

**Statement of Dr. Patricia Sanders
Deputy For Test, Simulation And Evaluation
Ballistic Missile Defense Organization
Amended Fiscal Year 2002 Military Construction Budget**

Madam Chairwoman, it is my pleasure to appear before you today to present the Fiscal Year 2002 Construction program for the Ballistic Missile Defense Organization (BMDO).

The objective of the BMDO construction program is to provide the facilities needed to support the research, development and testing of the Ballistic Missile Defense System and to acquire those facilities in accordance with Congressional guidance and that of the Department of Defense. The BMDO construction budget request includes Military Construction (MILCON) and Research, Development, Testing, and Evaluation (RDT&E) funding. The requested projects include MILCON planning and design and unspecified minor construction, an RDT&E funded Missile Defense System Test Bed and a Space Based Laser Test Facility.

Military Construction Funding (MILCON)

The MILCON budget request of \$ 8.3 million includes \$2.0 million in unspecified minor construction and \$6.3 million planning and design funds. The unspecified minor construction funds will be used for urgent, unforeseen projects. The design funds will be used for: Theater High Altitude Area Defense (THAAD) (part of the Terminal Defense Segment) test facilities at the Pacific Missile Range Facility (PMRF) and at the Ronald Reagan Ballistic Missile Test Site (RTS) at the Kwajalein Atoll in the Marshall Islands; Sea-based Midcourse test facilities at West Lock, Hawaii; and Unspecified Minor Construction projects.

This budget reflects the Secretary of Defense direction for BMDO to develop a single integrated ballistic missile defense system (BMDS) to defend the forces and territories of the United States, its allies and friends from all classes of ballistic missiles, without differentiating between theater and national missile defense. The Department will develop and deploy promising technologies and concepts in order to build and sustain an effective, reliable and affordable missile defense system.

The research, development, test and evaluation program is designed to enhance system effectiveness over time by developing layered defenses that employ complementary sensors and weapons to engage threats in the boost, mid-course and terminal phases of flight and to deploy capability incrementally. This revised structure involves three basic thrusts: First, the new ballistic missile defense program will build on the technical progress we have made to date by providing the funding required to develop and test elements of the previous program.

Second, the new program will pursue a broad range of activities in order to aggressively evaluate and develop technologies for the integration of land-, sea-, air-, or space-based platforms to counter ballistic missiles in all phases of their flight. Third, the new testing program will incorporate a larger number of tests using more realistic scenarios and countermeasures. During this testing, we may find

opportunities to accelerate elements of the program, and increase the overall credibility and capability of missile defense systems. This realistic testing will require investment in additional infrastructure.

Missile Defense System Test Bed

Development of the Ground Based Midcourse (GBMC) element project of MDS (Missile Defense system) (formerly known as the National Missile Defense (NMD) program) requires additional testing under operationally realistic conditions. The proposed MDS Test Bed Facility is needed to provide the infrastructure for realistic testing. The Test Bed will include components at several different installations at widely dispersed locations to provide trajectory, sensing, and interception scenarios that resemble conditions under which a Missile Defense System might be expected to operate. While the Test Bed will initially be used to test the GBMC element, in the future, the test bed will be capable of integrating boost, midcourse, and terminal element defenses, as well as sensors and battle management command, control and communications systems. The Test Bed will add realism, allow for multiple engagements, and add additional intercept areas to BMD testing, as recommended by the BMDO-commissioned Independent Review Team (IRT) (commonly referred to as the Welch Panel), and the Director, Operational Test and Evaluation.

