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HOUSE	APPROPRIATIONS COMMITTEE	X	HOUSE	ARMED SERVICES COMMITTEE	HOUSE	OTHER
SENATE			SENATE		SENATE	
HEARING DATE		TRANSCRIPT PAGE NO.	LINE NO.	INSERT NO.		
1 March 1984		57	1310			

Mine Hunting Technology

~~CONFIDENTIAL~~

Congressman Bennett: On another subject entirely, I wonder if there are any breakthroughs, or any efforts being made to get a better way of eliminating mines from the sea?

In other words, laser or other things being utilized are looked at. It strikes me that we don't operate in this field in a very advanced manner. Are they being done in that field? Does anybody know about it?

Answer: There have been no recent technological breakthroughs in the field of mine detection/disposal. Tests have been made to evaluate lasers for various missions and transmissivity in clear sea water makes them reasonable candidates for some functions. Unfortunately the coastal waters where mines are often encountered are characterized by extreme turbidity, especially at or near the bottom. This condition severely limits the utility of laser systems or underwater television systems to tens of feet. Our program for the detection and neutralization of mines is robust and balanced. It includes the development of a new generation acoustic mine hunting system for the recently authorized classes of mine hunting ships, as well as procurement of the recently developed mine neutralization vehicle (MNV). The MNV includes both acoustic and underwater television capability. In addition, the Navy is pursuing a program of channel mapping and clearance to eliminate or map mine-like objects in approaches to selected US ports. While we remain alert to the possibility of a technological breakthrough, we are following a strategy of a balanced evolutionary approach to this critical problem.

DECLASSIFIED IN FULL
Authority: EO 13526
Chief, Records & Declass Div. WHS
Date: JAN 10 2018

Office of the Secretary of Defense
Chief, RDD, ESD, WHS
Date: 10 Jan 2018 Authority: EO 13526 + 5 U.S.C. § 552
Declassify: _____ Deny in Full: _____
Declassify in Part: X
Reason: 3.3(5)(4)
MDR: 16 -M- 0970

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16-M-0970

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HOUSE	APPROPRIATIONS COMMITTEE	X	HOUSE	ARMED SERVICES COMMITTEE	HOUSE	OTHER
SENATE			SENATE		SENATE	
HEARING DATE		TRANSCRIPT PAGE NO.		LINE NO.	INSERT NO.	
1 MAR 1984				01	01	

VIOLATION OF ABM TREATY

QUESTION: Do any of the budget requests entail programs which might violate the 1972 U.S.--Soviet ABM Treaty?

ANSWER? These budget requests are for research on a broad range of defensive technologies, and are fully consistent with the ABM Treaty as are the research and technology demonstrations which will be conducted as part of the program.

The SDI program as with other research and development programs will be conducted in such a manner so as to comply fully with the ABM treaty using mechanisms that have worked effectively since the Treaty was signed over 12 years ago. The Department of Defense has thorough, comprehensive procedures and mechanisms for insuring compliance of its programs with strategic arms control agreements. The Administration reports annually to Congress on U.S. military programs and their compliance with arms agreements through Arms Control Impact Statements.

Page determined to be Unclassified
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 IAW EO 13526, Section 3.5
 Date: JAN 10 2018

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HEARING DATE	TRANSCRIPT PAGE NO.	LINE NO.	INSERT NO.		
1 MAR 1984		05	05		

~~CONFIDENTIAL~~

ERIS PROGRAM

CONFIDENTIAL

QUESTION: It has been reported that one of the technical demonstrations called for by the SDI is a test of the newly named Exoatmospheric Reentry Vehicle Intercept System (ERIS) formerly called the Homing Overlay Experiment. This test is to involve the use of an airborne sensor, the Airborne Optical Adjunct, to provide guidance information to the intercept component of ERIS. Would such a test violate the ABM treaty provision not to utilize systems that substitute for ABM radars? (Include in your response in a description of the ERIS program, and how it differs from HOE).

ANSWER: The Exoatmospheric Reentry Vehicle Intercept System (ERIS) was not formerly called the Homing Overlay Experiment (HOE). The HOE program started in FY78 to demonstrate the acquisition, track and intercept guidance accuracies needed for the nonnuclear kill (NNK) of a reentry vehicle in the exoatmosphere (Space). HOE, basically, is an experiment to test optical sensor technology.

