs. Also typically the prices include what used to be called concurrent spares when I was in the commercial aircraft business, which would be roughly equivalent to initial spares in the Air Force.

Assuming that Boeing is quoting their prices on the basis that I am familiar with, they are quoting a figure of \$22 million for the 747's, or thereabouts.

On the same basis I think the C-5A program would probably be somewhere in the neighborhood of \$4.8 billion. This would not include all of the spares, it would include only the initial spares and whatever support equipment went with the airplanes; the 120 aircraft. So just on a rough division, you would get approximately \$40 million. That is a very gross sort of comparison. And I think that everyone will understand that.

Senator JORDAN. How do these two planes compare in size and complexity?

Mr. FITZGERALD. I believe the C-5A is very slightly larger. The complexity, I would think, would be comparable, though that is a very broad term. The C-5A is primarily a cargo airplane.

It can carry troops in an emergency. But the essential purpose of a C-5A is to carry heavy Army equipment on the main deck, and the operators of that equipment in the passenger compartment above, 75 people or so in the passenger compartment, whereas the 747 is, as you know, primarily a personnel carrier, a passenger airplane—though I understand it has been offered in a convertible version, that is, a version which would also carry cargo.

The cross sectional area of the 747 is not as large as the C-5A, and the cargo door openings would not be as large. So it would not be possible to carry everything that you carry on the C-5A in the 747, although the passenger aspect I think would be better.

Senator JORDAN. You testified that there was a good deal of resistance to the implementation of "should cost" studies on the C-5A. What type of arguments were made against the implementation of these "should cost" studies?

Mr. FITZGERALD. The resistance to "should cost" studies has been stronger, I think, on other programs than the C-5A. There was, I am told, a "should cost" study made by the Air Force plant representatives office in Marietta, Ga., at the Lockheed plant, which was not used in favor of exercising the repricing formula for the follow-on buy.

The classic example of resistance which I had hoped to submit to you today in some detail was that on the Mark II Avionics program.

Senator JORDAN. Yes.

Mr. FITZGERALD. And this was deep seated, it was very strong. The field organizations supported by the procurement authorities at a very high level actively resisted and defeated the attempt by the Office of the Secretary of Defense to have a "should cost" study made on Mark II.

Senator JORDAN. Is that included in the information you hoped you would have clearance for?

Mr. FITZGERALD. Yes, sir. And I am certain that we can get clearance for this in time. It is quite a lengthy document. As I mentioned before, I was somewhat stung by the expressed possibility that my information would not be complete, so I made it a point to make this quite complete, including documentation and a narrative type statement.

Senator JORDAN. In this connection, Mr. Chairman, I ask that we have printed in the record at my request a letter from the Under Secretary of the Air Force John L. McLucas to you dated June 16, 1969, in reply to your letter. It is actually a letter of transmittal for certain enclosures he sent to the committee. But I am interested in the last paragraph, especially.

Chairman PROXMIRE. Without objection the entire letter will be printed in the record.

(The letter and accompanying documents follow:)

DEPARTMENT OF THE AIR FORCE,
OFFICE OF THE SECRETARY,
Washington, June 16, 1969.

HON. WILLIAM PROXMIRE,
*Chairman, Subcommittee on Economy in Government,
U.S. Senate, Washington, D.C.*

DEAR MR. CHAIRMAN: Enclosed are the following documents which at the hearings on June 11 you requested be furnished your committee:

1. Price Analysis Report ("Should Cost" Study), Mark II Avionics System, together with the price negotiation memorandum. Although not requested, the negotiation memorandum is provided since the "should cost" study represents only one element used by the Air Force in establishing its initial negotiating position. These documents contain information such as proprietary data and details of Air Force negotiating techniques which should not be released to other contractors; accordingly, we should be consulted prior to the public release of all or any part of these documents.

2. SRAM Cost Estimate Track Summary. To be more meaningful, the cost estimate track data contained therein would require an explanation of force structure, which is classified. However, the methodology of the USAF cost estimate tracks provides the basis for a year-to-year review of programs versus costs. Each change, and the reason for the change, is documented. Increases from year-to-year are specifically identified and program decisions are based on program progress versus cost. It should be noted that this methodology is used by the Air Force as a necessary management device to assure that costs are appropriately considered in planning and programming, and to provide a means to measure and assess contract performance.

3. A memorandum from Mr. A. E. Fitzgerald to Secretary Nielsen, dated March 15, 1968, (Subject: Cost Control on the Mark II and at Autonetics in General),

attached to which is a Memorandum of Conversation, dated March 13, 1968, by William W. George, formerly an employee of the Department of Defense. With respect to these documents, we feel that we should point out that while they are not considered classified in the sense of national security, their public release may not be in the best interests of maintaining good management in the military services. These memoranda include personal opinions of individuals, and were not expressions of views by top management people in the Air Force or OSD. While we recognize your right to have access to documents which concern management of resources within the military, we are not sure it serves a useful purpose to have this kind of information circulated in the open press. Specifically, we feel that it is essential to maintain an environment in which our people feel free to carry on our day-to-day business on an informal basis and in an atmosphere of complete candor through personal exchanges of views, debates and internal memoranda, and in which contractor employees may be open and frank with employees of the government without fear of retribution. We would not like to have people feel inhibited about expressing or writing down opinions very frankly by the possibility of disclosure of such memoranda to public scrutiny.

In furnishing the enclosed memoranda to your committee, I want to assure you that we in the Air Force Secretary's office are dedicated to improving management and cost control and we believe that Air Force officers are also.

I am aware that Mr. Fitzgerald has further information which he wishes to provide your committee in response to your request. I was advised of this late today, and an orderly review is underway to make this additional information available.

Sincerely,

JOHN L. MCLUCAS,
Under Secretary of the Air Force.

DEPARTMENT OF THE AIR FORCE,
Washington, June 20, 1969.

HON. WILLIAM PROXMIRE,
Chairman, Subcommittee on Economy in Government, U.S. Senate.

DEAR MR. CHAIRMAN: Transmitted herewith, pursuant to the request of your Committee Staff, is a document entitled "Case Example," with inclosures, which has been prepared by Mr. A. E. Fitzgerald, Deputy for Management Systems, Office of the Assistant Secretary of the Air Force (Financial Management).

As you will note, with the exception of the ten page Case Example, the material consists of documents, some of which are informal memoranda, that were written during the March 1967-May 1968 period. Two of the items in this package, the Memorandum of Conversation by Mr. William W. George and the March 15, 1968 Memorandum for Secretary Neilsen from Mr. Fitzgerald, were forwarded to you by Secretary McLucas on June 16th. The 33 page document referred to in Mr. Fitzgerald's statement as "An Analysis of the Mark II Program Prepared by an Office of the Secretary of Defense Analyst" does not bear a legible signature and carries the notation of "(First Draft)" on its cover. We believe it was prepared by Mr. George, who was formerly employed in the Office of the Assistant Secretary of Defense (Comptroller). We cannot attest to the accuracy of the data or the judgments as represented therein without extensive research and analysis.

As an overall comment on the inclosed documents, we feel we should point out that the ten page Case Example is Mr. Fitzgerald's personal view of the situation with respect to the Mark II Avionics Program and is not an Air Force view of recorded events. Further, the documentation attached thereto appears to have been carefully selected to support the point of view taken by Mr. Fitzgerald and does not provide a balanced picture of the situation.

Finally, with respect to the memoranda in the attached documents, you will note that Mr. Fitzgerald has employed the use of codes in lieu of revealing the names of certain individuals whose actions are presented in an unfavorable light. As pointed out above, two of these same items were forwarded to you by Secretary McLucas on June 16th. The names of the individuals were not deleted from those memoranda, and if you so desire, we can provide names of the individuals whose names are coded in the documents being presented at this time.

In addition to the concern expressed by Secretary McLucas in his letter regarding the public release of the memoranda, we believe the individuals con-

cerned should be afforded an opportunity to transmit their personal views regarding their involvement in this matter to your Subcommittee.

Sincerely,

Maj. Gen. JOHN R. MURPHY,
Director, Legislative Liaison.

[Attachment]

CASE EXAMPLE: PROBLEMS OF ATTITUDE AND INTENT ON THE MARK II
AVIONICS PROGRAM

In the hearings of June 11, 1969, I was asked to give examples of the attitude problem which I had described in general terms in my statement. I was further asked to furnish correspondence on this as it affected the Mark II Avionics situation. The following brief discussion will, I hope, illustrate several of the attitude problems as I saw them on the Mark II. As background for Members of the Subcommittee and staff who wish a complete history of the Mark II program through May of last year, I have included a document "An Analysis of the Mark II Program" prepared by an Office of the Secretary of Defense analyst. (Enclosure 1)

Enclosure 2 is a chronological file of sample memoranda from my own files which I believe will help illustrate the attitude problem I have discussed previously. I have removed the names of Air Force officers and contractor personnel from some of these memoranda. It is not my purpose to picture individuals in an unfavorable light. I have used the memoranda simply to illustrate and confirm the situation I will describe.

First, I would like to present a very brief background for the Mark II contract. Autonetics Division of North American Aviation was selected as the winner of a competition to build the Mark II Avionics systems for the F-111 and was awarded a purchase order by General Dynamics, the prime contractor, for the weapons systems on July 1, 1966. The purchase order contained the normal provisions of a definitized contract except that target prices were stated on a "not to exceed" basis. In theory, General Dynamics as the prime contractor could negotiate downward adjustments to the target prices, but Autonetics did not have the right to negotiate upward adjustments for the then-current statement of work.

The "not to exceed" target price for the research and development plus the first production run was \$145 million for Autonetics. At the time of the purchase order award, the envisioned system was pictured in Pentagon presentations and trade journals as a natural evolutionary improvement in the then-current Mark I system. While it was conceded that some further development work would be needed, impressions were left that the subsystems and components of the new system were within the "state of the art," and would present no particular development problem. This optimistic outlook was reflected in Autonetics price of \$39 million for the entire research and development program. To illustrate the advanced stage of development of components of the system, pictures of articles already built were included in trade journals as early as June 6, 1966. Later, after winning the competition, Autonetics ran an advertisement in one of the trade journals with the following statement:

"When will someone develop a precision microelectronic autonavigator that meets advanced requirements for aircraft avionics, and provides fast reaction capability, reliability, and accuracy under severe operating conditions?"

"Autonetics already has.

"It is the N16. It has proved its capabilities in more than 14,000 hours of testing, including test flights in five different types of aircraft. It is available for advanced inertial navigation applications requiring precision position and velocity accuracy on a short delivery schedule at low cost. N16 inertial navigation sets have been selected for the Mark II system in the F-111 aircraft."

The advertisement included a picture of the N16 already built and presumably all ready to plug into your new airplane.

Despite the optimistic outlook, indications of both technical and problems of cost growth began to filter up to Air Force Headquarters and to the Office of the Secretary of Defense early in 1967. At that time, a central office for all F-111 cost information existed at Air Force Systems Command Headquarters at Andrews AFB. One very competent cost analyst with additional assistance from time to time manned this office, and served as the single source of F-111 cost information for Air Force Headquarters and the Office of the Secretary of Defense. An analyst from the Office of the Secretary of Defense was assigned to track this program, and to advise the Comptroller of the Department of Defense and through him the Secretary of Defense. This analyst grew concerned about

the cost growth very early in the program. The first memorandum in the chronological file (Enclosure 2) records his concern:

The only estimate available today on Mark II is the one prepared in the Cost Study last spring before the basic configuration of Mark II had been determined. This estimate is generally considered to be far below the eventual cost of Mark II.

Elsewhere in the memorandum he recommended that a new independent cost study might be helpful.

In the meanwhile, many technical changes had been issued on the Mark II program. The vast majority of these changes were not to accommodate changing Air Force requirements, but instead resulted from requests by Autonetics to relax technical specifications. Nevertheless, the program was "reevaluated" and a new "not to exceed" estimate was submitted by the contractors. On the basis of the reevaluation of the program, the Secretary of the Air Force wrote to the Secretary of Defense on May 4, 1967 (not included in chronological file) recommending approval for the revised Mark II program. In this memorandum the Secretary of the Air Force gave assurances of an existence of a "not to exceed" current price. The memorandum also contained an estimate for the cost of the portion of the total program paralleling the contracted effort of \$712 million. This was made up of \$242 million for the total research and development and \$470 million for the first production run.

Mr. Vance, then the Deputy Secretary of Defense, approved the new program on this basis. However, shortly after Mr. Vance had approved the revised program, it was discovered that the Air Force cost estimates had been revised downward. The Office of the Secretary of Defense cost analyst having direct access to the "single source" office of F-111 information at Andrews AFB already knew of the true current Air Force estimate of \$941 million for the same work. The Air Force Secretariat was forced to admit that a "mistake" had been made. In actuality, the memorandum signed by the Secretary of the Air Force had been prepared by the military portion of the Air Force Headquarters (the Air Staff) and had not been seen by any financial people in the Secretariat prior to submission to the Office of the Secretary of Defense.

As a result of this embarrassing disclosure two things happened:

1. The Air Force cost analyst responsible for keeping the various headquarters informed of current estimates found himself in deep trouble. This was not because of the erroneous estimates forwarded to the Office of the Secretary of Defense, but because the true estimate had been given to them directly.

2. Pressures developed to do a "should cost" study on the Mark II, primarily from the Office of the Secretary of Defense and the Assistant Secretary of the Air Force for Financial Management. These pressures were resisted by Air Force procurement and program management people.

After a series of negotiations, the Assistant Secretaries of the Air Force for Installations and Logistics and Financial Management agreed to "An estimate of the probable cost of the currently proposed Mark II system assuming efficient and resourceful management by the companies involved." The foregoing quote is taken from the second memorandum in the chronological file for the Vice Chief of Staff, USAF, dated June 20, 1967.

Unfortunately, this definition mixed the so-called probable cost estimating and should cost estimating approaches as I described them in my statement of June 11. The direction to the Vice Chief of Staff was interpreted by the military procurement people to be confirmation that "normal contractor proposal fact finding process" would be used. (Item 3 in chronological file)

Fortunately, the ambiguity in the direction by the Air Force Secretariat was detected by the Office of the Secretary of Defense and was crisply clarified in a July 12 memorandum from Secretary Anthony.

"Since the assumption of 'efficient and resourceful management' will not necessarily yield the probable cost, I would suggest that separate estimates be developed under the following assumptions:

- "a. probable costs, under the contractor's current mode of operation;
- "b. what the items should cost, under an improved mode of operation."

In this same memorandum Secretary Anthony also directed that:

- "d. The relationship of the Mark II to the configuration of the airplanes already on contract and the method used by the contractor to segregate Mark II costs from these costs."

This meant a firm baseline for the incremental cost for the Mark II would be retained.

With the very clear direction from Mr. Anthony on the approach to the cost studies and on retention of a cost baseline, it would appear that the earlier arguments within the Air Force would have disappeared.

However, as recorded in the fifth item in the chronological file, the field organizations still resisted both the definition of a cost baseline separately identifying Mark II costs and the should cost study. Regarding the guidance given to the field on retaining a separate identification for cost for the Mark II, the following is recorded:

"2. The briefing form we saw on August 2 followed this guideline, except that Colonel M and other working level people in the SPO do not want to label the FB-111 and F-111K avionics 'Mark II.' However, they have agreed to track all the items contained in the April 14 proposal.

"3. General H is strongly opposed to this definition and wants to revert to the revised SPO definition of Mark II which includes Autonetics sub-systems only. Both he and General D expressed the fear that the Mark II program will be cut off if we use the April 14 definition because costs are too high. It is clear that they do not want the total cost of the system stated."

