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A HISTORY OF THE NUCLEAR WEAPONS STOCKPILE

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FY 1945 - FY 1975



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CLASSIFIED BY:
J. K. Bratton
Major General, USA
Director of Military Application

**A HISTORY OF THE
NUCLEAR WEAPONS STOCKPILE**

FY 1945 - FY 1975

August 1976

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FOREWORD

This document, *A History of the Nuclear Weapons Stockpile FY 1945 FY 1975* (TID-26990), updates the information in *A History of the Nuclear Weapons Stockpile, FY 1945 FY 1972* (WASH-1212), published in February 1973

This document lists and categorizes the elements of the national nuclear weapons stockpile for Fiscal Years 1945 - 1975 and is designed to serve as a basic reference source. It has been concurred in by the Department of Defense and the Energy Research and Development Administration.

Because of the scope and type of information contained in this publication, it should be carefully distributed, controlled, and protected consistent with its security classification and sensitivity as data of significance to United States national security.



J. K. Bratton
Major General, USA
Director of Military Application

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February 23, 1973

FOREWORD TO FIRST EDITION

For many years, questions have been asked regarding the growth of the Nation's nuclear weapons stockpile, quantities of nuclear materials in the early weapons, the yields of specific weapons, or total megatonnage contained in the stockpile at various times. This information could be obtained but entailed researching numerous sources and documents.

A History of the Nuclear Weapons Stockpile FY 1945-1972 has been published to provide one source for obtaining this type of information. The history is orchestrated in tables and charts which show the nuclear weapons stockpile composition by design categories and military mission categories.

This document represents the joint DoD AEC stockpile for Fiscal Years 1945-1972, and has been concurred in by both the Atomic Energy Commission and the Department of Defense.

Because of the breadth of the nuclear weapons information contained in this publication, it should be treated as highly sensitive nuclear weapon data of significance to our national defense and security. Viewers are enjoined to insure its proper security protection at all times.

I would like to extend my appreciation to the staffs of the Military Liaison Committee, the Defense Nuclear Agency, Atomic Energy Combined Operations Planning Group, and the Division of Military Application for their cooperation in the preparation of this document.



Frank A. Camm
Major General USA
Assistant General Manager for Military Application

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*For ready reference, pages containing selected tables and figures have been printed on colored stock

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INTRODUCTION

This document presents, in a series of tables and figures, a statistical summary of the United States nuclear weapons stockpile from the end of FY-1945 through FY-1975. The document is intended as a planning and reference document and will be updated on an annual basis. The data are divided into two sections.

In Section I, the nuclear weapons stockpile is organized into design categories and identified by Mark/Mod numbers to the extent necessary to separate significant differences in nuclear materials or yields. Tables and figures present end fiscal year data for

1. Number of weapons in the stockpile.
2. Quantities of nuclear materials (plutonium, tritium, combined reactor products, and enriched uranium) contained in stockpiled weapons and related inventories.
3. Yields available in the stockpile.

In Section II, the stockpile is organized into military mission categories (force structure) and identified by Mark/Mod numbers to the extent necessary to separate significant differences in nuclear materials or yields. Such allocations were not in general use within the AEC prior to FY-1961. Tables and figures present end fiscal year data, beginning in FY-1961, for

1. Number of weapons in the stockpile.
2. Quantities of nuclear materials (plutonium, tritium, combined reactor products, and enriched uranium).
3. Yields available in the stockpile.

Additional information pertaining to the source and treatment of the data is contained in the appendix.

This document was prepared by the Office of Production and Planning, Division of Military Application, Energy Research and Development Administration.

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SECTION I
STOCKPILE COMPOSITION INFORMATION ORGANIZED
INTO DESIGN CATEGORIES
(FY-1945 through FY-1975)

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Table 1—NUCLEAR WEAPONS STOCKPILE

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Table 1—(Continued)

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Table 1 — (Continued)

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Table 3—NUCLEAR MATERIAL QUANTITIES PER WEAPON

DELETED

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Table 4—PLUTONIUM IN THE NUCLEAR WEAPONS STOCKPILE (kg)

DELETED

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Figure 2
PLUTONIUM IN THE NUCLEAR WEAPONS STOCKPILE

DELETED

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Table 5—LITHIUM IN THE NUCLEAR WEAPONS STOCKPILE* (g)

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Figure 3
TRITIUM IN THE NUCLEAR WEAPONS STOCKPILE

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Table 6—REACTOR PRODUCTS IN THE NUCLEAR WEAPONS STOCKPILE (kg Pu Equivalent)