The ERIS program, on the other hand, is a project to explore alternative approaches to interceptor designs. [In FY84, concept definition studies will be completed to be followed by the definition and approval of a functional demonstration program in FY85.] ERIS is related to HOE in that ERIS will use HOE derived data to help design an interceptor concept. HOE is a sensor technology experimental program, while ERIS is a development and demonstration test program for an exoatmospheric interceptor subsystem.

With regard to the SDI proposed technical demonstration, [it is planned to integrate the Airborne Optical Adjunct (AOA), the Terminal Defense Radar, and the high endoatmospheric NNK interceptor for a functional demonstration. The ERIS interceptor will be separately demonstrated similar to the present HOE program and will be integrated into the functional demonstration consistent with ABM treaty requirements. The optical data from AOA will be relayed to the ground and used for object discrimination and target acquisition by the ground radar.] The ground-based radar, not the AOA, will control the engagement and direct the interceptor flyout.

Concur in Classification as marked

MAY 4 1984
Hatch
 SECURITY REVIEW, ACSI, HQDA

Classified by: USDBE
 Declassify on: OADR

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 Authority: EO 13526
 Chief, Records & Declass Div, WHS
 Date: JAN 10 2018

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HOUSE	APPROPRIATIONS COMMITTEE	X	HOUSE	ARMED SERVICES COMMITTEE	HOUSE	OTHER
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MIRVs ON ERIS

QUESTION: Is ERIS being developed to carry multiple interceptors? If so, would this violate the ABM Treaty restrictions on MIRVed ABM systems?

ANSWER: The ERIS is intended to be a small, light weight, low cost exoatmospheric interceptor which will carry a single hit to kill miniature homing vehicle. A competitive contract award is in progress. Contractor proposals (multiple) for an ERIS design will follow contract award.

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No SECURITY objection to
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[Signature]
 SECURITY REVIEW, ACSI, HQDA

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1 MAR 1984			Q7	Q7		

SDI AND OTHER INITIATIVES

QUESTION: Do any of the budget requests composing the SDI entail programs which might violate other treaty commitments, such as those contained in the 1976 Outer Space Treaty, or the 1963 Partial Test Ban Treaty?

ANSWER: This initiative, contemplating only research on a broad range of defensive technologies, is fully consistent with current US treaty obligations. The 1967 Outer Space Treaty prohibits placing nuclear weapons or weapons of mass destruction in orbit. The 1963 Partial Test Ban Treaty prohibits nuclear weapons tests "or any other nuclear explosion" in the atmosphere, in outer space, and under water. The US SDI program of broad-based R&D is entirely consistent with these treaties. Any testing in the atmosphere, in outer space and under water, as part of this effort, will not involve nuclear devices.

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1 March 1984					
					Coleman #8

STRATEGIC DEFENSE INITIATIVE

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Question: For example, would development, testing, and/or deployment of BMD satellites carrying the Excalibur nuclear pumped x-ray laser system violate any of our current treaty obligations? If so, please specify which provisions of which treaties would be violated.

Answer: The Strategic Defense Initiative (SDI) has no plans to conduct any nuclear weapon demonstration in space. Currently planned activities will be conducted entirely within existing treaty constraints. All currently planned Excalibur experiments will be conducted underground, in compliance with all applicable treaties and agreements.

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JAN 10 2018

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OFFICE							
OUSDRE/OADEN				425			
ACTION OFFICER/EXTENSION				DATE PREPARED			
COL. HOLMES/56813				2 May 1984			
COORDINATION							
OFFICE	ADEW	S+TF	AE				
NAME	Rankin	Shunk	Morris				
DATE	1 May 84	2 May 84	2 May 84				

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HEARING DATE	TRANSCRIPT PAGE NO.	LINE NO.	INSERT NO.		
1 March 1984				Coleman #8	

STRATEGIC DEFENSE INITIATIVE

~~CONFIDENTIAL~~

Question: For example, would development, testing, and/or deployment of BMD satellites carrying the Exoalibur nuclear pumped x-ray laser system violate any of our current treaty obligations? If so, please specify which provisions of which treaties would be violated.

Answer: The Strategic Defense Initiative (SDI) has no plans to conduct any nuclear weapon demonstration in space. Currently planned activities will be conducted entirely within existing treaty constraints. All currently planned Exoalibur experiments will be conducted underground, in compliance with all applicable treaties and agreements.