On the subject of the should cost analysis, the memorandum records:

"1. There is still considerable misunderstanding over the concept of 'should cost.' There is a strong desire on the part of procurement and pricing people not to do anything in this effort which is not a part of 'normal' negotiation preparation."

Although the stated excuse for not doing a should cost study was the lack of understanding, it became clear at this point that the question was not how to proceed in a should cost study, but whether one should be done at all. The higher ranking people in the field began to resist the influence of higher headquarters strongly, as indicated in the final paragraph of the referenced memorandum.

After a long series of discussions, meetings and field trips aimed at carrying out the direction from Secretary Anthony, it again became necessary for the Office of the Secretary of Defense to issue specific instructions. These instructions contained in a memorandum from Secretary Nitze on October 28 which included the following direction:

"(4) Identify separately all General Dynamics' costs clearly attributable to Mark II and insure that these costs are segregated from the cost of the work already on contract.

"(5) Identify contractor inefficiencies which can be eliminated through improved management control.

* * * * *

"(2) Insure that the negotiation proceeds from the 'should cost' analysis and not from projections of historical costs."

By this time it was perfectly clear that the field organizations in the Air Force, supported by higher procurement authorities, simply were not going to comply with directions from the Office of the Secretary of Defense. On December 26, 1967, a meeting was held in the Pentagon which returned full responsibility for the cost studies and negotiations to the field (Aeronautical Systems Division and Air Force Systems Command). This was stated as follows in the memorandum on the meeting:

". . . The presentation's main recommendation was to proceed with fact finding and negotiation, and with flexibility retained at the ASD (ASL) level to make deviations from the presented objectives when and if necessary and in consonance with the facts as the negotiation progresses.

* * * * *

"b. The 'efficiency' studies will not be pursued further for this negotiation."

At this time, further activities on the should cost studies were suspended.

With the successful defiance of the direction from the Office of the Secretary of Defense to maintain a meaningful separation of Mark II costs and to perform and use a meaningful should-cost study, the situation on Mark II returned to normal. Interest in Mark II cost control was very low indeed. The attitude of the field organizations can best be illustrated by my reading to you a memorandum recording a conversation between the Office of the Secretary of Defense cost analyst who had tracked the Mark II program and an official from North American. (Insert March 13, 1968 memorandum.)

On receiving a copy of this memorandum, which confirmed the attitude I had observed during the previous year, I decided that further attempts to work with the field organizations in Mark II cost control would be futile unless the attitude

displayed by high ranking officers in the field could be changed or overcome. Accordingly, I wrote the very strong memorandum which is included as the last item in the chronological file. This memorandum was clearly meant to be an internal document, and it is distasteful for me to reveal it publicly. However, the issue is so important that it must be documented.

I believe this abbreviated case study illustrates some obstacles which must be overcome if effective cost control is to be realized on major weapons acquisition programs. I hope it will be useful to you in formulating recommendations for improvement.

[Enclosure 1]

AN ANALYSIS OF THE MARK II PROGRAM (FIRST DRAFT) MAY 17, 1968

I. BACKGROUND

A. *The Contract Definition and Source Selection*

The requirement for the Mark II system was identified as early as 1964 when it became apparent that the F-111A/Mark I system did not have a satisfactory air-to-air capability. This requirement resulted in the initiation of contract definition in early 1966.

1. *The Original Contract.*—Principle competitors for the Mark II contract were Autonetics, Sperry and Hughes. Autonetics was selected as the winner on June 27, 1966. On July 1, 1966, Autonetics entered into P.O. 181 agreement with General Dynamics for a fixed-price incentive contract for a "not-to-exceed" target price of \$145 million.

The parties of the contractual document were General Dynamics as the prime contractor and Autonetics as the subcontractor. At the time of the contract signing, the Air Force issued CCNs 492 and 125 to General Dynamics on its RDT&E contract #8260 and its production contract #13403. These CCNs were accepted by General Dynamics.

P.O. 181 contained all the normal provisions of a definitized contract with the exception that target prices were stated on a "not-to-exceed" basis. This gave General Dynamics as prime contractor the opportunity to negotiate downward adjustments to the target prices. It did not give Autonetics the right to negotiate upward adjustments for the existing statement of work.

In addition to normal contractual provisions, P.O. 181 referenced Autonetics' source selection proposal and 1,062 items contained in the Air Force Deficiency Report. One of the most significant of the deficiency reports was the requirement to undertake a "form fit" study to insure that Mark II equipment fit within the physical limitations of the aircraft. It is significant to note that Autonetics agreed to correct all of the identified deficiencies at no change in target prices.

2. *Proposed Prices.*—The price estimate in the proposal was \$183 million with a \$38 million "management reduction." In effect, Autonetics management said it was willing to reduce the price in order to win the competition.

3. *Performance Baseline.*—The performance baseline contained in P.O. 181 is the same as the performance proposed by Autonetics. Performance specifications rather than design specifications for the individual end items (e.g., attack radar, general purpose computer) were established by the Autonetics proposal.

In its Cost Traceability Report dated October 2, 1967, Autonetics sets forth the claim that a design requirements baseline was not established in Contract Definition. The claim is based on the following contentions:

a. None of the parties understood the additional program definition efforts which remained after Contract Definition. These efforts were beyond the scope of P.O. 181.

b. The Deficiency Reports required a substantial implementation effort.

c. Significant interface problems existed between the avionics hardware items and the airframe.

Nevertheless, Autonetics did agree to accomplish development and production of the system with its proposed performance and with the deficiency reports incorporated. As stated in the basic contract, this would be done within the proposed target price of \$145 million. Prior to the contract signing, Mr. J. L. Atwood, President of North American Rockwell, wrote a letter to the Air Force saying that his company did not anticipate any difficulty in implementing the deficiency reports.

Actions following the source selection, which are discussed in the following section, did result in Autonetics making substantial changes to its original design concepts in order to meet the contractual performance specifications.

4. *Time Pressures*.—The final, and perhaps the most important, factor about the Contract Definition which must be considered is the time pressure involved in both the CD and operational capability dates. In order for the replacement of the Mark I avionics in the F-111A with the Mark II system to be cost effective (Mark II cost \$1.5-\$2.0 million more per aircraft than does Mark I), it was essential that Mark II be introduced with the third wing of F-111As.

The desire to use a modified version of the system, Mark IIB, on the FB-111 also placed severe constraints on the schedule. In order to meet the FB-111 aircraft delivery schedule, initial Mark IIB sets were required six months ahead of the first Mark II set.

These schedule constraints left a 33-month span for the contract definition, development and initial production of the Mark II and a 28-month span for the Mark IIB. Because of the short time period, the contract definition phase was shortened to three months for the contractor proposals and one and one-half months for the evaluation-source selection. This left 28½ months for development and production of the Mark II and 23½ months for the Mark IIB.

The compressed schedule meant a high degree of concurrency between the development and production programs. For example, in the *original* F-111D/Mark II schedule, production go-ahead was required before the first RDT&E unit was integrated. Flight tests were to begin only six months prior to initial production deliveries. From this schedule, it was obvious at the start that test results could not be used in improvement of initial production units.

The FB-111 original schedule was even tighter. The first RDT&E unit was scheduled for completion four months after production go-ahead. The sixth unit and the completion of system testing was scheduled for the same time as delivery of the first production units.

B. Activities Following Source Selection

1. *The "A-1 Specifications"*.—Immediately following the contract signing, Autonetics began to consolidate the deficiency reports into its proposed design. A 70-man team went to GD/FW to resolve questions concerning physical fit and interface. Meetings were also held on symbology with GD/FW.

During these meetings it became apparent to Autonetics that it would have to make substantial changes to many of its designs in order to achieve the contractually-required performance. In some cases the contractor prepared to ask for deviations from the performance specifications.

By September, 1966, a new set of performance specifications was drawn up. The new specifications, known as the A-1 Specs, resulted in a somewhat degraded performance. Also incorporated in the A-1 Specs were CCNs 1-12, which added a number of minor requirements but no substantive increases in performance.

At this time Autonetics agreed to the A-1 Specs, with the revised performance requirements and no change in the schedule. They agreed to this at *no change in target price. This is most significant in view of the contention made by Autonetics that the cause of the greater portion of the cost growth occurred prior to the A-1 Specs.*

In its supplement to Cost Traceability Report dated December 21, 1967 Autonetics contends that cost growth of \$163 million (above the June, 1966 proposed cost of \$132 million) is attributable to CCNs 1-12, all of which were issued prior to the A-1 Specs. However, the cost growth for CCN 12 is "as amended by letter dated May 18, 1967," thereby eliminating the necessary distinction between changes which took place before the A-1 Specs of September, 1966 and those which took place after the A-1 Specs.

2. *Specification Changes*. There is no doubt that Autonetics made significant changes to its designs after the source selection. It is also true that these changes were being made while development was going on in parallel. The salient point is that *Autonetics made these design changes in order to meet the original performance specifications, not to implement changes directed by the Air Force.*

During the working sessions prior to the A-1 Specs and in the months which followed, there were changes to the original performance specifications. However, these changes took the form of deviations from or degradations to the performance specified in the contract, not improvements.

The reason that the specifications were changed was not to accommodate changing Air Force requirements but rather to accommodate requests from

Autonetics to relax the specifications it could not meet and to comply with the deficiency reports. Thus, it can be concluded that the cost growth which has occurred would have been even greater had not the specifications been changed.

3. *Repricing the Program.* During the months following the source selection it must have been apparent to Autonetics that it could not keep its costs within the original ceiling price of \$172 million. By February 22, 1967, Autonetics had submitted proposals on some thirty CCNs for a total of \$80 million. In its system of financial controls, Autonetics had kept close track of these changes and had issued work authorizations to the operating organizations on a change-by-change basis.

In early March, 1967, Autonetics re-evaluated the program and its impending costs. This evaluation resulted in a recognition that:

- a. The current designs were substantially different than those contemplated at the time of source selection.
- b. Actual costs would likely be \$300 million.
- c. There had not been sufficient CCNs to cover these costs.
- d. The performance specifications could not be met without additional degradations in the requirements.

Faced with the realizations, Autonetics decided to reprice the entire program based on revised cost estimates and to press for the necessary deviations from the performance specifications. At this time *Autonetics relaxed its financial control over work authorizations and change control.* The repricing action was based on Autonetics' contention that (a) its basic designs had undergone fundamental and substantial changes since the source selection, (b) actual costs would be far above the amount originally contemplated, and (c) the cost of the changes could not be traced on a change-by-change basis.

Autonetics submitted a revised proposal for \$356.7 million to GD/FW on March 15, 1967. This proposal was passed on to the Air Force on April 1 and followed by a meeting of the presidents of Autonetics and GD/FW with the Secretary of the Air Force. At this meeting the contractors were told that the proposal was unacceptable because of the price and the unresolved deviations to the specifications.

On April 15 Autonetics submitted a revised proposal for \$297 million and again met with the Secretary of the Air Force. GD/FW was not present at this second meeting. The \$60 million reduction included \$22 million for relaxation of the specifications and \$38 million for a "management cut." Autonetics said it was willing to make such a cut in order to keep the program alive. However, its basic cost estimate of \$304.8 million remained unchanged. The \$38 million management reduction is the same amount of reduction which Autonetics made in its source selection proposal.

4. *Requirement for Traceability*—Soon after this second meeting the F-111 SPO sent a TWX to GD/FW. It said that the proposal was a "not to exceed" maximum price on which basis formal negotiations would be initiated, providing the contractor could trace from the original \$145 million contract to the \$297 million proposal.

II. TRACEABILITY

A. Air Force Requirement

As indicated in the previous section, the repriced Autonetics proposal was deemed acceptable for negotiation purposes contingent upon traceability. The exact quote from the TWX signed by the contracting officer on May 12, 1967, is as follows:

"5. The amount proposed in your 14 April 1967 letter is acceptable on a 'not to exceed' basis for negotiation purposes.

"6. The Autonetics proposed method of pricing P.O. 181 and subsequent authorizations thereto on a total program basis is totally unacceptable to the Air Force. The detail cost data to be submitted by GD/FW in support of the Autonetics effort shall be prepared in such a manner as to enable the Air Force to trace the cost from the initial Autonetics proposal embodied in P.O. 181. Each change to the initial authorized technical baseline shall be identified and the delta cost therefore shall be already thoroughly substantiated.

"7. It is recognized by the Air Force that Autonetics has been reluctant to furnish cost data in the manner prescribed above. However, in order to protect the integrity of the competition for the Mark II Program and to insure that the rights of the Government regarding the 'not to exceed' target price set forth in P.O. 181 are not jeopardized, the Air Force must insist that the detail cost data be prepared as outlined in paragraph 6 above."

Thus the requirement for traceability was specifically laid upon GD/FW and, in turn, on Autonetics. The traceability requirement, however, was not new. In January, 1967, the contracting officer sent a TWX to GD/FW saying that "any cost impacts which the contractor contends were generated by PCO letter No. 11-908 will be set forth as deltas to the original P.O. 181 costs and will be clearly, thoroughly and individually substantiated in said proposal."

B. Autonetics Position

It will be recalled that Autonetics repriced proposal was developed without reference to P.O. 181. Therefore, the only way the contractor could provide traceability was to "back fit" the cost increases to the changes which had taken place. Since many of the changes took place prior to the September 23, 1966 amendment, which was at no change in target price, the cost increases on this basis could not really be shown to be the responsibility of the Government.

Therefore, Autonetics took the position that traceability was not possible. In its Cost Traceability Report, submitted on October 2, 1967, Autonetics claimed that "because of the complex interrelationships of the activities and changes during the period June 1966 to April 1967, it is not possible to estimate the cost effect of each individual change."

In discussions with officials of the Department of Defense, Autonetics' top management, including President Fred Eyestone, insisted that it was impossible for the company to relate cost increases to specific changes. At the writing of this report Autonetics had not modified this position.

C. Air Force Evaluation

Because of Autonetics' unyielding position, the Air Force established, at the direction of the Deputy Secretary of Defense, a technical trace team under the direction of the F-111 SPO. This team was charged with identifying Government responsible changes and the attendant costs. *The maximum amount identified by this effort as the responsibility of the Government was \$20.2 million.* The cost of the changes were based upon contractor estimates contained in CCNs. Adding these additions to the amounts in the original contract yields a target price of \$165.5 million and a ceiling price of \$195.7 million.

III. CONTRACTOR PERFORMANCE

A. Schedule

It was recognized from the beginning that the schedule was very tight and involved a high degree of concurrency. As late as the fall of 1967, both the Air Force and the contractor claimed the schedule could be met. However, many individuals in DDR&E, Comptroller, and BoB contended that the schedule could not be met with satisfactory equipment.

As of March 20, 1968, the contractor's performance in the development program to date indicated slippage of 7-7½ months thus far. Since the schedule is already very tight and the degree of concurrency very high, it seems unlikely that this can be made up. Therefore, it appears that the initial production units will slip 6-12 months.

Faced with an impending slip in the test program and a schedule which already calls for production units to be built simultaneously with testing, Autonetics has two alternatives: (1) it can produce hardware on schedule which probably will not meet performance specifications, or (2) it can delay the schedule long enough to insure the equipment is fully operational. These alternatives will be discussed in the following section.

B. Technical

With the testing phase of the development program just beginning, it is difficult to judge the technical performance of the contractor. However, two general forecasts can be made.

