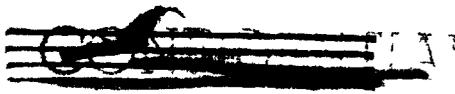




UNCLASSIFIED



Copied From Los Alamos National Laboratory Archive



WAR DEPARTMENT
P. O. Box 2610
WASHINGTON, D. C.

HISTORICAL

REFER TO FILE NO. _____

VERIFIED UNCLASSIFIED

LMR

3 May 1946

FINAL DETERMINATION
UNCLASSIFIED
L. M. Redman
OCT 27, 1980

MEMORANDUM to Major General L. R. Groves

Subject: Bombing Tables

1. Considerable excitement, partly unwarranted, has recently been stirred up by the 58th Bombardment Wing and some of the Operational Analysis Personnel, AAF, concerning availability of complete and satisfactorily authenticated bombing tables for use with A Bombs and Pumpkins. The situation to date is as follows:

(a) Based upon certain drops made under the jurisdiction of the Manhattan Engineer District, special bombing tables for bombing at sea level with pumpkins, and other special bombing tables for use in bombing Hiroshima and Nagasaki with the A Bombs involved, were computed at Los Alamos, under the direction of Dr. Shapiro.

(b) Shortly after the surrender of Japan Dr. J. R. Zacharias reorganized his division at Los Alamos. Dr. Shapiro was taken off of ballistic work and no further work was done on preparation of bombing tables until recently when Dr. Shapiro made up a special table, dated 12 April 1946. This table is for use only for the special situation to obtain the proper height when dropping the first A Bomb at Bikini. Copies of this table have already been delivered to Bikini by Lt. Colonel E. E. Wilhoit.

(c) The "Sea Level Pumpkin Table" referred to in (a) above will be satisfactory for use in dropping pumpkins at Bikini. This table together with the 12 April 1946 table referred to above should satisfactorily care for the Bikini tests.

(d) A Captain Sempke, Air Corps, who was recently killed at Sandia made up, on his own initiative, a special ground burst Pumpkin table for use at the target altitude encountered at Albuquerque. In doing this he modified part of an Ordnance Bombing Table which had what he thought was the proper ballistic coefficient for his special use.

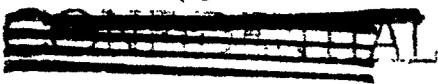
3
7
1
1
4
2
6
3

PUBLICLY RELEASABLE
LANL Classification Group

JAN 15 1999

CLASSIFICATION CANCELLED
PER [unclear] JAN. 1973

UNCLASSIFIED



Dr. Bradbury

UNCLASSIFIED
~~CONFIDENTIAL~~

(e) The special table referred to in(d) above was approximately correct but needed further revision as outlined in enclosure to letter, attached hereto to Manhattan Engineer District, from Army Air Forces, 24 April 1946, Subject: Bombing Tables. A revised special table, computed by a Mr. Dorfman, of the Operations Analysis Group, Army Air Forces, was transmitted to us with the above correspondence. Our copy of this special table was turned over by me to Dr. Shapiro during my visit to Los Alamos 25 to 28 April 1946. Dr. Shapiro made a quick check on one or two entries therein and believes the table to be suitable for its intended use, i.e. bombing with Pumpkins at the range at Albuquerque. The Army Air Forces have sent copies of this special table to the Strategic Air Force and to the 5th Bombardment Wing at Roswell Field.

(f) Brigadier General Powers, Air Forces, states that the Air Forces do not know whether or not there is a complete standard bombing table in existence for use with A Bombs and Pumpkins, and that the Air Forces definitely wants such a table, which is backed up by the Manhattan Engineer District or other appropriate issuing agencies as being the complete authentic table suitable for all conditions which might be encountered with the items involved.

(g) During my visit to Los Alamos April 24 to 28 1946, Dr. Bradbury stated that he does not wish to have Los Alamos start in again making up more tables for the present bombs or to be concerned with bombing tables in the future. He desires that in the future only preliminary drops, necessary to the development of the weapon be conducted under supervision of Los Alamos. He feels that beyond that, all drops for the purpose of obtaining basic ballistic table data should be made under the supervision of the Ordnance Department at whatever place is most suitable, and at the same time satisfactory to Manhattan Engineer District from the security standpoint.

2. In view of the above it is recommended that the Ordnance Department be requested to make up complete bombing tables which will be suitable for all conditions that may be encountered and which will not be restricted to a given special situation, for use in dropping the present pumpkin and for the A Bomb (Nagasaki Type). The issue of the tables can be controlled through Manhattan Engineer District or can be made by the Ordnance Department directly to the appropriate Air Force Agency. All tables made to date are classified only as restricted. The making of the above complete tables will not involve Ordnance Personnel not fully acquainted with the Wind Tunnel Work now being conducted at Aberdeen Proving Ground. Of these, only one man who will be involved does not know the weight of the Pumpkins now being manufactured by the Ordnance Department.

UNCLASSIFIED

CLASSIFICATION CANCELLED
PER DDC MEMO DATED JAN. 1973

~~CONFIDENTIAL~~

44-1174

