

**Opening Statement By
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Director, Ballistic Missile Defense Organization
before the
Subcommittee on Defense
Committee on Appropriations**

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Good morning, Mr. Chairman. It's a pleasure to be here to present the Department of Defense's Ballistic Missile Defense Program. I have a formal statement I'd like to submit for the record and a brief set of remarks I would like to go through quickly, then I would welcome your comments.

Over the past few years, Congress and the Administration have consistently directed that BMDO focus on three priorities for our missile defense programs:

- developing and fielding highly effective theater missile defense programs (TMD),
- developing for deployment a National Missile Defense program (NMD), and
- maintaining a substantial Advanced Missile Defense Technology program.

Mr. Chairman, the Fiscal Year '99 budget request reflects those priorities and maintains both program focus and momentum to try to meet the challenges we have ahead of us.

- total BMDO Fiscal Year '99 budget request is \$3.6 billion. This includes:
 - \$3.1 billion for RDT&E
 - \$409 million for procurement; and
 - \$17 million for military construction.
- Combining these three budget categories:
 - Theater air and missile defense account for \$2.1 billion, or roughly 59 percent.
 - NMD represents \$962 million or 27 percent.
 - Advanced Technology is \$253 million, which is about 7 percent of our budget.
 - Technical operations, which includes infrastructure support for our major defense programs, is \$194 million or about 5 percent of our budget.
- There are two new categories in our FY99 budget:
 - Threat and Countermeasures.
 - International Cooperative Programs.
 - These are not new efforts - but rather new program elements that we agreed to with the Congress.
 - Together they represent \$72 million or about 2 percent of the BMDO budget.

Mr. Chairman, our experience over the last couple of years reaffirms that developing and fielding missile defenses is not an easy task. It's a unique challenge.

And all of us who participate in this realize how difficult the challenges are. BMD should not be looked upon as individual programs, but as an entire mission area. We're trying to develop a "family of systems" for Theater Missile Defense, not just individual programs. The "family of systems" have to be interoperable with each other, and complement each other to provide the warfighter the capabilities he needs. As the committee is keenly aware, when conflicts arise, the military is called upon to fight jointly in an integrated manner. We are trying to make sure that we not only fight together, but also develop systems together - and actually procure the hardware together to provide a total systems capability.

Mr. Chairman, this past year, the Department has given BMDO the additional responsibility to develop and integrate a joint architecture for both theater missile systems and cruise missile defense systems. We call the combined effort theater air and missile defense. We're bringing together the architecture not just for our theater ballistic missile threat that we've been addressing for the last few years, but also the very real concern about the emerging threat from cruise missiles. Those two combined architectures will give us the total theater air and missile defense capabilities that we think we absolutely need to provide protection for our forces, protection for our allies and protection of our valuable assets.

Mr. Chairman, in spite of our many challenges, we're on the verge of fielding a comprehensive, interoperable, and highly effective missile defense that is responsive to the existing and to the emerging threat to the United States. This is due in no small part to the very strong support we get from Congress.

I've provided a set of charts which outline the details of what we're trying to do in our theater missile defense, national missile defense, and technology programs. I will not go through each of them now in the interest of time, but let me list them for you.

The first chart illustrates the master schedule for our TMD programs and our NMD programs. [CHART 1 - BMD MASTER SCHEDULE] It outlines our current funding, the Fiscal Year '99 request, and our projected Future Years Defense Program, or FYDP level. In addition, the chart outlines some of the key milestones for each one of the major defense acquisition programs, including when those programs go into production, and when they will actually start to be fielded.

While the TMD and NMD programs comprise the lion's share of our budget, we're still developing several critical missile defense technologies. The second chart lists those efforts. [CHART 2 - BMD ADVANCED TECHNOLOGY MASTER PLAN]

My prepared statement also provides some detailed information on our cost control and affordability methods, the things we're trying to do, and the methodologies we're implementing, to ensure that we are addressing the issue of affordability. This is a critical area of concern to me - as well as the Congress - as I look out over the FYDP and try to find the resources we need to field these important programs.

Mr. Chairman, my third chart illustrates why we have a variety of TMD systems and what part of the battlespace they cover. [CHART 3 - THEATER MISSILE DEFENSE]

I would like to briefly give you an update for each one of them and where they stand relative to our acquisition and development activities, and our fielding plans.

Let me start with the Patriot Advanced Capability 3. PAC-3 is currently in the EMD phase of engineering and manufacturing and development of our acquisition cycle. The PAC-3 is currently being fielded in three phases, or three upgrades. Currently, we have fielded in our inventory today the first two phases of the program, or first two configurations of PAC-3. These two configurations are available in the Middle East today, and in the case of a potential conflict with Iraq, they are prepared to counter today's current threat.

