



DEPUTY SECRETARY OF DEFENSE

1010 DEFENSE PENTAGON
WASHINGTON, DC 20301-1010

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JAN 14 2002

Honorable Spencer Abraham
Secretary of Energy
1000 Independence Avenue, SW
Washington, DC 20585

Dear Secretary Abraham:

In response to a National Security Decision Directive, enclosed is the 2000 Nuclear Weapons Council Report on Nuclear Weapons Surety (TAB B).

This report addresses the status of the safety, security and control of the nuclear weapons stockpile. It also addresses emergency response, inspection and evaluation programs, and the impact of budget constraints on required improvement programs. No significant problems were identified during the inspection programs or emergency response exercises conducted in the reporting period. There were no significant nuclear weapons accidents or security incidents.

Recommend you join me in signing the attached memorandum to the President (TAB A).

Sincerely,

Enclosures:
As stated

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MEMORANDUM FOR THE PRESIDENT

SUBJECT: 2000 Nuclear Weapons Council Report on Nuclear Weapons Surety (U)

(U) In response to direction in National Security Decision Directive 309, we have developed the 2000 Report on Nuclear Weapons Surety. This report addresses the status of the safety, security, and control of the nuclear weapons stockpile. From this review, we have concluded that the nuclear weapons stockpile remained safe, secure, and under positive control.

(U) Nuclear weapon surety is maintained through a combination of warhead design features, personnel programs, operational procedures, physical security measures, and comprehensive inspection and evaluation programs. There were no significant nuclear weapons accidents, security incidents, or problems encountered during the reporting period.

(b)(1),(b)(3):42 USC §2168(a) (1)(C)-(FRD)

(U) Budget constraints did not impact required improvement programs in 2000. In the near future, however, we expect to face substantial challenges in sustaining the technology and industrial base required to improve the safety, security, and control of the nuclear weapons stockpile. Both Departments remain committed to maintaining and enhancing the surety of the nuclear weapons stockpile.

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FOR DOE SIGNATURE**


Paul Wolfowitz
Deputy Secretary of Defense

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DEPARTMENT OF DEFENSE
AND
DEPARTMENT OF ENERGY

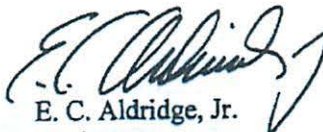


NUCLEAR WEAPONS COUNCIL
WASHINGTON, DC 20301-3050

FOREWORD

(U) I am pleased to provide the Calendar Year 2000 Nuclear Weapons Council Report on Nuclear Weapons Surety. This report is submitted to the President through the Secretaries of Defense and Energy in accordance with National Security Decision Directive (NSDD) 309.

(U) The events of September 11, 2001, and our subsequent actions fall outside of the reporting period of this document. However, through the actions of the members of the Nuclear Weapons Council, we have taken all the necessary actions to ensure the continued safety, security, and control of the nuclear weapons stockpile.


E. C. Aldridge, Jr.
Chairman

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**2000 NUCLEAR WEAPONS COUNCIL
REPORT ON NUCLEAR WEAPONS SURETY (U)**

INTRODUCTION (U)

PURPOSE (U)

(U) National Security Decision Directive (NSDD) 309 requires an annual Joint Department of Defense (DoD)/Department of Energy (DOE) Report on Nuclear Weapons Surety be provided to the President. The National Nuclear Security Administration (NNSA) was formally established on March 1, 2000, and is responsible for the DOE's nuclear weapons activities. This report covers the period January 1, 2000, through December 31, 2000, and addresses safety, security, use control, emergency response, inspection and evaluation programs, and the impact of budget constraints on required improvements.

STATUS (U)

(U) The United States nuclear weapons stockpile remains safe, secure, and under positive control. Table 1 summarizes the status of the nuclear stockpile and lists major surety features of each weapon type. The continued dismantlement of retired weapons lacking modern safety designs has improved overall nuclear safety. There were no accidents or significant incidents in 2000 involving nuclear weapons.

SAFETY (U)

(b)(1),(b)(3);42 USC §2168(a) (1)(C)-(FRD)

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(b)(1),(b)(3):42 USC §2168(a) (1)(C)-(FRD)

(U) Weapon Handling Improvements. The Pantex Plant made notable infrastructure and facility improvements to increase lightning protection assurance, as well as continued enhancements in assembly and disassembly procedures, allowing the plant to meet its operational requirements safely.

(U) Safety Studies and Assessments. Because the United States is not currently producing new nuclear weapons, weapons in the enduring stockpile must remain safe, secure, and reliable for an indefinite period. The DoD and NNSA conduct various studies and assessments to detect changes to weapons in the stockpile before safety concerns emerge. During 2000, the safety-related studies and assessments conducted did not reveal any problems with the safety of the U.S. nuclear stockpile.