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 SECTION 1.4.1, RECORDS
 Energy, 1994

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HOUSE	APPROPRIATIONS COMMITTEE	X	HOUSE	ARMED SERVICES COMMITTEE	HOUSE	OTHER
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HEARING DATE		TRANSCRIPT PAGE NO.	LINE NO.	INSERT NO.		
1 March 1984		Added question		Coleman #9		

~~**SECRET**~~

Question: Would an on-orbit test of TALON GOLD of the DARPA TRIAD violate the ABM Treaty? When is a test of TALON GOLD scheduled?

Answer: No. The TALON GOLD experiment is part of the DARPA TRIAD program which also includes the ALPHA chemical laser experiment and the Large Optics Demonstration Experiment (LODE). TALON GOLD is an experiment, begun in 1979, to be carried on shuttle to explore and validate technologies for very high precision pointing and tracking. Since a critical technical issue for space-based directed energy weapons is pointing and tracking, TALON GOLD has been included under the Strategic Defense Initiative. However, TALON GOLD was formulated, and continues to be aimed at generic pointing and tracking technology. The TALON GOLD program is predicated on a number of national requirements including precision pointing and tracking used for national technical means of verification and NASA scientific experiments. TALON GOLD is not a component in any space-based weapon system, ABM or otherwise. The technical information derived from the experiment and the validation of certain new pointing and tracking technologies provide one important input needed to judge the feasibility of space-based directed energy weapons systems. Such experiments are fully compliant with all US treaty commitments including the ABM Treaty and the Outer Space Treaty. The initial flight test of TALON GOLD is scheduled for 1988.

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1 March 1984					

STRATEGIC DEFENSE INITIATIVE

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Question: Is the Air Force interested in conducting an integrated on-orbit feasibility demonstration of the DARPA Triad Space Laser? If the program proceeds on schedule, when could such a test be conducted?

Answer: The DoD continues to pursue technology development activities and studies and analyses that are designed to support a decision in the late 1980's on whether to proceed to a system level demonstration to validate the technology being developed for space based lasers. These activities are described in the 1982 Space Laser Program Plan prepared at the request of Congress and approved by the Secretary of Defense in June, 1982. Some changes in the planned activities have been made necessary by the level of funding appropriated in FY 1983 and 1984, but the major demonstrations of technology readiness embodied in the DARPA Triad activities (Alpha -- the beam generator, LODE -- the beam control subsystem, and Talon Gold -- the acquisition, tracking and pointing subsystem) continue on approximately the same schedule as described in the 1982 plan.

These space laser activities are being subsumed into the Strategic Defense Initiative (SDI). In doing so, the DoD will place greater emphasis on the ballistic missile defense mission application, and will expand the technology efforts somewhat to meet the more stringent BMD performance needs and to enhance the relevance of the technology base activities conducted under the Space Laser Program Plan to other SDI activities. Such changes are not expected to have a major impact on the schedule of the baseline technology demonstrations of the Triad, since the Alpha, LODE, and Talon Gold are demonstrations of generic technologies

[REDACTED] typically identified with the Triad.

Successful completion of the baseline Triad activities in 1988 could support a decision to proceed with an on-orbit test. In about five years from the decision to proceed (1993), we might expect to have completed the design, fabrication, and flight test of a technology validator based upon the proven designs of the Triad technology demonstrations. [A potential demonstrator configuration could be a five megawatt class laser with a four meter diameter focusing telescope and 200 nanoradian accuracy pointing subsystem.] Depending on the results of the current Triad test program, other configurations could be chosen.

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HEARING DATE 1 March 1984	TRANSCRIPT PAGE NO.	LINE NO.	INSERT NO.	Coleman #11	

STRATEGIC DEFENSE INITIATIVE	
<p>Question: How would a test of the DARPA Triad be conducted (i.e., how would it be placed in orbit, what test vehicle would be used, over what range would it be tested, etc.)?</p> <p>Answer: There are no plans to test the DARPA Triad in space. The Alpha chemical laser will be tested under simulated space (vacuum) conditions on the ground, as will the Large Optics Demonstration Experiment (LODE). Talon Gold will be tested aboard the shuttle against a high flying aircraft and other instrumented targets.</p>	<p style="text-align: center;">Page determined to be Unclassified Reviewed Chief, RDD, WHS IAW EO 13526, Section 3.5 Date: JAN 10 2018</p>



OFFICE OUSDRE/OADEM		428	
ACTION OFFICER/EXTENSION COL. HOLMES/56413		DATE PREPARED 1 May 1984	
COORDINATION			
OFFICE	ADEM		
NAME	Burke		
DATE	1 May 84		

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STRATEGIC DEFENSE INITIATIVE

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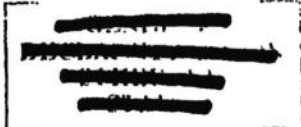
Question: How would a test of the DARPA Triad be conducted (i.e., how would it be placed in orbit, what test vehicle would be used, over what range would it be tested, etc.)?