The third and final configuration incorporates something very dear to us, the hit to kill interceptor. This technology provides a lethality that we have to have to be able to counter the future threats, and particularly threats where there are weapons of mass destruction, either chemical or biological or nuclear warheads. Hit-to-kill is the capability that we will incorporate in the third phase of the PAC-3 program. I anticipate that we will conduct our next PAC-3 flight test - the first intercept attempt - in the August time frame.

The Navy Area Program, following last year's successful intercept flight test, has now entered into EMD. The program will commence development flight tests for its current phase of the program in Fiscal Year '99, followed by an at-sea trial of what we call the user operational evaluation system (UOES) in Fiscal Year 2000. We plan to have the first unit equipage (FUE) for the Navy lower-tier program in 2001.

The Theater High Altitude Area Defense program (THAAD) is the hallmark program to give us the capability we have to have to counter the emerging threat for the future. The THAAD program is the most mature of our upper-tier programs. It complements the program we have with the Navy, the Navy Theater Wide Program. Mr. Chairman, in 1997, as a result of a failure to successfully intercept its target, we conducted a series of detailed reviews to look at and understand exactly everything about the basic design of the THAAD program, and to understand what is needed to ensure that the program is going to be successful.

We have completed the detailed reviews and, for the last nine months, have been correcting the deficiencies we noted as a result of our detailed independent reviews of THAAD. We've done a lot more testing on THAAD. Specifically, we have conducted:

- ground testing
- hardware testing
- systems testing
- subsystem testing, and
- software testing.

All of these tests have help prepare us for a successful intercept with the THAAD program. The next intercept test is planned for next month. We are very confident that - given all the testing and our reviews - we will be ready to conduct that next flight test.

Following a successful THAAD intercept flight test, our current plans are to execute the User Operational Evaluation System - or UOES - program for THAAD. Under this plan, we will buy 40 UOES missiles for the program. This decision, Mr. Chairman, will not be based solely on one intercept flight test. I know there are very strong concerns in the Congress, and certainly we in the Department have our own

concerns based on the THAAD program's past history, as to whether or not we're ready to procure 40 UOES missiles. My next chart outlines the process we will use to execute the UOES option. [CHART 4 - THAAD UOES Option Execution Activities]

Switching to the Navy theater wide program, we're preparing to enter into a Defense Acquisition Board review early this Summer. This will give us an opportunity to have the first milestone review for the Navy Theater Wide Program. We are looking at an evolutionary acquisition approach for Navy Theater Wide, consisting of an initial block one capability followed some time in the future with a more capable block two. I fully endorse this evolutionary acquisition approach. I think it's a wise thing to do to give us a capability as quickly as possible, but it allows us to conduct a measured way of ensuring that we really know what we're doing before we commit to the full-blown program.

And finally, Mr. Chairman, let me talk about the MEADS program. As you are aware, this is our cooperative program with Germany and Italy. It is currently in the project definition and validation phase. That phase is scheduled to be completed in the first quarter of Fiscal Year '99. And we're negotiating right now with our partners to develop the next phase of the program.

The Quadrennial Defense Review last Summer recommended the continuation of the MEADS program, and it did increase our Fiscal Year '99 budget to provide a hedge into the next R&D phase of the MEADS program. The Department did look at an opportunity to provide funds for the outyears for MEADS. However, because of other priorities within the defense budget, the Department decided it was not appropriate to do so last year. Nonetheless, during the POM process this year, Mr. Chairman, the Department will have to identify resource requirements for all of our Ballistic Missile Defense programs, including MEADS. We will look at alternative ways to see if we can provide funding for the outyears.

Mr. Chairman, I didn't talk very much about one other program that's very vital to our architecture. The Airborne Laser Program is the only program we have currently under development to provide a boost phase capability for missile defense. That is a very vital part of the missile defense architecture. The program is being managed by the United States Air Force. And it's being funded entirely by the Air Force. I am a strong supporter of the ABL in part because of the vital capability it will provide to our total missile defense architecture. I am very familiar with the technology risk. As a matter of fact, the program used to report to me in my previous capacity in the Air Force. I feel very confident that the program is proceeding apace. The Air Force is doing the right things to make sure they mitigate those technology risks before they proceed into the full scale activities for the Airborne Laser Program.

Mr. Chairman, if I could switch very quickly to National Missile Defense, as you know, this is our primary program to provide defense of the United States - all 50 states. This program gives us a capability to provide limited ballistic missile defense from a rogue nation attack. In addition, the NMD system would have some capability against a small, accidental, or unauthorized launch from one of the current nuclear powers, either Russia or China.

To ensure the Department has the required capability to defend the nation against an emerging threat, it has adopted the Three-plus-Three program strategy. We consider this to be a very ambitious program strategy in terms of schedule, but

we are committed to it because it allows us to develop the NMD system as rapidly as we possibly can. We will test and integrate our elements in the next few years. Finally, we will look at the threat in the year 2000, and if the threat warrants it, we will be prepared to deploy the system by the year 2003.