1. *The contractor will not achieve the performance proposed in its source selection proposal.* Autonetics recognized this and requested soon after source selection a number of deviations from this proposal. An example of the deviations granted is the system reliability, which was reduced for the first lot of production units.

2. *The equipment delivered in the first production lot will not perform to specifications in all operating modes.* One reason for this is that testing will take place concurrently with initial production and, therefore, improvements required which are identified in test cannot be made in the first production lot.

Autonetics is already anticipating a substantial retrofit program. It has identified known retrofits. In addition, the company notes that the results of test program may require a number of additional retrofits.

Because Autonetics is already planning a retrofit program, it seems logical to conclude that they will pursue the strategy of trying to meet the schedule with equipment which will not meet specifications in all operating modes. This is the "low cost" strategy for the company because they can avoid schedule penalties and probably receive additional funds to make the needed retrofits.

For the Government this is an undesirable strategy. Judging from past experience, it is likely that the Air Force will permit GD/FW to install the Mark II equipments in the third wing of planes even if they do not meet all specifications. These planes will then become operational with the intent of making the necessary retrofits at a later date. However, there is a high probability that these aircraft will not function properly in all modes and will experience a high loss rate. Such has been the experience with the F-111A/Mark I aircraft although its avionics is much less sophisticated.

C. Cost

The original contract included a target price of \$145.3 million, \$39.1 million for RDT&E and \$106.2 million for production. The targets were based on a target cost of \$132.2 million proposed by Autonetics, a profit of 10% and a ceiling price of 120% of target cost. Actually, Autonetics' original estimate was \$183 million (including a 10% profit) but this was subsequently reduced by \$38 million in a "management reduction" prior to the source selection. These prices are incorporated in the fixed-price incentive contract.

In the period September 1966 through March 1967 Autonetics made five separate price estimates, each of them higher than the previous estimate. The last of these, submitted in early March 1967 was for \$250.5 million.

On March 15, 1967 Autonetics submitted the repriced proposal of \$356.7 million which was discussed previously. By early 1968 it became apparent that actual costs at Autonetics might exceed even the new proposal.

In April, 1968 General Dynamics estimated that Autonetics' actual costs would reach \$320 million for the \$145 million contract. An Air Force estimate made in the same time period totaled \$368 million. Of this increase only \$20.2 million is the result of Government-responsible changes. The remainder is attributable to an initial estimating error (approximately \$100 million) and poor cost control at Autonetics (\$60-100 million, depending upon the ultimate cost).

It is clear that Autonetics cost performance on the Mark II has been unsatisfactory. As in the case of schedule and technical performance, the contractor was guilty of submitting an unrealistic proposal with promises which could not be met. However, in the schedule and technical areas it is not clear as yet whether the contractor's performance when compared to more realistic baselines will be satisfactory. On the other hand, current indications are that even when compared to realistic cost estimates Autonetics cost performance has been poor.

IV. COST PROBLEMS

A. Cost Growth

Estimates of the cost of the Mark II system have reflected a steady and substantial rate of increase since Autonetics was selected as the Mark II contractor in June, 1966. The figures below indicate the magnitude of this increase:

(Dollar amounts in millions)

| Date of estimate | R.D.T. & E. | Production | Total program |
|-----------------------|-------------|------------|---------------|
| June 1966..... | \$100 | \$500 | \$610 |
| December 1966..... | \$190 | \$600 | \$850 |
| June 1967..... | \$290 | \$820 | \$1,110 |
| January 1968..... | \$330 | \$1,180 | \$1,510 |
| Percent increase..... | +220 | +136 | +148 |

These estimates which were made by the contractors involved (General Dynamics and Autonetics) include the avionics equipment supplied by Autonetics, avionics supplied by General Dynamics, GD/FW integration costs, flight test, GD/FW loading on Autonetics equipment, and support costs (AGE, training, data and initial spares). The estimates are *not* precise because of the prob-

lems in segregating Mark II costs (especially those at GD/FW) in the estimates from other air vehicle and support costs.

The June, 1966 estimates include Autonetics' firm proposal for the equipment and GD/FW's estimate of the integration, GD/FW avionics, and support costs of Mark II. Not included in the initial estimates was GD's profit and burden on Autonetics' equipment since Autonetics was contemplated as an associate contractor at that time. However, Autonetics did bid on both a subcontractor and an associate basis and the bids differed by only \$1 million. Autonetics' original contract covered firm orders only for RDT&E and FY 1968 production, but, in addition, it contained option prices for additional Mark II sets and Mark IIB sets.

By December, 1966 both contractors had revised their estimates upward by approximately 40%. In June, 1967, General Dynamics submitted a firm proposal through FY 1967 production which included a revised proposal from Autonetics. The Autonetics increase was 116% above the original contract value. Total program costs rose by 85%. The most recent increase of \$400 million, reflected in the January, 1968 GD/FW Cost Information Report, was almost entirely for Autonetics hardware items.

B. Autonetics Cost Problems

The increases for Autonetics only are shown in the figures below :

[Dollar amounts in millions]

| Date of estimate | R.D.T. & E. | Production | Total program |
|-----------------------|-------------|------------|---------------|
| June 1966..... | \$39 | \$386 | \$425 |
| June 1967..... | \$124 | \$619 | \$742 |
| January 1968..... | \$173 | \$917 | \$1,089 |
| Percent increase..... | +341 | +138 | +156 |

The Autonetics increases can be categorized into three areas: (1) subcontractors, (2) burden on major subcontractors, and (3) in-house effort. The growth in each category between the June, 1966 contract for \$145 million (\$132 million cost) and its March, 1967 cost estimate (plus 10% profit) is as follows:

[Dollar amounts in millions]

| | June 1966 | March 1967 | Cost growth | |
|---------------------------|-----------|------------|-------------|---------|
| | | | Amount | Percent |
| Major subcontractors..... | \$68.6 | \$92.1 | \$23.5 | +34.3 |
| Burden (on above)..... | 5.5 | 17.4 | 11.9 | +216.3 |
| In-house effort..... | 58.1 | 195.3 | 137.2 | +236.1 |
| Total..... | 132.2 | 304.8 | 172.6 | +130.6 |

It is clear from this breakdown that the most disturbing cost problems are on Autonetics in-house effort which includes attack radar, inertial navigation set, system integration. A breakdown on these three items is shown below :

[Dollar amounts in millions]

| | June 1966 | March 1967 | Cost growth | |
|------------------------------|-----------|------------|-------------|---------|
| | | | Amount | Percent |
| In-house effort: | | | | |
| Attack radar..... | \$24.1 | \$91.6 | \$67.5 | +280 |
| Inertial navigation set..... | 21.8 | 58.6 | 36.8 | +169 |
| System integration..... | 12.2 | 36.6 | 24.4 | +200 |
| Other effort..... | 0 | 8.5 | 8.5 | ----- |
| Total, in-house effort..... | 58.1 | 195.3 | 137.2 | +236 |

It is in these three areas that Autonetics' source selection proposal was the most in error. In the case of the attack radar, Autonetics had to redesign its proposed design substantially in order to meet system performance specifications as well as physical limitations of the airframe.

Much of the physical fit definition was accomplished after the contract was signed in June, 1966, although the problems were cited in the deficiency reports prepared prior to the signing of the contract. The changes resulted in the A-1 specifications, which were agreed to by Autonetics in October, 1966 *at no change in target price*.

Autonetics' experience with the inertial navigation set was similar to that with the attack radar. Autonetics' proposal contemplated use of the N-16 platform which had been tested at Holloman. However, the deficiency reports and the physical fit study, again which Autonetics agreed to at no change in target price, caused the company to redesign the platform.

In both of these cases Autonetics vastly underestimated the complexity of the task and the requirements of the system when it signed the original contract. This was also true of the system integration effort which trebled in cost between June, 1966 and March, 1967.

V. ALTERNATIVE COURSES OF ACTION

The alternative actions which may be taken at this point can be divided into two categories: (1) actions on the basic contract (RDT&E and first production run) and (2) actions on follow-on production.

A. Basic Contract

The Mark II program is well down the road. Over \$200 million has already been spent by Autonetics on the Mark II program, primarily in RDT&E. In addition, GD/FW has also spent money in preparing for airframe modifications and integration. The initial Mark IIB production sets are scheduled for delivery in June, 1968 and the Mark II in November, 1968, with aircraft deliveries lagging these dates by eight months.

The Air Force has gone through a number of "reappraisals" of the program and decision points about whether to continue. The most crucial of these occurred in April, 1967 with the Secretary of the Air Force deciding to continue with the same contractor and to maintain the original schedule. At this time some of the cost increases and performance degradations were formally recognized. The Deputy Secretary of Defense approved this decision.

Given the commitment of the Air Force to the need for the improved air-to-air capability provided by the Mark II and the status of the basic contract, it would seem unwise to cancel the contract or to change its structure at this time. *If it can be enforced*, the basic contract provides the Air Force with assurances that the technical, schedule and cost provisions will be met or that the contractor will have assumed the resulting penalties.

The key here is whether the contract can be enforced and whether the Air Force wants to enforce it. Let us examine each of the areas separately:

1. *Technical/Schedule*.—The contractor's dilemma with regard to the alternatives of (a) meeting the schedule with equipment which does not meet technical specifications and (b) delaying the schedule in order to meet technical specifications has already been discussed. Based on the contractor's actions to date, it appears that he will adopt the former strategy.

If this is the case, the Air Force has the responsibility to insist, by working through General Dynamics, that the F-111D aircraft will not be accepted until they meet the contractual requirements. Given the Air Force's desire to get the planes operational it may be willing to accept the aircraft with deficiencies with a view to modifying them at a later date.

This would be a mistake for two reasons. First, the dangers of crashes through failure and/or combat losses will be greatly increased if the equipment does not operate satisfactorily. Second, this strategy would mean that the Air Force would not be enforcing the contract. As a result, the Government would have to pay for the modifications and the contractor would gain assurance that such a practice was acceptable.

2. *Costs*.—The magnitude of the problem in the cost area is much more serious. The current Air Force position is to recognize \$20.2 million in Government-responsible changes and to ask for no consideration from Autonetics for the degradations in performance. As noted earlier, this position results in a ceiling price of \$195.7 million. Based on current cost estimates, Autonetics could lose

\$125-175 million if this position is maintained. Although part of this loss can be recouped through additional changes, retrofit, follow-on production, and additional business resulting from Mark II capability, the size of the potential loss could strain the resources of Autonetics and its parent company, North American Rockwell.

The Air Force position appears to be strongly supported by the contractual documents and the facts of the case. The SPO has repeatedly asked the contractor to provide information on Government-responsible changes which will support a higher position, but the contractor has held firm to his position that no baseline was achieved by the June, 1966 contract. Until it has the facts to support a higher cost, the SPO feels it must stick with its current position.

Thus, a serious dilemma faces both the Air Force and the contractor. On one hand, the Air Force does not want to have one of its principle suppliers lose over \$100 million and, on the other, it does not have the facts to justify a higher position.

The contractor also faces a dilemma. If he tries to provide facts to justify a higher cost on a change-by-change basis (which are the terms specified by the Air Force), he implicitly recognizes the original contract as establishing a baseline and admits changes to it can be tracked. By changing his position on this crucial issue, the contractor weakens any later appeal he may make to the Armed Services Board of Contract Appeals that the original contract was "a mutual mistake."

Considerable feeling can be found in the Air Force that Autonetics is an innocent victim of a system which is changing from oral promises to written agreements. People with this viewpoint feel Autonetics should be "let off the hook," at least so that no loss is incurred.

Others argue that the procurement system is being tested and that the contract must be enforced in order to maintain the integrity of the source selection process. Only in this way, they say, can we make contractors responsible for their written promises during contract definition and thereby enforce the credibility of the source selection process.

Another point which has been largely overlooked is the value of the \$125-175 million to the Department of Defense. With important programs being cut back by a lack of funds throughout the Government, these funds are vitally needed elsewhere. The implicit notion that the money is more important to North America than it is to the Government, while finding considerable sympathy within the Department of Defense, is a fallacious one. The money itself is an important reason to hold Autonetics to the contract.

B. Follow-on Production

Before the decision is made to contract for follow-on production on the F-111D/Mark II some basic questions must be answered:

Is the Mark II system providing the intended effectiveness in operational situations?

Is this effectiveness needed to meet the projected threat?

How does this effectiveness compare to F-111A/Mark I? to F-4J? to A-6a?

Is the added effectiveness worth the incremental cost?

What lower cost alternative systems might be available?

All five of these questions deal with the need for a desirability of Mark II. No study has been made within OSD which properly addresses these questions in view of the substantial cost increases and potential performance degradations which have taken place in the program. Such a study is far too detailed for this paper but should be done before the decision is made to proceed with Mark II production.

If the decision is made to continue with Mark II, there are a number of alternative ways of procuring the system:

1. Continue the present structure with General Dynamics as the prime F-111 contractor and Autonetics the integrating avionics subcontractor.

2. Procure the individual components of the Mark II system directly from Autonetics' subcontractors and provide them to General Dynamics as Government-furnished equipment.

3. Compete the follow-on production for major system components such as the attack radar and the inertial navigation set.

General Dynamics has already received a quote from Autonetics on follow-on production costs and reflected this amount in its January, 1968 Cost Information Report. The Autonetics submission indicated increases of \$600,000 per unit over the previous estimates. The revised estimates show that the fore-

casted learning curve effect of costs decreasing with quantity will not be realized. In fact, the first year follow-on costs per unit will actually exceed the cost of the units already on contract. In informal discussions Autonetics officials concede that the prices have been intentionally set high to enable the company to recoup potential losses on the existing contract.

Under this alternative, the Government has to pay profit and burden charges for both General Dynamics and Autonetics. Thus, for a \$100 purchase from a component supplier the Government pays \$161, as shown below :

| | |
|--|----------|
| Component supplier price----- | \$100. 0 |
| Autonetics burden (25 percent)----- | 25. 0 |
| <hr/> | |
| Autonetics cost----- | 125. 0 |
| Autonetics profit (10 percent)----- | 12. 5 |
| <hr/> | |
| Autonetics price----- | 137. 5 |
| General Dynamics burden (7.5 percent)----- | 10. 3 |
| <hr/> | |
| General Dynamics cost----- | 147. 8 |
| General Dynamics profit (9 percent)----- | 13. 3 |
| <hr/> | |
| General Dynamics price----- | 161. 1 |

It should be noted that *the 61% increase does not include integration or installation by either General Dynamics or Autonetics as these efforts are funded as direct charges for which the contractor is also paid burden and profit fees.* Under this alternative the component suppliers will probably be sole source which implies higher costs charged by them.

This alternative is the low risk, high cost one. The risks are low in that the Air Force has the assurance of both General Dynamics and Autonetics that the components will perform up to the specifications. In addition, potential legal problems regarding technical data and proprietary rights are avoided.

The second alternative, procuring the components directly from the suppliers and furnishing them to GD as GFE, has some attractive cost saving features. The 60% add-on factor could probably be eliminated from the cost. Since 96 of the sets already will be produced, the components of the system should be fully qualified. This means that they can function as independent units and that no further integration is needed. The key to this alternative is getting the components fully qualified in time to adopt this approach. The third alternative, competing major system components, can be adopted on its own merit or in addition to the second alternative. It would involve alternative sources of supply for the most expensive system components.

These alternative sources could be either of two types, (1) a component meeting the same specifications as the first sets or (2) an alternative design which may have different specifications but will be more cost-effective. Either type would involve bringing new suppliers into the business with perhaps some additional development work on their part. This presents problems in qualifying new components, but it also introduces the forces of competition into determining the cost of these items.