- **(U) A Nuclear Explosive Safety (NES) Master Study of off-site transportation** previously planned for mid-2000 was postponed to the second quarter of 2001.
- **(U) Four Nuclear Weapon System Safety Group (NWSSG) studies** were completed: B-52, E6B, the Portable Weapons Launching System (PWLS) and Trident I. These studies concluded that the systems met DoD safety standards when operated in accordance with approved operational plans, procedures, and nuclear weapon system safety rules (NWSSRs).
- **(U) One Weapon System Safety Assessment (WSSA) on the B-52** was completed. The results were briefed to the Chief, Air Force Safety, and the NWSSG in April 2000. Three other WSSAs are ongoing: the C-17, the Dual-Capable Aircraft (DCA) WSSA, and the B-2A WSSA. These will be completed in calendar year (CY) 2001.
- **(U) Additionally, the Nuclear Explosive Safety Studies Group (NESSG)** completed four NES Studies and one NES Revalidation. These studies included one Lightning Control Master Study, one W76 Dismantlement and Inspection (D&I) Program Study, and studies evaluating proposed process changes to the B61-10 and W87. The NES Study Revalidation addressed W88 operations and allows the W88 surveillance program to continue through September 2004.

SECURITY (U)

(U) Security Summary. The nuclear stockpile remained secure, and there were no significant security incidents.

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(b)(1)

(U) **Ballistic Weapons Trainer (RWT).** The Air Force sponsored the development and production of the B61-4 Type 3E Trainer (RWT) to meet operational training and evaluation requirements in Europe and the United States. The RWT simulates War Reserve (WR) weapons in appearance and test responses. This reduces the need to use actual WR for training, exercises, and evaluations, thereby improving safety and security. NNSA will produce a total of 51 trainers. The first production unit will be delivered in 2001 with total production complete in early 2003.

(U) **Inter-Continental Ballistic Missile (ICBM) Security Initiative.** Air Force Space Command (AFSPC) has appointed an executive council to develop a Nuclear Security Roadmap that will help lay the groundwork for enhancing the security of nuclear weapons. AFSPC, with support from the Defense Threat Reduction Agency (DTRA), the Joint Staff, the National Nuclear Security Administration and other Federal agencies, undertook a series of studies, experiments, and exercises to assess the security of ICBMs. These included a Launch Facility Engineering Study, an In Situ Assessment, the Mighty Guardian III Force-on-Force Exercise, and an Integrated Security and Use Control assessment of the weapon storage areas (WSAs). The results of these activities are being analyzed and will become part of the groundwork for the Nuclear Security Roadmap.

(U) **Weapons Storage Area (WSA) Security Initiative.** Air Combat Command (ACC) has appointed an executive council to develop a Nuclear Security Roadmap that will lay the groundwork for enhancing the security of those nuclear weapons stored in WSAs. ACC is studying data gained from earlier calendar year exercises that tested the efficacy of WSA and storage structure facilities. These exercises included the Mighty Guardian I and II Force-on-Force exercises. The results of these activities are being analyzed and will be used to develop the ACC Nuclear Security Roadmap.

(U) **Security Research and Development.** DoD and NNSA research and development activities continue on three-dimensional video motion detection and assessment, activated delay/denial, modeling and simulation, recapture tools, and man-portable explosive detection.

(U) **Over-the-Road Security.** NNSA is enhancing security for over-the-road transport of nuclear weapons by replacing the existing 20-year-old fleet of Safe Secure Trailers

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with new Safeguards Transporters (SGTs). At the end of fiscal year 2000 (FY 2000), ^(b)₍₁₎ SGTs were operational. SGT production is on schedule and within budget. The NNSA plans to have an all-SGT fleet by FY 2005.

USE CONTROL (U)

(b)(1),(b)(3):42 USC §2168(a) (1)(C)-(FRD)

(U) B61-34/10 Alt 339 Multiple-Coded Switch Encryption Translator (MET). Retrofits for Alt 339 (end-to-end PAL encryption capability) resumed in 2000. All PAL controllers in Europe were upgraded and are compatible with plain-text operations. All

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weapons outside the continental U.S. (OCONUS) will be retrofitted with Alt 339 by the end of first quarter 2002.

(U) **Use Control Research and Development.** DoD and NNSA research and development focused on improvements in weapon-level use control, denial, and PAL code management. Modernization and upgrades for the PAL Code Management Systems for the European Theater, Air Force depots, and the NNSA are underway, with a scheduled initial operational capability (IOC) of 2001. Ongoing integrated security and use control studies are furnishing the basis for W80 LEP use control design options and goals. They are also influencing changes in security policy and requirements and emergency operations planning.