During the past year, Mr. Chairman, we conducted two very successful NMD exoatmospheric kill vehicle - or EKV - flight tests. Two different industry teams supported those efforts and are competing against each other. We demonstrated in those initial tests that we can use an EKV sensor to identify and track objects in space - including threat representative targets and decoys - and allow us to discriminate and determine what is an actual target and what is not.

In the very near future - literally in about a week - BMDO and our NMD Joint Program Office will announce the award for the Lead System Integrator - or prime contractor - for National Missile Defense. We have two very strong industry teams competing to be our prime contractor for NMD: the Boeing Company and the United Missile Defense Company, which is a joint venture between Lockheed-Martin, Raytheon and TRW. The LSI contractor's main task will be to complete element development of our NMD program, and to integrate all those elements into a single system to give us the effective NMD capability for the United States.

Overall, Mr. Chairman, our NMD program is progressing very well, especially considering the very high risk schedule that we've embarked upon. Nevertheless, we're doing everything we can to ensure that program is going to be successful.

Mr. Chairman, my last chart addresses an issue of key concern to both the Congress and Department: missile defense testing. [CHART 5 - [BMD TEST PHILOSOPHY](#)] It is my objective to ensure our test programs are laid out so they can be successful - not only in conducting those tests - but in addressing - or retiring - the risks to ensure we can put effective TMD and NMD capabilities into our warfighters' hands.

The chart lays out our testing philosophy and strongly emphasizes modeling and simulation, computer simulations, and evolves to hardware-in-the-loop testing, software testing, and an orderly progression toward flight tests. Obviously, the most visible tests we conduct are flight tests. I want to make sure that when we conduct a flight test that we address all the risks associated with our programs before we actually commit to a highly visible and very costly flight test. This is particularly important when you consider that our programs have compressed schedules, and we have a limited amount of testing that we're planning for each TMD and NMD system. So, I'm very committed to ensuring our test programs are structured to successfully demonstrate system capabilities.

Because of these concerns, the OSD test community and BMDO commissioned the independent study, led by General Welch and the Institute of Defense Analysis, to review our test program. The task force study concluded - and I certainly agree - that in the past we have deviated from some of our philosophies.

BMDO and our Service Executing Agents are trying to make sure we understand exactly where those deviations were and address them. We also are looking at both the urgent need to give our warfighters a missile defense capability and the need to conduct an appropriate test program. When we do this, we address the technical

risks associated with hit-to-kill systems, and structure a program that provides the right order in our testing: progressing from modeling and simulation, through hardware-in-the-loop, software and eventually flight testing.

I am glad to report that we have actually incorporated most of the task force recommendations over the last year in the THAAD program. We did that in response to past test failures. Now the onus is on me, my program directors and the Services to ensure that we are applying those same lessons learned and applying the task force recommendations to the rest of our programs.

Mr. Chairman, let me close with one final comment about advanced technology. Just about one month ago marked the 15th anniversary of President Reagan's speech that launched the SDI program. If we go back and look at the programs under SDI, we will see that about 60 or 70 percent of the budget was devoted to advanced technology. Most of those technologies were the foundation that allowed us to develop the systems we have today: from PAC-3 and THAAD, to elements of our National Missile Defense Program. Our past investments make today's program possible.

Mr. Chairman, I'm concerned that in our advanced technology program today, our budget is about 7 percent of our total budget. I'm not quite sure that's adequate. I have a vision and a charge for my people to look to see if we can increase our technology budget to get it to about the 10 percent level. That will put it very closely to the technology budget levels that we like to see in the entire Department of Defense.

Even if we cannot achieve some growth in the technology budget, we have to improve the focus of our investments in technology. To achieve this important end, I have initiated two important efforts at BMDO. First, we created a Joint Technology Board with the three Services to advise me how we can share resources and leverage off past investments in technology. I am happy to report that this is a success and we have full participation from the Services. Second, we have developed a technology master planning process that builds a roadmap for all our technology efforts. Again, working with the Services, we have identified how and where our technology investments fit into the overall BMD program.

Mr. Chairman, my prepared statement talks a little bit more about those two efforts. In the interest of time, I'm going to close here. But I want to assure you and the other committee members that we are absolutely committed to making sure that we can provide effective missile defense systems for our country and for our warfighters, both in the area of TMD and NMD. We're doing everything we can to make sure that we do all of this in a joint perspective, that we're not just looking at individual programs in isolation, but we're trying to make sure that we have a joint area where all of our systems can work together, and all of our systems can work in tandem and complement each other to give us the capability that we think we need to support our warfighters and our national security needs.

Thank you, Mr. Chairman.