The risks inherent in these latter two approaches have not been fully explored. From this initial inspection it is clear that either or both of them could result in substantial reductions in Mark II costs for the price of additional work on the part of the Air Force. A detailed examination of these alternatives, their potential savings, and their inherent risks should be made before a decision on procurement strategy of the follow-on contract is selected.

VI. IMPLICATIONS FOR FUTURE PROCUREMENTS

The Mark II program is useful as a test case for examining current Department of Defense procurement practices and how effective they are to the development and procurement of a very advanced and complex system. From this examination we should be able to make some meaningful conclusions about future procurements.

A. Characteristics of the Mark II Procurement

The Mark II procurement has the following characteristics :

1. It utilized Concept Formulation, Contract Definition, and the approach specified by DoD instruction 3200.9.

2. The contract was let in a meaningful competition with two strong contenders.
3. A fixed price incentive contract with a tight ceiling and a cost sharing pattern was used.
4. The contractor was allowed to "write his own contract" by specifying technical characteristics, schedule milestones, and cost targets he felt he could meet, and these were incorporated into the contract.
5. The contract was a form of Total Package Procurement. Included in a single contract were development responsibilities, the initial production run, and options for follow-on production runs. The only deviation from the TPP concept was the failure to include support and logistics equipment in the contract.
6. Performance specifications rather than design specifications were used.
7. The definitized contract was signed immediately following the source selection.
8. The contractor was apprised of the deficiencies in his proposal.
9. A high degree of concurrency between the development and production programs was utilized.
10. The number of substantive changes in requirement was held to a minimum.

Nearly all of these characteristics are the result of procurement policies developed in the past 3-5 years. The new policies are generally believed to be a substantial improvement over the previous policies or the lack thereof. Yet all of the policies were incorporated into this procurement, and the results were still not satisfactory.

B. Effectiveness of these Policies

What went wrong? Let us examine each of these characteristics and policies individually and together in order to ascertain why the Mark II program has run into severe problems.

1. *Contract Definition.*—There is little doubt that the Concept Formulation and Contract Definition stages were useful in defining the requirements of the Mark II system. This is the primary reason that there have virtually been no changes in the performance requirements desired by the Air Force.

A justifiable criticism may be leveled at the Air Force for rushing the final stage of the Contract Definition process. In truth, the competing contractors did not really have time to evaluate completely the deficiency reports and to assess their impact on their proposals.

However, the Air Force was encouraged to do this by the unguarded optimism of Autonetics who claimed it could integrate the deficiency reports into its proposal with minimal effort. Autonetics also showed its optimism on costs by slicing its proposed price by \$38 million. Another competitor expressed in writing considerable pessimism about the achievability of the cost, schedule and technical requirements. No doubt these differing views helped Autonetics win the source selection and hurt its competitors' chances.

2. *Competition.*—The competition between Autonetics and its competitors was real and aggressive. The only problem with this intense kind of competition is that it motivates contractors to be overly optimistic and to make promises which can never be fulfilled. Missing from the source selection was any evaluation of the "realism" of the contractor's proposals.

3. *Fixed Price Contract.*—The contract signed by Autonetics contained all of the features advocated by the latest procurement policies: fixed price, financial incentive provisions, a cost sharing pattern, and a tight ceiling. Such a contract is ideal for holding a contractor to his word, and this one is sufficiently tight to permit the Air Force to do just that.

This type of contract is supposed to give the contractor the maximum incentive to control his costs. Yet *Autonetics has never shown at any time during the development of the Mark II any inclination to keep costs under control.* In fact the reverse has been true. One reason for this is that the financial incentives of the basic contract are vastly overshadowed by the contractor's desire to achieve the performance and schedule specifications and the potential profits of follow-on contracts. The belief that this contract motivated the contractor to control his costs is a delusion.

A more relevant consideration is whether this type of contract is appropriate for a highly complex, advanced development such as the Mark II. It may well be that a cost type contract, say CPIF, would have been more appropriate.

4. *Writing his own Contract.*—Getting the contractor to “write his own contract” by specifying the requirements he feels he can meet and then incorporating them into the contract seems to be a good idea because it gives the contractor the job of definition.

5. *Total Package Procurement.*—The Total Package Procurement concept has been widely heralded as a major “breakthrough” in defense contracting. No doubt it is a useful approach in situations where the degree of risk is at least definable. In the case of Mark II it may not be appropriate because of the uncertainty involved and technical complexity of the system. For example, although the contract contains firm option prices for the follow-on buy, the Air Force is not planning to use these prices because of the large increase in actual costs which has already occurred.

6. *Performance Specifications.*—The Air Force set forth performance specifications for the Mark II system and judiciously avoided use of design specifications. This permitted the contractor to redesign the equipments to meet the performance specifications without implicating the Air Force in the responsibility for the design changes. While Autonetics has tried to involve the Air Force in these changes, the Air Force has carefully, and wisely, avoided this pitfall.

7. *Early definitization of the Contract.*—The Mark II contract was definitized immediately following the source selection. No letter contract was issued; no delay was encountered in coming to terms. It is clear that such a move greatly increases the Government's financial protection and permits the contract's incentives, for whatever they may be worth, to go into effect immediately.

8. *Deficiencies.*—The Air Force took some pains to evaluate the shortcomings of the proposals and to review these deficiencies with the contractors. For its efforts the Air Force exacted a price: the contractors were obliged to correct these failings which affected the performance specifications.

As discussed earlier, it may be that the contractors should have been given more time to evaluate the impact of the deficiency reports and that the Air Force should have spent more time evaluating the credibility of the cost proposals.

9. *Concurrency.*—In my opinion the high degree of concurrency required by the Air Force to meet the proposed schedule was the biggest mistake of the Mark II procurement. Admittedly, concurrency was an absolute necessity in order to meet the operational availability date.

Yet I believe this was an unrealistic requirement and will lead eventually to unsatisfactory equipment which has been designed in a hurry, is not properly tested, and fails to meet performance requirements. Such a rushed schedule will inevitably increase costs through inefficient practices, retrofits, and modifications.

In developing an advance system, it is far better to get the system designed first rather than rushing it into operational use. If the Air Force felt at the time that holding to the IOC date was essential, then the sophistication of the Mark II system should have been reduced substantially.

10. *Changes.*—The Air Force is to be commended for careful definition of its requirements for the Mark II and its ability to hold substantive changes to a minimum.

In summary, the procurement policies and practices used in the Mark II program were effective with the following exceptions:

a. The final phase of Contract Definition was hurried in that the impact of the deficiency reports and the realism of the contractors' cost proposals were not fully evaluated.

b. The unrealistic schedule forced a high degree of concurrency which will result in operational problems with early production units.

C. *Overview of the Mark II Procurement*

These two shortcomings do not really explain what went wrong with the Mark II procurement. Although they help us understand why technical and schedule problems inevitably will arise, they do not explain why such a severe cost overrun has occurred.

The usual causes of cost overruns—undefined, requirements, numerous changes, undefinitized contracts, lack of risk placed on the contractor, "gold plating" by Government engineers, sole source contracting, major unexpected problems—have all been absent from the Mark II procurement.

The reasons for the cost overrun are two-fold. First, both the contractor and Air Force were unrealistic in assessing the ultimate cost of the system. It appears the contractor knew very well what he was getting into but was so anxious to win the competition that he was willing to "buy in" by quoting a low price. His rationale for doing this will be discussed in the next section.

The Air Force was also guilty of lack of realism, probably because it was anxious to "sell" the program to OSD and to the Congress. No independent assessment was made of Mark II costs at the time of source selection and as a result, the Air Force was forced to depend upon the contractor's estimates. This lack of cost realism is not unusual in this type of program but it is unfortunate. It can only be stopped by realistic, independent cost estimates made prior to source selection.

The second reason for the large cost overrun is fundamental to our procurement system. Simply stated, the contractor believed that he would not be held to the written agreements made at the time of source selection and in the following three months.

In the nine months after the source selection the contractor pursued a strategy of using change notices as a means of "getting well." However, no changes of any magnitude were made by the Air Force. Realizing in March, 1967 that he had had to redesign substantially the Mark II equipments in order to meet the performance specifications, the contractor estimated that his costs had escalated far above the amounts which could be covered by changes.

At this point Autonetics adopted the strategy of reproposing without regard to the original contract and contending that the contract was not valid. Autonetics has operated effectively with this kind of strategy for some years in the Minuteman program. The company failed to recognize, or did not believe, that the procurement system was shifting from oral promises to written agreements.

The Mark II program in many ways can be viewed as a test of the emerging system. The Air Force is being tested by a major contractor as to whether it will enforce those written agreements. By so doing, it can shift, as it has been trying to do for many years, the procurement of major new systems to a more businesslike atmosphere.

If it fails to enforce the contract, the Air Force and the entire Department of Defense can count on many more years of misleading promises from contractors and failures to meet contractual requirements. On the other hand, enforcing the Mark II contract can be advent to a more realistic, businesslike period in defense contracting.

To many people Autonetics is the innocent victim of a shifting environment. Yet the company went into this program and these commitments knowing full well that the system and its requirements were changing. For failing to live up to these commitments it must be willing to accept the penalties.

| ABBREVIATED JOINT MESSAGEFORM and/or CONTINUATION SHEET | | | | SECURITY CLASSIFICATION UNCLASSIFIED | |
|--|-------------|-------------|-------------------------|---|----------|
| PRECEDENCE | RELEASED BY | DRAFTED BY | PHONE | | |
| ACTION Priority | | | Lt Col Vosper/pal | | 54908 |
| INFO Priority | | | | | |
| <p>resources be applied in the determination of a pre- negotiation objective and definitized arrangement.</p> <p>Part II. Request you comply with requirements of referenced Memorandum except that SAF-IL and SAF-FM review of the evaluation plan is changed from 5 Jul 67 to 13 Jul 67. Part III. The evaluation requested and the plan should include: (a) How the contractors proposal for the total F-111D Mark II configured aircraft will be evaluated and what other analytical means will be used to establish the government pre-negotiation price objective. (b) How the defined Mark II subsystem components and integration effort for applicable sub and prime contractor will be evaluated to establish the government pre-negotiation price objective. (c) How the price objectives relative to the production contract established by (a) and (b) above will be extrapolated to a total program F-111D/Mark II cost estimate. Part IV. Request a written F-111D/Mark II evaluation plan be forwarded by AFSC to arrive this headquarters (AFSPDF) not later than 10 July 1967. Request a briefing of the plan be conducted by AFSC at Hq USAF on 12 Jul 67 for AFSDC and 13 Jul 67 for SAF-IL and SAF-FM. Briefing- hours and locations will be provided by telecon.</p> | | | | | |
| CONTROL NO. | TOR/TOD | PAGE NO. | NO. OF PAGES | MESSAGE IDENTIFICATION | INITIALS |
| | | 2 | 2 | Mark II Costs | |
| REGARDING INSTRUCTIONS | | | SECURITY CLASSIFICATION | | |
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ASSISTANT SECRETARY OF DEFENSE,
Washington, D.C., July 12, 1967.

Memorandum for Assistant Secretary of the Air Force (FM).
Subject: Evaluation of Mark II Price Proposal.

I have received your proposal on evaluation on Mark II costs and I wholeheartedly endorse this effort. The proposed study is crucial to the successful negotiation of a satisfactory price. In addition, it will be required for any potential funding increases requested in the F-111A/D PCR which are associated with Mark II.

Because of the importance of this study, I would like to make a few suggestions as to its implementation. These are aimed at insuring the study fulfills the needs mentioned above.

1. The technical performance baseline must be clearly stated for the major subsystems as well as the overall system prior to developing any cost estimates.

2. The evaluation of individual cost elements should be based on detailed information on labor hours and rates, raw material prices, major subcontracts and the method of contractor selection, the principal categories of overhead and the method of allocation, and profit and burden rates. The information should be drawn from the internal systems at General Dynamics/Fort Worth and North American Aviation (Autonetics and from an in-plant review .

3. The comparison of Mark II costs to the avionics systems used in the A-6 and F-4 series aircraft will be useful, but statistical analysis should not be the primary method used to evaluate the contractor's proposal.

4. In addition the evaluation of the contractor's proposal, an independent estimate of Mark II cost should be made. *Since the assumption of "efficient and resourceful management" will not necessarily yield the probable cost. I would suggest that separate estimates be developed under the following assumptions:*

- a. *probable costs, under the contractor's current mode of operation;*
- b. *what the items should cost, under an improved mode of operation.*

5. To produce a meaningful picture of Mark II costs, the following items should be separately identified and evaluated :

- a. the take-out costs associated with the Mark I system ;
- b. the integration effort required at General Dynamics/Fort Worth for the Mark II ;
- c. the peculiar support costs associated with the Mark II ;
- d. *the relationship of the Mark II to the configuration of the airplanes already on contract and the method used by the contractor to segregate Mark II costs from these costs.*

I shall look forward to reviewing the results of this study upon its completion. In the interim I would like to make Mr. William George of my staff available to you to assist in planning and in carrying out this evaluation.

ROBERT N. ANTHONY.

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE,
Washington, D.C., August 4, 1967.

Memorandum for Mr. Marks.

Subject: Concerns about F-111D/Mark II Evaluation Plan.

The comments below are a result of the discussion which Ernie Fitzgerald and I had at the F-111 SPO on Wednesday. You may find them useful in the briefing on Friday.

A. Mark II Definition

1. Ernie and I reached an agreement with Air Staff and AFSC on July 31 to use April 14 contractor proposal as a baseline and adjust from there *based on technical changes.*

2. *The briefing form we saw on August 2 followed this guideline, except that Colonel—and other working level people in the SPO do not want to label the FB-111 and F-111K avionics "Mark II." However, they have agreed to track all the items contained in the April 14 proposal.*

3. *General — is strongly opposed to this definition and wants to revert to the revised SPO definition of Mark II which includes Autonetics subsystems only. Both he and General—expressed the fear that the Mark II program will be cut off if we use the April 14 definition because costs are too high. It is clear that they do not want the total cost of the system stated.*

B. "Should Cost" Analysis

1. *There is still considerable misunderstanding over the concept of "should cost." There is a strong desire on the part of procurement and pricing people not to do anything in this effort which is not a part of "normal" negotiation preparation.*

2. An exception to this is the work sampling planned at GD and Autonetics with the support of CMD. However, it is not clear how this analysis will be used in pricing. Unfortunately, the supervisors at GD have already been notified that the work sampling will be done in their areas, which will tend to bias the data.

3. The "should cost" analysis can be done by the pricing people without additional help, but it will require a somewhat different pricing philosophy. Three things are needed to realize significant reductions in the negotiation price :

- a. A better definition of the meaning of "should cost" and how it can be applied to these two contractors.

b. Continuing support from Mr. Marks that this is necessary for negotiation purposes.

c. Follow-up working sessions with — and other price analysts at ASD.

4. There is also a lack of understanding about how the "should cost" estimate will be used.

As an additional note, we ran into some difficulty in being able to sit down and work with working level people at ASD and the F-111 SPO. General — started the day by saying, "Of course I'm going to attend your meeting. You don't think I would leave you alone to influence my people!" Over half the day was spent with General — and General — discussing general concepts. Only during a short period in the afternoon were we able to get down to the specific of the Mark II definition and the "should cost" analysis.

WILLIAM W. GEORGE.