The MDS Test Bed is proposed to include the following components:

- Five Ground Based Interceptors (GBIs) with supporting infrastructure at Fort Greely, Alaska and a missile transfer facility at Eielson Air Force Base, Alaska. The GBIs at Fort Greely will allow BMDO to prove out the design and siting of a GBI field that would be required to fire in a salvo without having the GBI interfering with each other GBI, to test the communication between all component parts, and to test for fuels degradation in the arctic environment, as well as to develop and rehearse maintenance and upkeep processes and procedures. At present, BMDO does not intend to launch any GBI from Fort Greely during the testing process because these missiles would fly over land in violation of current flight test safety restrictions. Flight test would be conducted from Ft. Greely if the safety issues could be satisfactorily addressed.
- Two GBI launch silos at Kodiak Launch Complex (KLC) at Kodiak, Alaska. The KLC is a commercial space launch center owned by the Alaska Aerospace Development Corporation. This proposed component is proposed pending requires completion of the National Environmental Policy Act (NEPA) process. The GBI at KLC would allow more realistic test trajectories, compared to those presently provided by launching GBI from the RTS, and from the Pacific Missile Range at Kauai Island in Hawaii.
- Upgraded software for the existing phased array COBRA DANE radar on Shemya Island, refurbishment of the existing electrical power plant there, and test support infrastructure at Eareckson Air Station on Shemya Island, Alaska. The upgrades will allow the COBRA DANE radar to be used as part of the realistic sensing of offensive missiles during MDS tests. This, in combination with the existing ground based radar prototype at RTS, will allow the program to test sensing and intercept of targets launched from a variety of locations.

- Upgraded the software for the existing early warning radar (EWR) at Beale Air Force Base in California. The upgrade will allow the upgraded EWR (UEWR) at Beale to be used as part of the realistic sensing of offensive missiles during MDS tests.
- Battle Management Command and Control (BMC2) nodes at Fort Greely, RTS and the Joint National Training Facility (JNTF), Colorado, and at another location in Colorado Springs, Colorado. The BMC2 nodes will allow the MDS system to test its ability to control MDS components in a variety of locations.
- In Flight Interception Communication System (IFICS) Data Terminals (IDT) at Fort Greely (2), Eareckson Air Station (2), Kodiak (1) and RTS (2). The IDT will allow the MDS system to test its ability to communicate information between about the target location and characteristics to the GBI to effect a successful interception.
- In the future the Test Bed could include a new phased array, X-Band radar proposed for the Pacific area in roughly the 2006 time frame. This project is at a preliminary stage of design and is not in the FY02 budget. Its final location cannot / will not be determined prior to completing the National Environmental Policy Act (NEPA) process.
- Satellite and/or fiber communications between all elements to allow them to communicate.
- Test targets launched from Vandenberg Air Force Base and from aircraft when an advanced version of an air launched target is developed.

In addition, the following elements will support the Test Bed:

- Defense Support Program (DSP) satellites to test their ability to assist in rapidly identifying a target missile.
- Combat Systems Engineering Development Site (CSEDS), New Jersey and Aegis SPY radar.

BMDO proposes to build facilities for the MDS Test Bed using funds appropriated as Research, Development, Test and Engineering (RDT&E), rather than funds appropriated as Military Construction (MILCON). The primary reason for using RDT&E funds versus MILCON funds is to provide the needed flexibility to make required changes identified through testing in a realistic environment. The MILCON funding approach set out in Title 10 U.S.C., Chapter 169 is based on the assumption that all aspects of the facility to be constructed — its size, configuration, and use — can and should be known in detail, prior to Congressional approval of the project. Further, MILCON presupposes that few, and only relatively minor changes would be required to a facility after Congress approved the project. While these are reasonable requirements when applied to most facilities that are constructed on military installations, the requirements do not readily allow for the evolution and development of this MDS Test Bed. The intent of the robust testing is to determine whether the proposed components operate as envisioned, and if not, to determine how the components should be changed so that they will provide an effective defense. Change to the components is extremely likely to require change in the supporting facilities. As an example, the precise missile that will be used as the GBI in an operational GBMC element has not yet been determined. The MDS test bed will be using a surrogate GBI. As more is known about the final size and particular fueling, configuration and other aspects of the GBI, the launch silos, and other

supporting GBI facilities at the test bed may have to be reconfigured in order to support as realistic a testing program as is possible.

The cost of constructing the proposed Test Bed should be included in the total R&D cost of developing a GBMC missile defense element.