(U) **Formation of the Compartmented Advisory Committee.** The NWC established the Compartmented Advisory Committee (CAC) in November 2000 to provide advice and recommendations on technical requirements for nuclear weapon surety upgrades for all weapon systems in the stockpile undergoing refurbishment. The CAC examines the need for nuclear surety improvements; assesses proposals for use-control upgrades both internal and external to the weapon systems, as well as technical and/or operational security mitigators or solutions; recommends the timeframes in which the improvements must be instituted; and prepares cost-benefit analyses for NWC consideration. The CAC is composed of select members of the NWC Standing and Safety Committee who have primary responsibility for nuclear weapons surety issues. The CAC helps to ensure that NWC decision makers have the information and staff necessary to make knowledgeable decisions regarding proposed nuclear weapons surety.

SURETY IMPROVEMENTS (U)

(b)(1),(b)(3);42 USC §2168(a) (1)(C)-(FRD)

(U) **ICBM W78 Joint Life Extension Study (LES).** In October 2000, the ICBM Project Officer Group (POG) issued their report on the W78 LES three-year effort concluding that no near-term technical drivers were identified for NNSA or DoD components. The POG recommends that the W78 warhead refurbishment begin in 2013 as currently scheduled.

(U) **Surety Research and Development.** NNSA is conducting an extensive R&D program aimed at improving surety of the stockpile. These efforts address the safety exceptions inherent in the systems and are expected to provide significantly better control. Results of this research will be incorporated in future LEPs.

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JOINT EMERGENCY RESPONSE (U)

(b)(1)

(U) **Policy and Planning.** If a nuclear weapon is involved in an accident in the United States, the Department with custody of the weapon will respond to establish control and mitigate any consequences. The DoD and the NNSA will work together to render the weapon safe, remove it from the accident site, and collect, safeguard, and remove any classified and/or hazardous material from the accident site.

(b)(1),(b)(3);42 USC §2168(a) (1)(C)-(FRD)

(U) NNSA has begun a series of exercises to develop a methodology for disposition of damaged nuclear weapons. The first of the series of exercises was held in December 1999 at NNSA, Nevada Operations Office as a table top exercise. A follow-on was conducted in late 2000.

INSPECTION & EVALUATION PROGRAMS (U)

(U) Both the DoD and the NNSA manage inspection programs to ensure their organizations meet established surety standards. The number of DoD's nuclear-capable units remained relatively constant over the recent fiscal years after a rapid decrease in the early 1990s. In 2000, the Military Departments and DTRA conducted Nuclear Surety Inspections (NSIs) to examine surety procedures for selected nuclear-capable units. The

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NNSA conducted evaluations of its nuclear operations, nuclear explosive facilities, and weapon safety programs. These inspections and evaluations indicated that the DoD and the NNSA adequately assure nuclear surety.

IMPACT OF BUDGET CONSTRAINTS ON REQUIRED IMPROVEMENT PROGRAMS (U)

(U) Budget constraints did not impact required improvement programs in CY 2000. In the near future, however, we expect to face substantial challenges in sustaining the technology and industrial base required to improve the safety, security, and control of the nuclear weapons stockpile. Of particular concern are the infrastructure for weapons testing, maintenance, and production and the availability of personnel with expertise in nuclear weapons design and production. The two Departments continue to work a path forward to implement surety improvements in LEPs beginning with the W76 and W80 programs, both of which are now in Developmental Engineering Lifecycle Phase. The DoD and NNSA remain committed to enhancing stockpile surety by identifying and reducing surety risks while maintaining weapon reliability. The two Departments are working together to define and address difficult trade-offs necessitated by budget and resource constraints.

CONCLUSION (U)

(U) The U.S. nuclear weapons stockpile remained safe, secure, and under positive control in CY 2000. Activities are underway to review study recommendations and, where warranted, implement them to improve further the safety, security, and control of the U.S. nuclear weapons stockpile. The limited ability of stockpile stewardship tools to qualify changes in the nuclear explosive package is impacting our ability to implement a full range of surety improvements. The LEPs for the enduring stockpile provide a unique opportunity to incorporate these approved surety improvements deemed necessary by the DoD and NNSA.