THE DEPUTY SECRETARY OF DEFENSE,
Washington, D.C., October 28, 1967.

Memorandum for the Secretary of the Air Force
Subject: MARK II Avionics.

I know that the Air Force is now preparing for negotiations with General Dynamics/Fort Worth and Autonetics to definitize the Mark II contract supplement. However, I am concerned about the reports on Mark II costs and Autonetics' attempt to reprice the program without regard to their original contractual commitments.

It is my understanding that the Air Force is conducting a "should cost" study of the proposed Mark II program. I am desirous that this approach be used to identify areas for reduction in Mark II costs and that the results of this study be used as the basis for contract negotiations. Accordingly, I request that the following actions be taken in the Air Force "should cost" study:

- (1) Insist that Autonetics, through General Dynamics, provide the Government with cost information on individual changes supported by detailed cost estimates.
- (2) Establish a group of Air Force technical people to evaluate responsibility for these changes and their attendant costs.
- (3) Identify and evaluate all known changes, at the time of initiating negotiations, for incorporation into the contract.
- (4) *Identify separately all General Dynamics' costs clearly attributable to Mark II and insure that these costs are segregated from the cost of the work already on contract.*
- (5) *Identify contractor inefficiencies which can be eliminated through improved management control.*
- (6) Use the best available cost analysts and industrial engineers in this exercise.

In mapping your Mark II negotiation strategy, be sure to include the following points:

(1) Through the prime contract with General Dynamics, make certain that Autonetics is held to its original proposal plus customer-responsible changes, or failing this, that General Dynamics is held responsible.

(2) *Insure that the negotiation proceeds from the "should cost" analysis and not from projections of historical costs.*

Concurrently, insure that meaningful cost reporting systems, which measure actual costs against planned costs, exist at both General Dynamics and Autonetics. These systems must meet the Air Force criteria for acceptable planning and control systems.

By November 3, 1967, I would like from you a status report on the status of your prenegotiation efforts to date and your plan of action for meeting the requirements set forth herein. In this regard, I suggest that you consider utilizing a team approach similar to that being used in the Pratt & Whitney T F-30 engine negotiations.

If you consider that our overall objectives can be better met by approaches different from those outlined above, please provide me with your recommended alternatives..

PAUL H. NITZE.

DEPARTMENT OF THE AIR FORCE,
HEADQUARTERS AIR FORCE SYSTEMS COMMAND,
ANDREWS AIR FORCE BASE,
Washington, D.C., December 26, 1967.

Subject: F-111/Mark II Prenegotiation Activity.
To: Memo for the File.

1. The briefing presented at this headquarters 13 December 1967 was given 22 December 1967 to SAF and Hq USAF levels. Attendees are as on attached list. *"The presentation's main recommendation was to proceed with factfinding and negotiation, and with flexibility retained at the ASD (ASL) level to make deviations from the presented objectives when and if necessary and in consonance with the facts as the negotiation progresses."* This recommendation was accepted by Secretary Charles.

2. The following items are considered to be significant:

- a. The comparison of Mark II avionics with comparable systems—e.g. F4, A6—is *not* to be pursued further for *this negotiation*. As a normal data bank function, it is assumed that ASD (ASC) will continue gathering this type of data.
- b. The *"efficiency"* studies will not be pursued further for the negotiation.
- c. Mr. Marks did request a "paper" on Autonetics overhead, which the SPO indicated would be supplied. The discussion did not clarify exactly what was wanted. It appears that ASD should be prepared upon specific request to supply a clear picture of overhead facts. Again, this is nothing to delay negotiation.
- d. Mr. Marks requested that a copy of the technical trace be supplied when it was completed.

G. B. ARTHUR,
*Assistant Chief, Pricing and Financial Division,
Directorate of Procurement Policy.*

[1 Atch. List of Attendees]

[Mark II Briefing, Room 5C1034, 0930, 22 December 1967]

AUTHORIZED ATTENDANCE

SAF

Secy Marks, Secy Charles, Mr. Nielsen, Mr. George, Mr. Fitzgerald, Mr. Davis, Col. Charberlin.

AIR STAFF

Lt Gen Ruegg, Maj Gen Keeling, Maj Gen Jeffery, Col R. Hansen, Mr. C. Johnson, Col Robinson.

ASD

Brig Gen Gossick, Col Pugh, Mr. Brown, Mr. Ferguson, Mr. Sills, Mr. Aber.

HQ AFSC

Maj Gen Higgins, Maj Gen Zoeckler, Brig Gen Tuebner, Col Staley, Mr. Kirschbaum, Lt Col Brandt, Mr. Arthur.

AFPRO, GD/FW

Col Mundorf.

AFPRO, AUTONETICS

Col K. Hansen, Mr. Solberg.

DCAA

Mr. Fuller, Mr. Hunt.

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE,
Washington, D.C.

Memorandum of conversation
Subject: Discussions on Mark II.

I was visited today by an official from North American Rockwell. He asked to talk about the cost situation on Mark II. The thrust of his comments was that Autonetics' costs on the Mark II are extremely high but that the Air Force did not seem concerned about it.

He offered the following specific comments :

1. Recently Mr. X of Autonetics, and Mr. Y of North American Rockwell, met with Lt. General A; Maj. General B, Maj. General C, Maj. General C. Colonel M and Colonel N of the Air Force. The purpose of the meeting was for Autonetics to talk about Mark II costs and the cost control efforts the company has underway.

a. The meeting was moved up from March 21 so that the Air Force would have the information prior to its March 6 meeting with Mr. Anthony. With the exception of Maj. General D, all of the Air Force officers also attended the meeting with Mr. Anthony.

b. Maj. General B was very concerned about Autonetics' cost control and had originally asked for the meeting.

c. Mr. X presented a number of management systems the company was implementing but indicated that costs were increasing at a rapid rate. The company now anticipates approaching ceiling on its April, 1967 proposal (target price: \$297 million, ceiling price: \$351 million).

d. Follow-on production costs will be higher than projections by approximately \$600,000 per unit. Unit costs in 1969 will be higher than 1968 unit costs; in other words, an inverse learning curve will be in effect.

e. Lt. General A did not seem displeased with the company's projections. He said now that the program had been approved his primary concern was getting the system to perform.

f. Autonetics' top management interpreted the meeting as an indication that the Air Force was willing to live with the higher costs.

2. The company is currently working toward its April, 1967 proposal for \$297 million. It assumes that the June, 1966 contract is no longer in effect because of the number of design changes the company has made. Despite these design changes, performance anticipated for the Mark II has been degraded, not increased.

3. In pricing Mark II follow-on production costs in the GD/FW Cost Information Report, Autonetics intentionally put in higher costs in 1969-1972 so that the company could make a substantial profit for the entire program.

4. The company had to supply a list of "good news" items on the Mark II for the Air Force's March 6 meeting with Mr. Nitze.

5. Although the company's schedule charts currently indicate that the current schedule will be met, in reality the schedule will slip 6-7 months. Even so, there will be a high degree of concurrency between development and production.

6. On March 8 Lt. General E and B. General F visited Autonetics but gave no indication that they were concerned about Mark II costs.

7. Despite the fact that many staff people around the Pentagon have expressed grave concern about Mark II costs, the direction the company is receiving from key Air Force officials is that everything is okay. This makes it very difficult to achieve any meaningful cost control within the company.

I asked the official what hard results all the company's new control systems were producing. He said none to speak of, that costs were increasing at a rapid rate. He indicated that the company's objective, as set forth by Mr. Y, was to get the follow-on business rather than worry about profits on the initial run.

The official indicated genuine concern that the company was in error not to constrain costs but that he could not get his top management to take action when the Air Force seemed so willing to accept higher costs. He said he hoped somebody would tell his top management to "shape up."

WILLIAM W. GEORGE.

DEPARTMENT OF THE AIR FORCE,
Washington, March 15, 1968.

Memorandum for Secretary Nielsen.

Subject: Cost Control on the Mark II and at Autonetics in General.

Attachment 1 is a copy of a memorandum by Bill George of Mr. Anthony's office recording a conversation he had with a member of North American Rockwell's management group. I am appalled at its content. However, it fits the long-term, unwholesome pattern of disregard of cost by Air Force officers dealing with this company. If the impressions recorded by Bill George are accurate, and I believe they are, the situation apparently has reached the point where even the beneficiaries of the process can no longer stomach it.

In a memorandum to Mr. Marks dated October 30, 1967, I recorded the following:

"... *specific* direction to the field *encourages* Air Force managers to allow inefficiencies in acquisition programs. The rationale, which I have personally heard openly and clearly explained by high-ranking Air Force managers, is that inefficiency in contractor operations is 'national policy.' It is further explained that inefficiency is necessary to the attainment of 'social goals.' It is stated that inefficiency provides for such things as:

1. Equal employment opportunity programs.
2. Seniority clauses in union agreements.
3. Programs for employment of the handicapped.
4. Apprentice programs.
5. Aid to small business.
6. Aid to distressed labor areas.
7. Encouragement of improvements to plant layout and facilities.

"Furthermore, it is clearly explained that pressing for efficient cost management is undesirable because it diverts management attention from more important matters."

This explanation was made several times by Major General D in his instructions to the F-111 "should cost" study team. With this sort of direction from a Major General, there is little wonder that his subordinates did not take the "should cost" effort as seriously as they should. Further, I am certain this attitude has been conveyed to Autonetics repeatedly both on the Mark II and Minuteman programs.

For example, Autonetics officials think they were told by General G last summer that they should not be concerned about Minuteman costs and that General G personally would see that they got any additional money they needed for Minuteman. I have been told by participants in General O'Neill's study of Minuteman management problems that this alleged communication had a marked softening effect on the conduct and outcome of the study.

We must draw the line somewhere on abuses of stewardship. The Mark II situation looks like a good place to start. I suggest that we lay this whole problem out for Secretary Brown along with the recommendations that the review of costs and, more particularly, the establishment of a "should cost" baseline on Mark II be accomplished under the direct control of our office.

A. E. FITZGERALD,

Deputy for Management Systems.

MARCH 29, 1967.

Memorandum for Mr. Anthony
Subject: Mark II Avionics Costs

From all the information I have, it is clear that, next to the engine program, Mark II Avionics represents the largest area of current cost growth on the F-111 program. It is the area we know least about because of (a) the complex contractual structure and (b) the technical complexity. It is also most critical to the capabilities of the entire weapons system and to the delivery schedule of the airplanes.

With these great technical and schedule pressures, cost considerations are often overlooked. I feel that we need to achieve control over costs now, before the costs become nothing more than the product of decisions which have already been made. There are three things which we should do:

1. Get firm target dates from the Air Force for the definitization of the Mark II supplement to the contract.
2. Have Mr. McNamara assume final authority for approving the Mark II contract supplement, as he is doing with the airframe and the engines.
3. Develop an independent estimate of Mark II costs, to be used in negotiating the contract.

The first two items were proposed in my March 21 memorandum and therefore need no elaboration. *The independent estimate would be prepared in a manner similar to the Navy estimate on the P&W engines.* It would include both RDT&E and production costs for the Mark II, covering the "airframe impact" costs at GD as well as the basic hardware costs at Autonetics.

"The only estimate available today on Mark II is the one prepared in the Cost Study last spring before the basic configuration of Mark II had been determined. This estimate is generally considered to be far below the eventual cost of Mark II." Although the contractors have promised estimates by April 1, I know of no Air Force plans to develop an independent estimate.

I have discussed the possibility of preparing an independent estimate with Ernie Fitzgerald, and he is enthusiastic about taking over responsibility for the task should you request that it be done. In this regard, I have drafted a letter for you to send Mr. Marks requesting the Air Force to prepare this estimate.

WILLIAM W. GEORGE.

DEPARTMENT OF THE AIR FORCE,
Washington, June 26, 1967.

Memorandum for the Vice Chief of Staff, USAF

The purposes of this memorandum are to confirm our understanding that a thorough evaluation of the contractor's Mark II avionics price proposal will be performed and to clarify our desires in this regard.

First, the review team will include functional specialists for in-depth analyses of engineering man-hours, manufacturing man-hours, material subcontracts, overhead and other major cost elements as appropriate. Specialists in the plant representatives' offices and DCAA organizations will be utilized to the maximum possible extent.

The evaluation, which is estimated to require between two and three months to perform, should include:

1. A firm definition of the subsystem and component content of the currently proposed Mark II system.

2. A comparison of the proposed costs of Mark II components and subsystems with the costs of similar or related items in other avionics systems, including avionics items in the A-6 and F-4 series aircraft.

3. *An estimate of the probable cost of the currently proposed Mark II system assuming efficient and resourceful management by the companies involved.*

The schedule shown in the cost briefing of June 20, 1967, called for the Mark II to be on contract in October. Therefore, the evaluation report should be submitted no later than September 22, 1967. Meanwhile, we wish to review the evaluation plan, including the work schedule and the dates of interim progress reports, no later than July 5, 1967.

ROBERT H. CHARLES,
Assistant Secretary of the Air Force (Installations and Logistics).
LEONARD MARKS, Jr.,
Assistant Secretary of the Air Force (Financial Management).

Senator JORDAN. In the last paragraph Under Secretary McLucas said:

I am aware that Mr. Fitzgerald has further information which he wishes to provide your committee in response to your request. I was advised of this late today, and an orderly review is underway to make this additional information available.

Mr. Fitzgerald, at what time was this request made? From late yesterday to hearing time this morning would indicate that they are operating under a tight schedule.

Mr. FITZGERALD. Yes, sir. I would be the first to admit that.

As I say, after getting a copy of Dr. McLucas' letter on Saturday to Senator Proxmire, I set out to gather this material together so that I could make certain that I had presented a complete picture. And I completed the preparation of multiple copies of this material late yesterday afternoon.

Senator JORDAN. Thank you, Mr. Fitzgerald, my time is up.

Chairman PROXMIRE. Congressman Moorhead?

Representative MOORHEAD. Thank you, Mr. Chairman.

Mr. Fitzgerald, I understand that John McGee and his boss were the only fuel inspectors in Thailand and Laos with jurisdiction over hundreds of millions of gallons of fuel oil and hundreds of millions of dollars. In comparison, how many bowling alley inspectors are there?

Mr. FITZGERALD. I may be the first, Mr. Moorhead, I don't know, really.

Representative MOORHEAD. Mr. Fitzgerald, in today's Washington Post there was an article by Bernard Nossiter about the Minuteman II. And in this article, which you may have seen, he says:

As far as is known, attempts to test fly Minuteman from its siloes have failed four times. The latest failure on August 14, 1968 was witnessed at Michigan, North Dakota by Senator Milton R. Young, R (N.D.), and ranking Air Force officers.

Are you familiar with those failures in your jurisdiction? And were they all because of the guidance system?

Mr. FITZGERALD. I am not intimately familiar with them, Mr. Moorhead. It was my impression that only one of the failures was directly traceable to the guidance system. I am not certain.

Representative MOORHEAD. In your answer to questions by the chairman of the committee you referred to, as I understand it, attempts to withhold cost information on the SRAM system. Could you expand on this?

Mr. FITZGERALD. This was on the Mark II.

Representative MOORHEAD. This was the avionics of the F-111?

Mr. FITZGERALD. Yes. There was a change in the Air Force estimate which had been prepared, making the estimate lower prior to submitting the revised Mark II program to Mr. McNamara for his approval.

And the program was approved on the basis of an estimate which had been knowingly reduced. This was not discovered until after the approval of the revised program was in effect. That was one of the things that I have documented or described in my case study, the whole process leading up to the problems on the Mark II.