DELETED

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Table 6—(Continued)

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Figure 4
REACTOR PRODUCTS IN THE NUCLEAR WEAPONS STOCKPILE

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Table 7—ORALLOY (93.15%) IN THE NUCLEAR WEAPONS STOCKPILE (kg)

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Table 7—(Continued)

DELETED

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Figure 5
ORALLOY (93.15%) IN THE NUCLEAR WEAPONS STOCKPILE

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Table 8—ENRICHED URANIUM (OTHER THAN 93.15%) IN THE NUCLEAR WEAPONS STOCKPILE (kg)

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Table 9—NUCLEAR MATERIALS SUMMARY

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Table 10—STOCKPILE YIELD* (KT)

DOE
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Table 10—(Continued)

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DOE
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Figure 6
STOCKPILE YIELD

DOE
6.2 (a)

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SECTION II
STOCKPILE COMPOSITION INFORMATION ORGANIZED
INTO MILITARY MISSION CATEGORIES
(FY-1961 through FY-1975)

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Table 11—NUCLEAR WEAPONS STOCKPILE BY FORCE STRUCTURE

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Table 11 --(Continued)

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Table 11—(Continued)

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Figure 7
NUCLEAR WEAPONS STOCKPILE
BY FORCE STRUCTURE

DOE
6.2 (a)

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Table 12.—PLUTONIUM IN THE NUCLEAR WEAPONS STOCKPILE BY FORCE STRUCTURE (kg)

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DOE
6.2 (a)

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Table 12—(Continued)

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Table 12—(Continued)

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Figure 8
PLUTONIUM IN THE NUCLEAR WEAPONS STOCKPILE
BY FORCE STRUCTURE

DOE
6.2 (a)

DELETED

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Table 13—TRITIUM IN THE NUCLEAR WEAPONS STOCKPILE BY FORCE STRUCTURE (g)

DOE
6.2 (a)

DELETED

Table 13—(Continued)

DOE
6.2 (a)

DELETED

Table 13—(Continued)

DOE
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DELETED

Figure 9
TRITIUM IN THE NUCLEAR WEAPONS STOCKPILE
BY FORCE STRUCTURE

DELETED

DOE
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Table 14—REACTOR PRODUCTS IN THE NUCLEAR WEAPONS STOCKPILE BY FORCE STRUCTURE (kg Pu Equiv.)

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DOE
6.2 (a)

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Table 14--(Continued)

Table 14—(Continued)

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Figure 10
REACTOR PRODUCTS IN THE NUCLEAR WEAPONS STOCKPILE
BY FORCE STRUCTURE

DELETED

DOE
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52

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DOE
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DELETED

Table 15--ORALLOY IN THE NUCLEAR WEAPONS STOCKPILE BY FORCE STRUCTURE (kg)

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Table 15---(Continued)

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DOE
6.2 (a)

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Table 15—(Continued)

Figure 11
ORALLOY (93.15%) IN THE NUCLEAR WEAPONS STOCKPILE
BY FORCE STRUCTURE

DOE
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Table 16—STOCKPILE YIELD BY FORCE STRUCTURE (KT)

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Table 16 —(Continued)

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Table 16—(Continued)

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DOE
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Figure 12
STOCKPILE YIELD BY FORCE STRUCTURE

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60

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APPENDIX

SOURCE AND TREATMENT OF DATA

Data on stockpile composition were obtained from the joint AEC/DOD stockpile position. The bulk of the design and yield data utilized for weapons and components no longer in the stockpile was obtained from DMA files. Additional design and yield data for these early weapons were obtained from Albuquerque Operations Office (ALO), Oak Ridge Operations Office (ORO), and Los Alamos Scientific Laboratory (LASL). Stockpile data for FY 1971 were obtained from the Master Data File of the DMA Weapons Stockpile model. Data on the nuclear weapons in stockpile for subsequent fiscal years were obtained by joint AEC ERDA/DOD stockpile coordination. When available, unit material quantities were based on weighted averages of actual ALO build records rather than nominal values. Inventory and allocation data for materials other than those actually contained in stockpile weapons were obtained from AEC Headquarters records.

For those weapons which utilized more than one pit type, the distribution of pit types within the existing warheads was estimated based on pit part production records.

DELETED The end-of year quantities of tritium in the stockpile have been adjusted to allow for tritium decay (using a half life of 12.26 years). The combined reactor product values shown in Tables 6 and 14 are based on an equivalence factor of 72 kg plutonium per kg tritium.

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