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(12 characters per inch)*

DON'T TYPE BEYOND THE LINES TOP, BOTTOM, OR SIDE

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Reviewed Chief, RDD, WHS
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1 Mar 84			16: McCloskey no. 1		

STRATEGIC DEFENSE INITIATIVE

Question: If the Committee would permit only a 5 percent real growth in the programs now encompassed by the SDI, how would this change the structure of the program and what shift in priorities, if any, would occur?

Answer: The DoD believes that it is unwise to approach the issue of the proper level of funding for the Strategic Defense Initiative from the standpoint of an allowable percentage of growth. The program was structured as a compilation of defined work efforts and projects built up into each program element, and the budget request should stand or fall on the basis of the worth of those individual work efforts and projects.

It should be noted that the Secretary of Defense's adjustments to the defense budget request for fiscal year 1985, a part of the President's deficit reduction plan, did not offer any reduction to the SDI.

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Date:

JAN 10 2018

OFFICE							
OUSDR/CADEW				429			
ACTION OFFICER/EXTENSION				DATE PREPARED			
COL. HOLMES/56413				7 May 1984			
COORDINATION							
OFFICE	ADEW	SPTMF	OSD (C) RID				
NAME	Rouline	Churk	RyHoffman				
DATE	7 May 84	4 May 84	5/8/84				

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1 Mar 84			16: McCloskey no. 1		

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HEARING DATE	TRANSCRIPT PAGE NO.	LINE NO.	INSERT NO.		
1 Mar 84			17: McCloskey no. 2		

STRATEGIC DEFENSE INITIATIVE

Question: What would the answer be if the Committee held the program to nominal growth?

Answer: The DoD believes that it is unwise to approach the issue of the proper level of funding for the Strategic Defense Initiative from the standpoint of an allowable percentage of growth. The program was structured as a compilation of defined work efforts and projects built up into each program element, and the budget request should stand or fall on the basis of the worth of those individual work efforts and projects.

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 Reviewed Chief, RDD, WHS
 IAW EO 13526, Section 3.5
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OFFICE							
OUSDRE/OADRH				430			
ACTION OFFICER/EXTENSION				DATE PREPARED			
COL. HOLMES/56413				7 May 1984			
COORDINATION							
OFFICE	ADEN	STATF	OSD (C) RFD				
NAME	Raskin	Shuck	B. Hoffman				
DATE	7 May 84	8 May 84	5/8/84				

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1 Mar 84			17: McCloskey no. 2		

STRATEGIC DEFENSE INITIATIVE

Question: What would the answer be if the Committee held the program to nominal growth?

Answer: The DoD believes that it is unwise to approach the issue of the proper level of funding for the Strategic Defense Initiative from the standpoint of an allowable percentage of growth. The program was structured as a compilation of defined work efforts and projects built up into each program element, and the budget request should stand or fall on the basis of the worth of those individual work efforts and projects.

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JAN 10 2018

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HEARING DATE	TRANSCRIPT PAGE NO.	LINE NO.	INSERT NO.		
March 1, 1984	2	37			

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Tactical Jam-Resistant Communications

Begin typing text here.

[classification]

(The information follows:)

The information desired by the Committee has been forwarded to the Committee under separate cover.

CONFIDENTIAL

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 Reviewed Chief, RDD, WHS
 IAW EO 13526, Section 3.5
 Date: JAN 10 2018

[classification]

OFFICE								
Theater & Tactical (C ³ , DUSD(C ³ I), OSD								
ACTION OFFICER/EXTENSION							DATE PREPARED	
LTC Walsh/52855							28 March 1984	
COORDINATION								
OFFICE								
NAME								
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HOUSE	APPROPRIATIONS COMMITTEE	X	HOUSE	ARMED SERVICES COMMITTEE	HOUSE	OTHER
SENATE			SENATE		SENATE	
HEARING DATE	TRANSCRIPT PAGE NO.		LINE NO.	INSERT NO.		
March 1, 1984	4		72			

Tactical Jam-Resistant Communications

(The information follows:)

There are no official contractor commitments or estimates on the cost of EJS production equipments at this time.

Page determined to be Unclassified
 Reviewed Chief, RDD, WHS
 IAW EO 13526, Section 3.5
 Date: JAN 10 2010

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