Representative MOORHEAD. At what level of the Air Force was this estimate—you say knowingly, knowing that it was not accurate—reduced and then submitted to Mr. McNamara.

Mr. FITZGERALD. It was below the Secretary's office. I couldn't say exactly where it occurred.

Representative MOORHEAD. Below the Secretary of the Air Force?

Mr. FITZGERALD. Yes, sir.

Representative MOORHEAD. But in the Air Force?

Mr. FITZGERALD. Yes, sir.

Representative MOORHEAD. That is quite a charge, Mr. Fitzgerald, that someone knowingly doctored a document before submitting it to the Secretary of Defense for his approval.

Mr. FITZGERALD. Some of the program was omitted from the estimate along with its cost.

Representative MOORHEAD. I haven't seen this documentation, but I look forward to seeing it.

Mr. FITZGERALD. I describe this in my case example. I don't think this would be violating my direction. But at the time of this incident there was a single office established, a cost analysis office at Air Force Systems Command Headquarters, which was the one source of F-111 cost information for all the headquarters organizations in Washington. At one time there was a lot of conflicting cost information on the F-111. This office was set up at the request of Mr. Anthony, who was then the Comptroller of the Department of Defense. The various head-

quarters had direct access to this office, and could get cost estimate information on demand.

The way this problem came to light was through the Office of the Secretary of Defense getting the information directly from the cost analysis office, the single source office at Andrews Air Force Base, prior to the revision of the estimate. And then the two estimates, the lower revised estimate and the so-called true estimate, came together in the analytical office of the Office of the Secretary of Defense, and the Air Force was forced to admit that a mistake had been made.

But by then the program was approved and the spending was underway.

Representative MOORHEAD. We had one witness, I believe it was Mr. Rule, who testified that there was a sort of game that was played across the river where the contractors came in with a lower cost than they knew they would have, and the Pentagon knowingly approved this lower cost, figuring that this was the best way to get approval from the Congress. Is this the kind of situation you are describing now, only it was to get approval of the Secretary of Defense. In other words, we have at least a two-tier buy-in.

Mr. FITZGERALD. Yes, sir; that was the type of thing—although as I mentioned earlier, the distortion is not altogether purely cost, it is on technical aspects as well. The Mark II is a classic example of that. The publicity very early in the game of the Mark II program left the impression that there was very, very little development work to be done on the hardware.

For example, shortly after the program was approved initially, and shortly before the large cost increases became known officially the contractor for the Mark II components ran this ad in one of the trade journals (exhibiting ad). I will describe the ad to you.

It says:

When will someone develop a precision microelectronic autonavigator that meets advanced requirements for aircraft avionics, and provides fast reaction capability, reliability, and accuracy under severe operating conditions?

It shows the picture of the gadget already built and says:

Autonetics already has.

And then they go on to say:

It is the N16. It has proved its capabilities in more than 14,000 hours of testing, including test flights in five different types of aircraft. It is available for advanced inertial navigation applications requiring precision position and velocity accuracy on a short delivery schedule at low cost. N16 inertial navigation sets have been selected for the Mark II system in F-111 aircraft.

Shortly after this there was a new estimate that came out which recorded an increase in the estimate for this article of 169 percent. So the so-called buy-in is not altogether a cost factor. There are technical factors involved as well.

I would say that it is entirely possible to have what I would call a technical buy-in which has a cost that was really too fat, given technical readiness. In other words, the \$39 million development cost of Mark II was completely unrealistic, considering the real state of the hardware. Now, had we accepted the assumption—which I think was urged on us, and had the assumption proven correct—that the articles

were all ready to plug into your new aircraft, that might have been a good estimate, you see.

Representative MOORHEAD. I am increasingly concerned—I don't completely understand the intricacies of this weapons system versus that, but I do understand when people are telling the truth or not telling the truth. One of the things that you said in earlier testimony is that the manned orbiting laboratory has been cancelled. I have read that in the papers too. But you said "although we are still spending a lot of money on it." Could you explain that?

Mr. FITZGERALD. Well, as I understand it, again from reading the newspapers, the termination of the contracts is not immediate. There is going to be a phaseout period which will require a substantial amount of money to finance.

Representative MOORHEAD. Again thinking of the truth or lack thereof in these situations, I referred to your trip memorandum. Do you remember that? Was part of the document I introduced into the record last Friday?

Mr. FITZGERALD. Yes, sir, I do remember that. I think if we were going to withhold comments I would express the preference that that be withheld.

Representative MOORHEAD. I think there is one paragraph on page 7 under the heading "Ethical Situation" which I think may indicate how the truth is kept from responsible officers.

You say:

Although it is impossible to quantify its effect, the ethical situation in the management of the Minuteman program has a derogatory impact on program management. There are many examples of failures by ESD and Minuteman management personnel to exert maximum effort in the Government's interest compounded by strenuous efforts to cover up problems and stifle criticism. A glaring example is the manner in which attempts to pinpoint responsibility for failure have been dealt within recent months. It is generally believed that the systems programs director is being relieved of his responsibility because he told the truth regarding the failure of one of the Minuteman contractors to deliver as promised; citing the failure of this contractor is viewed in some quarters as a reflection on the system program director's superiors. It is very difficult to envision anyone conveying an unpleasant truth to the headquarters in these circumstances. The outlook for full visibility by higher levels of management is dim indeed. Worse, the ethical and moral climate makes it nearly impossible to motivate people properly.

Who was the systems program director who is being relieved of his responsibility that you referred to?

Mr. FITZGERALD. That was Brigadier General Cruikshank.

Representative MOORHEAD. Is that the same General Cruikshank referred to in Mr. Nossiter's article who was reportedly upset by this program and said that it is like old cheese, the older it gets the worse it smells; is that the same fellow?

Mr. FITZGERALD. That is the same General Cruikshank.

Representative MOORHEAD. Thank you, Mr. Fitzgerald.

Thank you, Mr. Chairman.

Chairman PROXMIRE. Mr. Fitzgerald, according to your testimony that you have just given us, you had certain cost control and oversight responsibilities for all of the major Air Force weapons systems program for the past several years. It was during this period that the large overrun and cost growth in programs of the C-5A, a \$2 billion overrun or close to it, the Minuteman with a \$4 billion, the SRAM

with an increase of \$300 million to over \$600 million, the F-111 and Mark II avionics programs with overruns in avionics, engines and air frames occurred. What was your role during this period when these costs were skyrocketing and before your responsibility for them was taken away? What actions did you take?

Mr. FITZGERALD. First off, my role was to develop and oversee the application of improved management control for thees major programs. And this I attempted to do with my primary emphasis on the development, the promotion, and application of performance measurement systems which would give us the status, the factual, objective status of where we stood with these programs so that overruns could be detected earlier, the so-called early warning feature; and second, to try to improve the processes through which we estimate the cost of hardware. In particular, I worked on the promotion of the "should cost" approach.

My actions over these years when the costs were admittedly increasing rapidly was to try to get these procedures adopted in a form that would be truly effective, and not in a way that would just be management image window dressing.

Chairman PROXMIRE. Can you give us one or two examples. After all, you are in a position which can be criticized.

Mr. FITZGERALD. Yes, sir.

Chairman PROXMIRE. You have been removed from this after a period in which these costs have gone very, very high, and you had some responsibility for those costs. And so if you can give us some examples of the action you took and the response or failure to respond of your superiors, it would be most helpful to get an insight into this and see what we can do about it.

Mr. FITZGERALD. I feel this responsibility very strongly. I am in a relatively minor position in the Pentagon hierarchy, but nevertheless it is one where, as I said before, I do feel responsibility.

The actions that I took were primarily, until a year ago, attempts to instruct our people in the field in the use of improved techniques, both through procedures, and field trips, and so on.

The principal obstacle, as I have testified to before, and as I hope to illustrate here today, to acceptance of these procedures was attitude. Some of the statements which I will eventually present to you in the case example will illustrate very clearly that the field organizations, at least in the Air Force, simply had no enthusiasm whatsoever for anything that would place stringent controls on cost, even to the point of allowing visibility. Now, the best example I can give of the —

Chairman PROXMIRE. You say even to the point of allowing visibility?

Mr. FITZGERALD. The status of the program.

Senator JORDAN. Even to the point of disclosure what these costs were when these increasing costs were occurring, is that correct?

Mr. FITZGERALD. That is right. And I think that the contractors and the program officers have common interest in this. If through the application of a tougher performance measurement system we were able to show, for example, on the C-A5, that in early 1967 we indeed had a huge overrun on work done through that point in time, and the information that could lead you to that is factual, and it can be put together, as it was at one point in time, then it would be impossi-

ble later on to attribute those overruns to some subsequent development such as inexorable economic growth and technical problems.

This is resisted by both the field organizations who are being measured by these processes as well as the contractors. It is perfectly understandable to me that the contractors would resist it. It is not completely understandable that our own field organizations would resist it.

Chairman PROXMIRE. You say the heart of the problem, then, is the attitude on the part of your own field people?

Mr. FITZGERALD. And supported by some people in headquarters. They couldn't get away with it if it weren't.

Chairman PROXMIRE. The attitude of softness on cost increases, an attitude of permissiveness on cost increases, an attitude that cost increases aren't really very important?

Mr. FITZGERALD. As long as there is money to pay for it.

Chairman PROXMIRE. And it is this attitude on which we asked you to testify and on which you are not being allowed to testify again this morning. The letter which was sent on June 13 from Secretary McLucas says the following:

I have advised Mr. Fitzgerald that he is free to testify before your committee next Tuesday, or on such other days that you may desire, to speak on matters within the area of his competence.

He says you are free to testify. Either you are free or you are not free. When we came to the crux of this matter on which you can give us the real problem, the attitudes of permissiveness toward cost increases, they tell you you can't disclose this to us.

Let me read part of this letter to which Mr. Jordan referred which again clamps down on your ability to testify. Mr. McLucas wrote on June 16, yesterday, as follows:

This is a letter which forwarded documents, and No. 3 is a memorandum from Mr. A. E. Fitzgerald to Secretary Nielsen, dated March 15, 1968—subject: cost control on the Mark II and at Autonetics in general—attached to which is a memorandum of conversation, dated March 13, 1968, by William W. George, formerly an employee of the Department of Defense. With respect to these documents, we feel that we should point out that while they are not considered classified in the sense of national security, their public release may not be in the best interests of maintaining good management in the military services. These memoranda include personal opinions of individuals, and were not expressions of views by top management people in the Air Force or OSD. While we recognize your right to have access to documents which concern management of resources within the military, we are not sure it serves a useful purpose to have this kind of information circulated in the open press. Specifically, we feel that it is essential to maintain an environment in which our people feel free to carry on our day-to-day business on an informal basis and in an atmosphere of complete candor through personal exchanges of views, debates and internal memoranda, and in which contractor employees may be open and frank with employees of the Government without fear of retribution. We would not like to have people feel inhibited about expressing or writing down opinions very frankly by the possibility of disclosure of such memoranda to public scrutiny.

This rationalization seems to me to be very, very weak, because it is based on the notion that if you were to be allowed to discuss this

problem with the Congress and with the public that people in the Pentagon will feel inhibited about expressing themselves in the future. As I understand it, you are prepared to discuss this with us without disclosing names. You said that you were removing the names of people on whom this would reflect adversely. And it is beyond me to understand why this kind of disclosure would have any adverse effect on the Pentagon. It seems to me that it could only have a favorable effect. Right now, as you have testified, I am convinced, and I think many people must be convinced, that there is a lack of strength and force in holding down costs by officials in the Pentagon and in the field. And the only way we can get at it is to discuss it, talk about it, expose it, find out—get examples of how this has resulted in higher costs. Do you feel free on the basis of the action taken by your superiors to discuss any part of this now with us?

Mr. FITZGERALD. Mr. Chairman, I have probably left the impression that my superiors were uncooperative on this point. I would like to emphasize that I gave them material late last night. But I am prepared, and I will take it on myself to read the narrative of the case example, with your permission, withholding until we get permission for it the release of the remainder of the document. I think I can make the point and I will take the responsibility for reading the narrative, if you like.

Chairman PROXMIRE. Go ahead.

Mr. FITZGERALD. This is the case example on problems of attitude and intent on the Mark II avionics program.

In the hearings of June 11, 1969, I was asked to give examples of the attitude problem which I had described in general terms in my statement. I was further asked to furnish correspondence on this as it affected the Mark II avionics situation. The following brief discussion will, I hope, illustrate several of the attitude problems as I saw them on the Mark II. As background for members of the subcommittee and staff who wish a complete history of the Mark II program through May of last year, I have included a document "An Analysis of the Mark II Program" prepared by an Office of the Secretary of Defense analyst who monitored the program.

This is rather substantial document which I think will be very useful to the staff—33 pages—tracing the history of the program, its technical problems and cost and legal problems. (See p. 799.)

Enclosure 2 is a chronological file of sample memoranda from my own files which I believe will help illustrate the attitude problem I have discussed previously. I have removed the names of Air Force officers and contractor personnel from some of these memoranda. It is not my purpose to picture individuals in an unfavorable light. I have used the memoranda simply to illustrate and confirm the situation I will describe. (See p. 815.)

First, I would like to present a very brief background for the Mark II contract. Autonetics Division of North American Aviation was selected as the winner of a competition to build the Mark II Avionics systems for the F-111, and was awarded a purchase order by General Dynamics, the prime contractor, for the weapon system on July 1, 1966. The purchase order contained the normal provisions of a definitized contract except that target prices were stated on a "not to exceed" basis. In theory, General Dynamics as the prime contractor could negotiate

downward adjustments to the target prices, but Autonetics did not have the right to negotiate upward adjustments for the then-current statement of work. The "not to exceed" target price for the research and development plus the first production run was \$145 million for Autonetics. At the time of the purchase order award, the envisioned system was pictured in Pentagon presentations and trade journals as a natural evolutionary improvement in the then-current Mark I system. While it was conceded that some further development work would be needed, impressions were left that the subsystems and components of the new system were within the "state of the art," and would present no particular development problem. This optimistic outlook was reflected in Autonetics price of \$39 million for the entire research and development program. To illustrate the advanced stage of development of components of the system, pictures of articles already built were included in trade journals as early as June 6, 1966. Later, after winning the competition, Autonetics ran an advertisement in one of the trade journals with the statement which I read earlier.

Despite the optimistic outlook, indications of both technical and problems of cost growth began to filter up to Air Force headquarters and to the Office of the Secretary of Defense early in 1967. At that time, a central office for all F-111 cost information existed at Air Force Systems Command Headquarters at Andrews Air Force Base. One very competent cost analyst with additional assistance from time to time manned this office, and served as the single source of F-111 cost information for Air Force headquarters and the Office of the Secretary of Defense. An analyst from the Office of the Secretary of Defense was assigned to track this program, and to advise the Comptroller of the Department of Defense and through him the Secretary of Defense. This analyst grew concerned about the cost growth very early in the program. The first memorandum in the chronological file (enclosure 2) records his concern:

"The only estimate available today on Mark II is the one prepared in the cost study last spring before the basic configuration of Mark II had been determined. The estimate is generally considered to be far below the eventual cost of Mark II."

Note that he had pointed out this early that it was generally conceded that the eventual cost—

Chairman PROXMIRE. Reread that sentence you just read.

Mr. FITZGERALD. "This estimate is generally considered to be far below the eventual cost of the Mark II."

Chairman PROXMIRE. Whose observation is this?