Title 10 U.S.C. Section 2353 authorizes funding a limited class of construction with RDT&E if the facility is necessary for the performance of a research and development contract and in addition the facility must be to support research and development; and it cannot have general utility.

BMDO has determined that aspects of the Test Bed project clearly fall within the 10 U.S.C. 2353 authority. Other aspects of the Test Bed could be viewed by some to be of "general utility" and thereby not authorized by 10 U.S.C. 2353; as n. Neither the statute nor its legislative history contain a definition of general utility, and a number of people and organizations could view what is, and what isn't, of general utility differently. While BMDO could, in theory, fund part of the Test Bed project with MILCON, doing so would greatly reduce BMDO's ability to rapidly and effectively make changes to the Test Bed in response to requirements identified through realistic testing. To resolve the issue, the Department of Defense has proposed legislation that would clarify its authority to construct the Test Bed, to include facilities of general utility, with RDT&E funds.

The legislative proposal would allow construction activities to be undertaken with authorized RDT&E funds at Fort Greely, Eareckson Air Station, Eielson Air Force Base and Kodiak, Alaska. The proposal would also authorize the Secretary of Defense to provide assistance to local communities to meet the need for increased municipal or community services or facilities resulting from the construction, installation, or operation of the MDS test bed.

The FY 2002 construction budget request (MILCON and RDT&E) of \$296.6 million contributes \$283.3 million of RDT&E funds to the development of the MDS Test Bed, which will be used initially to prove out the midcourse capabilities. Over time the test bed will expand to include weapons and sensor capabilities to improve all missile defense capabilities, as they are made available.

This test bed will allow us to test more than one missile defense segment at a time and exploit multiple shot opportunities so that we can demonstrate the layered defense concept. The test bed will provide a realistic environment to test different missile defense capabilities under varying and stressing conditions. It will also help us test and prove out construction, transportation, and logistics concepts we will need to build and operate deployment facilities in the challenging Alaskan environments.

FY 2001 Military Construction Appropriation

The Congress appropriated \$85.1 million in FY2001 Military Construction to fund the first phase of NMD deployment facilities. Of that amount \$20.85 million has been reprogrammed to planning and design to continue the deployment facilities design effort. We are planning to use \$9 million to perform site preparation at Fort Greely. The site preparation would include clearing, excavating, and grading the site, preparing facility sub-bases, and installing preliminary utilities (two water wells) and

road infrastructure. The proposed site preparation work is the initial part of the approved FY 2001 MILCON project and the work was planned and designed using MILCON funds. It will not include construction of any silos, or other structures. While the site preparation work at Ft. Greely is work that is authorized under the BMDO Fiscal Year 2001 MILCON project, BMDO recognizes that the previous MILCON documentation no longer accurately describes the work actually planned in the next several years. To rectify this situation, BMDO has submitted a revised DD Form 1391 for the MDS Test Bed construction in its Fiscal Year 2002 Budget request. The remaining \$55 million in FY2001 MILCON will be retained until additional guidance is received on how to proceed with the Ballistic Missile Defense System and would be available to construct deployment facilities when directed.

Space Based Laser Test Facility

Another RDT&E funded project is the Space Based Laser Test Facility. The facility is needed to conduct the ground test and demonstration portions of the Integrated Flight Experiment (IFX). The test facility will include a singularly unique structure designed specifically to support the full power laser test firing of the IFX and combined integration tests of the chemical laser system configured as a complete space vehicle.

The main building structure will include a 120 foot wide by 240 foot long by 150-foot tall, 'High Bay' class 10,000 clean room, a shipping receiving and decontamination area (120 feet by 95 feet, class 10,000 clean room), and support spaces for offices, laboratories, and shops. The facility will be constructed at the NASA John C. Stennis Space Center in Mississippi. The FY 2002 request for \$5 million starts the project. Total construction cost is estimated at \$37 million.

Thank you for your support, Madam Chairwoman. I would be happy to answer any questions you and the Members of the Committee might have.