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(b)(1),(b)(3);42 USC §2166(a) (1)(C)-(FRD)

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WASHINGTON, DC 20301-3010

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ACQUISITION AND
TECHNOLOGY

ACTION MEMO

December 6, 2001, 8:13 AM

FOR: ^{DEATH} SECRETARY OF DEFENSE

DepSec Action _____

FROM: Mr. E. C. Aldridge Jr., Under Secretary of Defense for Acquisition and Technology *E. C. Aldridge Jr.*

SUBJECT: 2000 Nuclear Weapons Council Report on Nuclear Weapons Surety

- In response to National Security Decision Directive (NSDD) 309 (TAB B), the Nuclear Weapons Council (NWC) has produced the calendar year 2000 Report on Nuclear Weapons Surety (TAB C).
- This joint DoD/DOE report addresses the status of the safety, security and control of the nuclear weapons stockpile. It also addresses emergency response, inspection and evaluation programs, and the impact of budget constraints on required improvement programs.
- No significant problems were identified during the inspection programs and emergency response exercises conducted in the reporting period. There were no significant nuclear weapons accidents or security incidents.

RECOMMENDATION: ^{dep} Secretary of Defense sign the forwarding letter to the Secretary of Energy (TAB A-1) and the memorandum to the President (TAB A-2). Request the Executive Secretary return the package to OATSD(NCB)/NM for forwarding to the Secretary of Energy.

COORDINATION: TAB D

Attachments:
As stated

SPL ASSISTANT DIR PTA	
SF MA GIAMBASTIANI	
MA BUCCI	
EXECSEC WHITMORE	<i>[Signature]</i>

Prepared By: (b)(6) 6756-2001AT

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SECRET CONTROLS

TAB B

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THE WHITE HOUSE

WASHINGTON

June 27, 1988

NATIONAL SECURITY ⁷ DECISION
DIRECTIVE NUMBER 309

Nuclear Weapons Safety, Security, and Control (U)

Adequate safety, security, and control of United States nuclear weapons and nuclear weapon systems and nuclear weapon facilities are of paramount importance to the security of the United States. This NSDD reaffirms and consolidates my guidance for Department of Defense (DOD) and Department of Energy (DOE) responsibilities for nuclear weapon safety, security, and control.

Nuclear weapons are a cornerstone of United States national security and will continue to provide a basis for national defense for the foreseeable future. To maintain credible deterrence, our nuclear weapons must be appropriately deployed and ready, and they must be safe, secure, and controlled. (U)

The basic premise for DOD and DOE dual-agency judgment and responsibility for safety, security, and control derives from each Department's obligation to protect the public health and safety. (U)

DOD and DOE will share the responsibilities to:

Identify and resolve nuclear safety problems connected with nuclear weapons. (U)

Prevent unauthorized use of a nuclear weapon through the use of positive control measures. (U)

Determine the adequacy and effectiveness of physical security measures and coordinate their efforts including exchange of technical and operating data. (U)

Establish an interagency command control, and communications infrastructure to ensure nuclear weapons safety, security, and control during any national emergency from a nuclear accident to war.

To ensure I am adequately informed of the status of nuclear weapon safety, security, and control matters, the following reporting procedures shall be implemented:

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An Annual Surety Report shall be prepared jointly by DOD and DOE and submitted by June 30th of each year. As a minimum, the report shall address nuclear weapon safety, security, control, emergency response, inspection and evaluation programs, and the impact of budget constraints on required improvement programs. (u)

A DOE Annual Report on Nuclear Weapons Domestic Safeguards and Security shall be submitted by April 30th of each year that shall describe the current state of protection of all DOE domestic nuclear weapons facilities. (u)

I shall be briefed annually on nuclear weapons safeguards and security after these reports are submitted and reviewed. (u)

The staff of the National Security Council should be advised promptly of unusual problems or accomplishments involving nuclear weapon safety or security. (u)

This directive supersedes NSDM-254, dated April 27, 1974, and NSDD-279, dated June 16, 1987, and supplements NSDD-281, United States Nuclear Weapons Command and Control, dated August 21, 1987. (u)

Ronald Reagan

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TAB C

TAB D

**COORDINATION FOR THE 2000 NUCLEAR WEAPONS COUNCIL REPORT ON
NUCLEAR WEAPONS SURETY**

Under Secretary of Defense (C)	Mr. Zakheim	November 30, 2001
Vice Chairman, Joint Chiefs of Staff	Gen Pace	October 25, 2001
General Counsel	Mr. Dell'Orto	November 29, 2001
PA&E/Deputy Director (S&SP)	Mr. Ioffredo	November 26, 2001
Deputy Assistant Secretary of Defense For Forces Policy (Acting)	Mr. Schneider	September 5, 2001
Administrator, NNSA	Gen (Ret) Gordon	November 2, 2001

1/8/2002

General John A. Gordon

Department: Department of Energy

Organization: NNSAWA-1

Title: Administrator

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	(b)(6)	

Clearance	Schedule
<input type="checkbox"/> Pentagon Badge	Scheduler: (b)(6)
Begin Date: SSN:	Phone: (b)(6)
End Date:	Email:

Committee	Position	Begin	End	Active
NWC	Member	1/1/1980	1/1/2030	<input checked="" type="checkbox"/>