Mr. FITZGERALD. This was the cost analyst in the Office of the Secretary of Defense who tracked the program in behalf of Secretaries Anthony and McNamara.

Chairman PROXMIRE. And that was at what time?

Mr. FITZGERALD. This was on March 29, 1967.

Chairman PROXMIRE. Thank you.

Proceed.

Mr. FITZGERALD. Elsewhere in the memorandum he recommended that a new independent cost study might be helpful.

In the meanwhile, many technical changes had been issued on the Mark II program. The vast majority of these changes were not to accommodate changing Air Force requirements, but instead stemmed from requests by Autonetics to relax technical specifications.

Chairman PROXMIRE. The vast majority of these changes, then, were at the request of the contractor, which should have reduced the cost; is that correct?

Mr. FITZGERALD. Certainly reduced the value to the Government; yes, sir. And should have—

Chairman PROXMIRE. Should have reduced the cost.

Mr. FITZGERALD. Should have reduced the cost, yes.

Chairman PROXMIRE. And reduced the value of the program—

Mr. FITZGERALD. Would not have necessarily reduced it below the quoted cost, which was too low to begin with.

Nevertheless, the program was "reevaluated" and a new "not to exceed" estimate was submitted by the contractors. On the basis of the reevaluation of the program, the Secretary of the Air Force wrote to the Secretary of Defense on May 4, 1967—not included in chronological file—recommending approval for the revised Mark II program. In this memorandum the Secretary of the Air Force gave assurances of an existence of a "not to exceed" current price. The memorandum also contained an estimate for the cost of the portion of the total program paralleling the contracted effort of \$712 million. This was made up of \$242 million for the total research and development and \$470 million for the first production run.

Mr. Vance, then the Deputy Secretary of Defense, approved the new program on this basis. However, shortly after Mr. Vance had approved the revised program, it was discovered that the Air Force cost estimates had been revised downward. The Office of the Secretary of Defense cost analyst having direct access to the "single source" office for F-111 information at Andrews Air Force Base already knew of the true current Air Force estimate of \$941 million for the same work. The Air Force secretariat was forced to admit that a "mistake" had been made. In actuality, the memorandum signed by the Secretary of the Air Force had been prepared by the military portion of the Air Force headquarters—the air staff—and had not been seen by any financial people in the secretariat prior to submission to the Office of the Secretary of Defense.

As a result of this embarrassing disclosure two things happened:

1. The Air Force cost analyst responsible for keeping the various headquarters informed of current estimates found himself in deep trouble. This was not because of the erroneous estimates forwarded to the Office of the Secretary of Defense, but because the true estimate had been given to them directly.

2. Pressures developed to do a "should cost"——

Chairman PROXMIRE. Say that again. He was in deep trouble, why?

Mr. FITZGERALD. I will read the whole statement.

The Air Force cost analyst responsible for keeping the various headquarters informed of current estimates found himself in deep trouble. This was not because of the erroneous estimates forwarded to the Office of the Secretary of Defense, but because the true estimate had been given to them directly.

The second point——

Chairman PROXMIRE. In other words, he was in trouble because he had given the Secretary of Defense or the Defense Department a true estimate of the cost?

Mr. FITZGERALD. Not through channels, he had given it to them di-

rectly, which was the arrangement which had been set up, and I think was overlooked. And the estimate which went through channels was changed somewhere along the way.

Chairman PROXMIRE. You are going to explain why he was in trouble for this?

Mr. FITZGERALD. Because it was not desired to reveal the true estimate. The field organizations did not want to reveal the true estimate.

Chairman PROXMIRE. With whom was he in trouble?

Mr. FITZGERALD. With his immediate superiors in the Air Force Systems Command.

Chairman PROXMIRE. All right, proceed.

Mr. FITZGERALD. The second development was the beginning of pressures to do a "should cost" study on the Mark II—

Chairman PROXMIRE. When you say he was in trouble, what happened? In what way was he in trouble? Was he reprimanded, did he receive a letter of reprimand?

Mr. FITZGERALD. I don't believe he received a letter, Mr. Chairman. Again, I don't want to put this man on the spot any more than necessary, but he was isolated, he was effectively removed from the supervision of this activity. He was given minor things to do, and was subject to the sort of isolation that we sometimes see with civil service.

Representative MOORHEAD. Would the chairman yield?

Chairman PROXMIRE. Yes, indeed.

Representative MOORHEAD. He was sent to take care of bowling alleys.

Mr. FITZGERALD. No; I don't think he even got a bowling alley, Mr. Moorhead.

But then pressures developed to do a "should cost" study on the Mark II, primarily from the Office of the Secretary of Defense and the Assistant Secretary of the Air Force for Financial Management. These pressures were resisted by Air Force procurement and program management people.

After a series of negotiations, the Assistant Secretaries of the Air Force for Installations and Logistics and Financial Management agreed to "An estimate of the probable cost of the currently proposed Mark II system assuming efficient and resourceful management by the companies involved." The foregoing quote is taken from the second memorandum in the chronological file for the Vice Chief of Staff, USAF, dated June 20, 1967.

Unfortunately, this definition mixed the so-called probable cost estimating and should cost estimating approaches as I described them in my statement of June 11. The direction to the Vice Chief of Staff was interpreted by the military procurement people to be confirmation that "normal contractor proposal factfinding process" would be used. Item 3 in the chronological file.

Fortunately, the ambiguity in the direction by the Air Force secretariat was detected by the Office of the Secretary of Defense and was crisply clarified in a July 12 memorandum from Secretary Anthony:

Since the assumption of "efficient and resourceful management" will not necessarily yield the probable cost, I would suggest that separate estimates be developed under the following assumptions:

- (a) probable costs, under the contractor's current mode of operation;
- (b) what the items should cost, under an improved mode of operation.

In this same memorandum, Secretary Anthony also directed that:

(d) The relationship of the Mark II to the configuration of the airplanes already on contract and the method used by the contractor to segregate Mark II costs from these costs.

This meant a firm baseline for the incremental cost for the Mark II would be retained.

With the very clear direction from Mr. Anthony on the approach to the cost studies and on retention of a cost baseline, it would appear that the earlier arguments within the Air Force would have disappeared.

However, as recorded in the fifth item in the chronological file, the field organizations still resisted both the definition of a cost baseline separately identifying Mark II costs and the should cost study. Regarding the guidance given to the field on retaining a separate identification for cost for the Mark II, the following is recorded:

2. The briefing form we saw on August 2—

And this is 1967—

Chairman PROXMIRE. This is a quote from where?

Mr. FITZGERALD. This is a quote from a memorandum by the OSD cost analyst who I was working with on the attempt to retain a cost baseline to do a "should cost" study on the Mark II:

The briefing form we saw on August 2 followed this guideline, except that Colonel M and other working level people in SPO do not want to label the FB-111 and F-111K avionics "Mark II." However, they have agreed to track all the items contained in the April 14 proposal.

The next point—and I have changed these names in the document I have proposed to submit. I have not changed them here. I have deleted them and put letters in their place.

3. General H is strongly opposed to this definition and wants to revert to the revised SPO definition of Mark II which includes Autonetics subsystems only. Both he and General D expressed the fear that the Mark II program will be cut off if we use the April 14 definition because costs are too high. It is clear that they do not want the total cost of the system stated.

On the subject of the "should cost" analysis, the memorandum records:

1. There is still considerable misunderstanding over the concept of "should cost." There is a strong desire on the part of procurement and pricing people not to do anything in this effort which is not a part of "normal" negotiation preparation.

Although the stated excuse for not doing a "should cost" study was the lack of understanding, it became clear at this point that the question was not how to proceed in a should cost study, but whether one should be done at all. The higher ranking people in the field began to resist the influence of higher headquarters strongly, as indicated in the final paragraph of the referenced memorandum. This contains the discussion with General D. And I will read this, since I don't have it to submit at this point:

As an additional note, we ran into some difficulty in being able to sit down and talk with working level people at the Aeronautical Systems Division and the Systems Program Office. General D started the day by saying, "of course I am going to attend your meeting. You don't think that I would leave you alone to influence my people?"

After a long series of discussions, meetings, and field trips aimed at carrying out the direction from Secretary Anthony, it again became necessary for the Office of the Secretary of Defense to issue specific instructions. These instructions contained in a memorandum from Secretary Nitze on October 28 which included the following direction:

(4) Identify separately all General Dynamics' costs clearly attributable to Mark II and insure that these costs are segregated from the cost of the work already on contract.

(5) Identify contractor inefficiencies which can be eliminated through improved management control.

(6) Insure that the negotiation proceeds from the "should cost" analysis and not from projections of historical costs.

By this time it was perfectly clear that the field organizations in the Air Force, supported by higher procurement authorities, simply were not going to comply with directions from the Office of the Secretary of Defense. On December 26, 1967, a meeting was held in the Pentagon which returned the full responsibility for the cost studies and negotiations to the field (Aeronautical Systems Division and Air Force Systems Command). This was stated as follows in the memorandum on the meeting:

... The presentation's main recommendation was to proceed with factfinding and negotiation, and with flexibility retained at the ASD (ASL) level to make deviations from the presented objectives when and if necessary and in consonance with the facts as the negotiation progresses.

This is difficult to interpret, but it means that they have complete freedom to do what they wish.

Chairman PROXMIRE. That who has complete freedom?

Mr. FITZGERALD. The field organizations.

The second point—

Chairman PROXMIRE. And this was a directive from whom?

Mr. FITZGERALD. This was a memorandum of the meeting which was held in the Pentagon on December 26—

Chairman PROXMIRE. Can you disclose who was responsible for the memorandum?

Mr. FITZGERALD. Well, the memorandum was signed by the Assistant Chief of Pricing and Financial Division, and the Director of Procurement Policy in the Air Force Systems Command.

The next point is, the efficiency studies will not be pursued further for this negotiation.

At this time, further activities on the should cost studies were suspended.

With the successful defiance of the direction from the Office of the Secretary of Defense to maintain a meaningful separation of Mark II costs and to perform and use a meaningful should cost study, the situation on Mark II returned to normal. Interest in Mark II cost control was very low indeed. The attitude of the field organizations can best be illustrated by my reading to you a memorandum recording a conversation between the Office of the Secretary of Defense cost analyst who had tracked the Mark II program and an official from the contractor organization.

This is the first of the two memorandums which you have which were not cleared for public use. But I think that I can describe the memorandums in general. The author of the memorandum stated that he had been called on by an official of this corporation who recounted a meet-

ing with one lieutenant general, three major generals, and two colonels at the contractor plant in which the status of the program was discussed, including the drastically higher cost projections. With the one exception, the officers present, according to the memorandum, did not seem displeased with the company projections, and stated that now that the program had been approved, the primary concern was getting the system to perform. Nothing new or unusual there. He went on to describe other situations in the program and the poor atmosphere for cost control.

And finally, the thing that was astounding to me was that, according to this memorandum, the official indicated a general concern that his company was in error not to constrain costs, but that he could not get his top management to take action when the Air Force seemed so willing to accept higher costs. He said that he hoped that someone would tell his top management to "shape up."

I think that this is an unusual occurrence. Certainly this type of person is in the minority in big contractor organizations. But I think that there are some such people in every large organization.

I find this very difficult—this is a personal aside here—to blame the contractor for being a little indifferent to cost when he is confronted with such a customer attitude.

On receiving a copy of this memorandum, which confirmed the attitude I had observed during the previous year, I decided that further attempts to work with the field organization in Mark II cost control would be futile unless the attitude displayed by high ranking officers in the field could be changed or overcome. Accordingly, I wrote the very strong memorandum which is included as the last item in the chronological file. This memorandum was clearly meant to be an internal document, and it is distasteful for me to reveal it publicly. However, the issue is so important that it must be documented.

That is the conclusion of the abbreviated case study which I had put together in the hopes that it would illustrate some of the obstacles which must be overcome if effective cost control is to be realized in our major weapons acquisition programs. I sincerely hope what I have given you here today, and hopefully what I am able to furnish to supplement it in the future, will be useful to you.

Chairman PROXMIRE. Mr. Fitzgerald, in the first place I want to make sure that you understand that while you read that on your responsibility, it was at our request, we asked you for this. And we at least—at least I as chairman of this committee assume responsibility for your having given us this responsive reply.

In the second place, as I understand it, in the latter part of this case it appears that the contractor's employee was concerned about the cost, but the Air Force was not. In fact, they said, don't worry about it, forget it. Is that correct?

Mr. FITZGERALD. In general. I think the basic supposition was that it was important to worry about the presentation of costs as long as the program was being sold, that is, as long as the field organizations were seeking approval for the program. But, having gotten approval, it was assumed that that was no longer really a problem, that the cost increases could be tolerated, and that the most important thing was to get the system to work.

I think we would all agree that it is extremely important to get it to work. But that, in my opinion, should not detract from the cost control efforts.

Chairman PROXMIRE. It appears that the conflict in part here is that the civilian management in the Air Force is interested in costs, is interested in quality, and I presume they are also very interested in time, to be delivered in time, is that correct?

Mr. FITZGERALD. Yes, sir. I would say that everyone in the Department of Defense would profess interest in all these things. I think it is a matter of degree. I cannot say in all honesty that the civilian management in either the past administration in the Air Force or the Department of Defense was unified in these desires. I think in this particular case that I have used there was the strongest of support from the highest levels in the Department of Defense for doing the things that I think should have been done. It was not simply something that an individual in the Air Force had dreamed up and was trying to implement.

Chairman PROXMIRE. The main difficulty of the attitude in the field is that they were so anxious that these programs go ahead that they not be scrubbed, as Mr. Rule put it, not be eliminated, that they were willing to go along on inadequate information, in fact they were very adverse to providing the truth if the truth might result in the cancellation of the program.

Mr. FITZGERALD. Yes. That was the case early in the program. Later on they would resist anything that might identify excessive cost, inefficiency.

Chairman PROXMIRE. What other motive would they have other than trying to fight for and preserve the program.

Mr. FITZGERALD. I think certainly that is the principal motive. They have become advocates of the program rather than objective reviewers. And this is understandable. We place them in that position. We require them to be advocates for the program. I think also it is a question of lack of experience, in particular in industrial business management, that leads many of these people in the field to assume that the large contractors must know best, and that they must be efficient, otherwise they wouldn't be so rich. The military officers in particular I think are ill equipped to cope in a business situation with the top management people in the contractor companies for the reasons I have described briefly the other day.

They are required to spend a great part of their adult life in military activities which are getting increasingly complex, and then are subjected at the other end of their careers to a very necessary up-or-out policy which requires that most officers retire at fairly early age, which leaves very little professional lifespan in this kind of business.

Chairman PROXMIRE. What this seems to me to highlight also is the necessity for having somebody here at headquarters who is deeply interested in cost control and who has something to say about this program, has a review responsibility for the program. At the present time it seems that you have been deprived of that, and the decisions will be made in this respect out in the field, is that correct.

Mr. FITZGERALD. Not entirely. It is true that I am out of it, but the Secretary of the Air Force still has the authority. The difficulty, of course, is that the Secretary of the Air Force has ultimate authority

for so many things, and it is difficult for him to get involved in all of them.

Chairman PROXMIRE. So that part of the expertise has been lost, part of the responsibility to recommend to the Secretary of the Air Force is gone, because this responsibility has been transferred apparently from you to the military in the field, is that right.

Mr. FITZGERALD. That is my feeling, Mr. Chairman.

Chairman PROXMIRE. How about the desirability of having it in the military themselves, having the military officers make this decision, or the civilians, in the Pentagon.

Mr. FITZGERALD. I strongly believe in a check and balance for situations like this.

Chairman PROXMIRE. Does this represent a general Department of Defense policy now, or is it an adaptation by the Air Force because of your presence on the program? Are they shifting responsibility in general to the military? Do you know of any other examples?

Mr. FITZGERALD. I can't speak with firsthand authority on the other services. I am not sure whether the Air Force situations I have been involved in is because of my own personal problems after last November, or as a general policy shift. But it certainly has shifted that way in the Air Force, for whatever reason, at least in the areas I have been involved in.

Chairman PROXMIRE. Senator Jordan.

Senator JORDAN. Thank you, Mr. Chairman.

Mr. Fitzgerald, you have been a good witness. Our difficulty here is, the testimony you give leads directly to the responsible officials over you who make policy decisions. And those officials have not yet appeared before this committee.

So I want to repeat to the chairman my support for the statement that Congressman Conable made this morning for the minority, urging that the Assistant Secretaries, the people who are responsible for these basic program policies, back through the past several years, be invited before this committee. We have talked to fine witnesses like Mr. Fitzgerald and others, but he is at the working level. I think we should concentrate on getting the people here who made the policy decisions that resulted in these great overruns.

Chairman PROXMIRE. I thank you very much, Senator Jordan, and I certainly agree with that. And I think equally important perhaps, in the light of what we can do about this, or more important, we ought to have before us the people who are now responsible, the Secretary of the Air Force, and others who are now responsible for these policies, which seem to be not improving but deteriorating even further.

Mr. Moorhead?

Representative MOORHEAD. Thank you, Mr. Chairman.

Mr. Fitzgerald, I want to be sure I understand some of the figures that you have testified to. I have jotted them down here. For the Mark II the first price, as I understood your testimony, was not to exceed \$145 million, of which \$39 million was for research and development.

Mr. FITZGERALD. That was for the Autonetics contract alone for the research and development and the first production run. There would

be General Dynamics costs to be added to that as well as Air Force adds, as they are called.

Representative MOORHEAD. So we are not comparing the \$145 million with the true Air Force's estimate that you gave of \$900 million.

Mr. FITZGERALD. No, sir, those were not comparable. If you will recall, I mentioned that there was an estimate for the total program which paralleled the contracted effort. The contracted effort was \$145 million at Autonetics, and some other amount which I don't have available at General Dynamics, probably half again that much.

Representative MOORHEAD. What was the final figure for Autonetics that would compare with \$145 million?

Mr. FITZGERALD. The latest contractual estimates that I have heard are around \$360 million for that portion.

Representative MOORHEAD. More than double the original.

Mr. FITZGERALD. Yes, sir; more than double. The total program has increased even more than that, because follow-on contracts have apparently increased a greater percentage than the one in hand—in estimates, the contracts are not let, you understand, they are not executed.

Representative MOORHEAD. And one of the reasons at least that Autonetics was able to get this contract was that they purported to have gone further on their research and development, or would require less research and development time and money than was actually the fact, is that your testimony?

Mr. FITZGERALD. That has proven to be the case.

Representative MOORHEAD. So it is somewhat akin to the C-5A, which was or at least may have been a cost buy-in—this was a technology buy-in which they later were able to correct at great expense, is that about the situation?

Mr. FITZGERALD. I am not sure that they have corrected it entirely, but I am certain that they have made some progress. I would label it a technical buy-in if I were forced to make a choice, yes, sir.

Representative MOORHEAD. It has always been my impression and testimony before this committee reinforces this, that Secretary McNamara and Assistant Secretary Anthony and others in the Office of the Secretary of Defense were very cost conscious and were making real efforts to control costs—and it would seem from the testimony that you have given that that was the case—but the true facts were concealed from them beginning primarily at the field level, is that correct?

Mr. FITZGERALD. I believe that the facts were concealed from them. And I think this is characteristic of any large organization, Government or business.

Mr. Parkinson, who writes so amusingly on management matters, called this phenomenon the dark at the top of the stairs. And it is very appropriate. I think that it is a natural sort of thing. But you have to provide some means of overcoming it. In a large business organization you use internal audit and organizations of that sort who have freedom of movement throughout the organization, as well as the built-in checks and balances in the accounting systems and internal controls—which we are quite weak on in the Defense Department.

As a second comment on your question, I think that the degree of interest of the Office of the Secretary of Defense on anything touching the F-111 program tended to be greater than that on other programs

because of Mr. McNamara's personal interest in the program. So he was exceptionally interested in this program, I would say.

Another point was that the very successful review on the "should cost" basis of the F-111 engines which Mr. Rule has described before several committees took place at about this time, and was something that the Secretary of Defense wanted to see done more widely.

There are several factors that came to bear on the determination of the Secretary of Defense's office to get a "should cost" study done on the Mark II.

Representative MOORHEAD. Have you any recommendations to this committee or to the Office of the Secretary of Defense to get a little light at the top of the stairs?

Mr. FITZGERALD. Yes, sir, I do have. The ones that I have made the other day would do a great deal toward this if they could be carried out.

Representative MOORHEAD. You mean a reward and punish system for field representatives based on both cost of performance experience or acquisitions?

Mr. FITZGERALD. Yes; but also to strengthen and reorient the management systems, make them real, not just management image facades, as many of them are today. As Mr. Shillito testified, we have an enormous number of paper systems, according to the information given me, it is 680 management systems available to impose on contractors, none of which give us any great amount of objective information about where we stand. Nor are they policed. Now, this is another important matter, somewhat distasteful to the field, but they must be policed, in addition to solving the motivation problems that I mentioned before.

Representative MOORHEAD. It seems to me that the one virtue or characteristic we should insist on at all levels is the truth, you can't make rational decisions in the Air Force and the Office of the Secretary and the Congress until we have the accurate facts on which to base the decision. And replete in your testimony, and Mr. Rule's, are cases where the facts were actually consciously and intentionally concealed from higher decisionmaking levels.

Mr. FITZGERALD. Either by distortion or partial disclosure. Partial disclosure is a more typical means of concealment. For example, leave off the estimate for the spares and support items to get the program sold, and then remember it later on.

Representative MOORHEAD. Half truths, you might call them?

Mr. FITZGERALD. Yes, sir, lack of full disclosure. What is disclosed is very often accurate, but it is not the whole truth.

Representative MOORHEAD. It seems to me that the Secretary of Defense and the Congress are entitled to be told the truth, the whole truth, and nothing but the truth, and that principle has been violated too often.

Thank you, Mr. Chairman.

Chairman PROXMIRE. Mr. Fitzgerald, and Congressman Moorhead, I commend both of you. I think this is at the very heart, that is, getting a little more light at the top of the stairs. The darkness, it seems to me, has deepened since you have been transferred out of your responsibility, it may be enlightened somewhat in the bowling alleys in Thailand, but in the case of these major weapons systems costing billions of dollars to the taxpayers there is no question that those

decisions will have to be made with less enlightenment than we have had in the past, since you are no longer given the responsibility of informing the Secretary of the Air Force and others who have this enormous responsibility of the highly relevant facts.

What about the specific document we had, the memorandum by you to Secretary Nielson dated March 1969? You have given us some of the meat in that document, but are you permitted to supply it to the subcommittee?

Will you be able to do it in the future?

Mr. FITZGERALD. I was under the impression that had been supplied to the subcommittee this morning, but was not available for public release.

Chairman PROXMIRE. I want to be able to use it. We don't feel as if we have it available if we have it under wraps.

Mr. FITZGERALD. I was hoping that we, when we removed the names—and I really see nothing to be gained by putting these individuals on the spot—I was hoping by removing the names that I could gain permission to release it. I will continue to try that, and with your permission I would like to be able to assure the Secretary that we would protect those individuals. There is no question about your right to see them. You can. They can be made public, but I would like to enter a personal plea that we not unduly spotlight these individuals.

Chairman PROXMIRE. I would agree to that.

What about the Mark II "should cost" study? We were provided a copy of this document this morning, but were requested not to disclose its contents. What is your position on disclosing the Mark II "should cost" study?

Mr. FITZGERALD. I have never reviewed this in any detail, Mr. Chairman. The disclosure of some of the items which are viewed as proprietary might not be completely fair to the company involved.

On the other hand, I think that a summary could be made of the document which could be released in good conscience without jeopardizing the proprietary internal cost information at all. I think this could be readily accomplished.

Chairman PROXMIRE. A summary would obviously be highly useful. This is a sizable document [exhibiting thick volume], and it is hard for the committee, the members of the press and the public to follow this. You of course know it thoroughly, but it is hard for us to be able to interpret it. A simple and concise summary would be a great service.

Mr. FITZGERALD. Yes, sir, I think so.

Chairman PROXMIRE. Will you give us that summary?

Mr. FITZGERALD. Well, I will attempt to get one, yes, sir. (See App. II, p. A3.)

Chairman PROXMIRE. We don't expect to it be one page, but we would like it to be quite a bit shorter than this.

We want to thank you very much, Mr. Fitzgerald. You have done an excellent job, and we hope we can get you out of that bowling alley and into the weapons system.

Mr. FITZGERALD. I have been relieved of the bowling alley.

Thank you, Mr. Chairman.

Chairman PROXMIRE. The committee will stand in recess, subject to the call of the Chair.

(Whereupon, at 12 noon the committee was recessed, subject to the call of the Chair.)

APPENDIX I

LIST OF WEAPONS SYSTEMS SELECTED FOR GAO STUDY

| | Mission | Status |
|---------------------------------------|---|---|
| DEPARTMENT OF THE ARMY | | |
| Aircraft: | | |
| Cheyenne helicopter..... | Close in ground support/troop transport convoy escort.. | Production—canceled. |
| UH-1H helicopter..... | Tactical transport helicopter..... | Production. |
| AH-1G Cobra helicopter..... | Attack helicopter..... | Do. |
| Missiles: | | |
| Shillelagh..... | Surface-to-surface antitank missile—main armament of the Sheridan tank. | Do. |
| Safeguard..... | Antiballistic missile..... | Operational system development. |
| Dragon..... | Surface-to-surface missile destruction of armored vehicles and other hard targets. | Engineering development. |
| SAM-D..... | Surface-to-air missile—field army air defense system.. | Advanced development. |
| Lance..... | Artillery support..... | Engineering development. |
| Tow..... | Destruction of armored and field fortifications—surface-to-surface air-to-surface guided missile. | Production. |
| Vehicles-ordnance: | | |
| M-551 Sheridan tank..... | Armored reconnaissance/airborne assault vehicle..... | Do. |
| M-561 Gama Goat..... | Vehicle to provide mobility for troops and equipment.. | Do. |
| DEPARTMENT OF THE NAVY | | |
| Aircraft: | | |
| S-3A..... | Submarine detection, tracking, and destruction..... | Contract definition. |
| F-14..... | Air superiority fighter..... | Do. |
| EA-6..... | Electronic support of strike aircraft and assault forces.. | Production. |
| F-4J..... | Twin-seat fighter aircraft..... | Do. |
| P-3C..... | Land-based ASW weapons..... | Do. |
| CH-46 and CH-47..... | Assault support, cargo operations, commercial operations. | Do. |
| AN systems: | | |
| AN/SQS-23 surface ship sonar. | Long-range sonar for antisubmarine warfare..... | Operational, undergoing modification. |
| AN/SQS-26 surface ship sonar. | Detection of submarines, use on destroyers..... | Production. |
| AN/BOQ-2 submarine sonar system. | To detect, track, classify, and localize submarines and surface ships. | Do. |
| Missiles: | | |
| Phoenix..... | Air-to-air missile for F-111B..... | Operational system development. |
| Poseidon..... | Underwater and surface-to-surface nuclear inertially guided missile. | Production. |
| Walleye..... | TV-guided air-to-surface bomb..... | Contract definition. |
| Condor..... | TV-guided air-to-surface missile..... | Do. |
| Standard and standard ARM. | Surface-to-air missile..... | Production. |
| Subroc..... | Underwater-to-air-to-underwater antisubmarine, inertially guided, nuclear depth missile. | Do. |
| Sparrow E..... | Air-to-air electronically controlled homing missile with conventional warhead. | Do. |
| Sparrow F..... | do..... | Operational system development. |
| Ordnance: | | |
| Mark 46 torpedo..... | Advanced active acoustic homing antisubmarine torpedo. | Do. |
| Mark 48 model 0 torpedo..... | Wire-guided antisubmarine torpedo..... | Contract definition. |
| Mark 48 model 1 torpedo..... | do..... | Do. |
| Ships: | | |
| LHA amphibious assault ship. | Deployment of marine expeditionary forces in amphibious assaults. | Construction. |
| CVA-67 aircraft carrier..... | Attack carrier..... | Completed. |
| CVAN-68 aircraft carrier (nuclear). | do..... | Under construction. |
| CVAN-69 aircraft carrier (nuclear). | do..... | Partially funded (long leadtime items). |
| DE-1052 class, escort ship.. | Locate and destroy hostile submarines..... | Under construction or completed (46 ships). |
| DX, new destroyer..... | Fleet escort destroyer..... | Contract definitions. |
| DXGN, new guided missile frigate..... | do..... | Do. |
| SSN attack submarine (nuclear). | Tracking and destroying enemy submarines..... | Completed or under construction (37 ships). |

LIST OF WEAPONS SYSTEMS SELECTED FOR GAO STUDY—Continued

| | Mission | Status |
|---|--|---|
| DEPARTMENT OF THE AIR FORCE | | |
| Aircraft: | | |
| AMSA (advanced manned) strategic aircraft | Destruction of strategic targets with nuclear conventional ordnance. Replaces B-52 bomber. | Concept formulation. |
| F-15 | Air superiority fighter. | Contract definition. |
| C-5A | Designed to carry large payloads and outsized cargo over long ranges for MAC. | Early production and flight testing. |
| F-111, FB-111, and RF-111 | Tactical support, strategic bombing, fleet air defense, air superiority, reconnaissance. | Production. |
| A-37B | Interdiction or close-air-support in counterinsurgency or limited war. | Do. |
| A-7D | Fixed wing, subsonic, light attack. | Do. |
| A-7E | do | Do. |
| AWACS | Provide airborne early warning of a bomber threat and command/control of tactical interceptor force. | Engineering development. |
| Missiles: | | |
| Maverick | Destruction of tactical ground targets. | Contract definition. |
| Titan III | Space launch vehicles. | Development essentially complete, 3 versions in production. |
| SRAM | Air-to-surface missile to strike primary targets and suppress antibomber defenses. | Advanced engineering development. |
| Minuteman II and III | Destruction of strategic ground targets at intercontinental range. | Production. |

APPENDIX II

A. ERNEST FITZGERALD,
McLean, Va., October 15, 1969.

HON. WILLIAM PROXMIRE,
*U.S. Senate,
Washington, D.C.*

DEAR SENATOR PROXMIRE: This letter is in response to questions from the Joint Economic Committee staff regarding the effect of contract changes on the C-5A aircraft which you requested during my testimony on June 17, 1969. I was unable to supply complete information at that time, and requested that I be allowed to supply the requested information for the record. I have attempted to obtain complete and balanced information for submission to the committee, but without success so far.

Yesterday, I was informed by the Assistant Secretary of the Air Force for Financial Management that you should request the desired information directly from the Office of the Secretary of the Air Force if you still want it.

As you can appreciate, the obfuscation in this affair has been most distressing to me. However, in my current position there is little I can do other than offer my apologies to you and the committee for the long delay.

Sincerely,

ERNEST FITZGERALD.

(A3)