

THIS PAGE IS DECLASSIFIED IAW EO 13526



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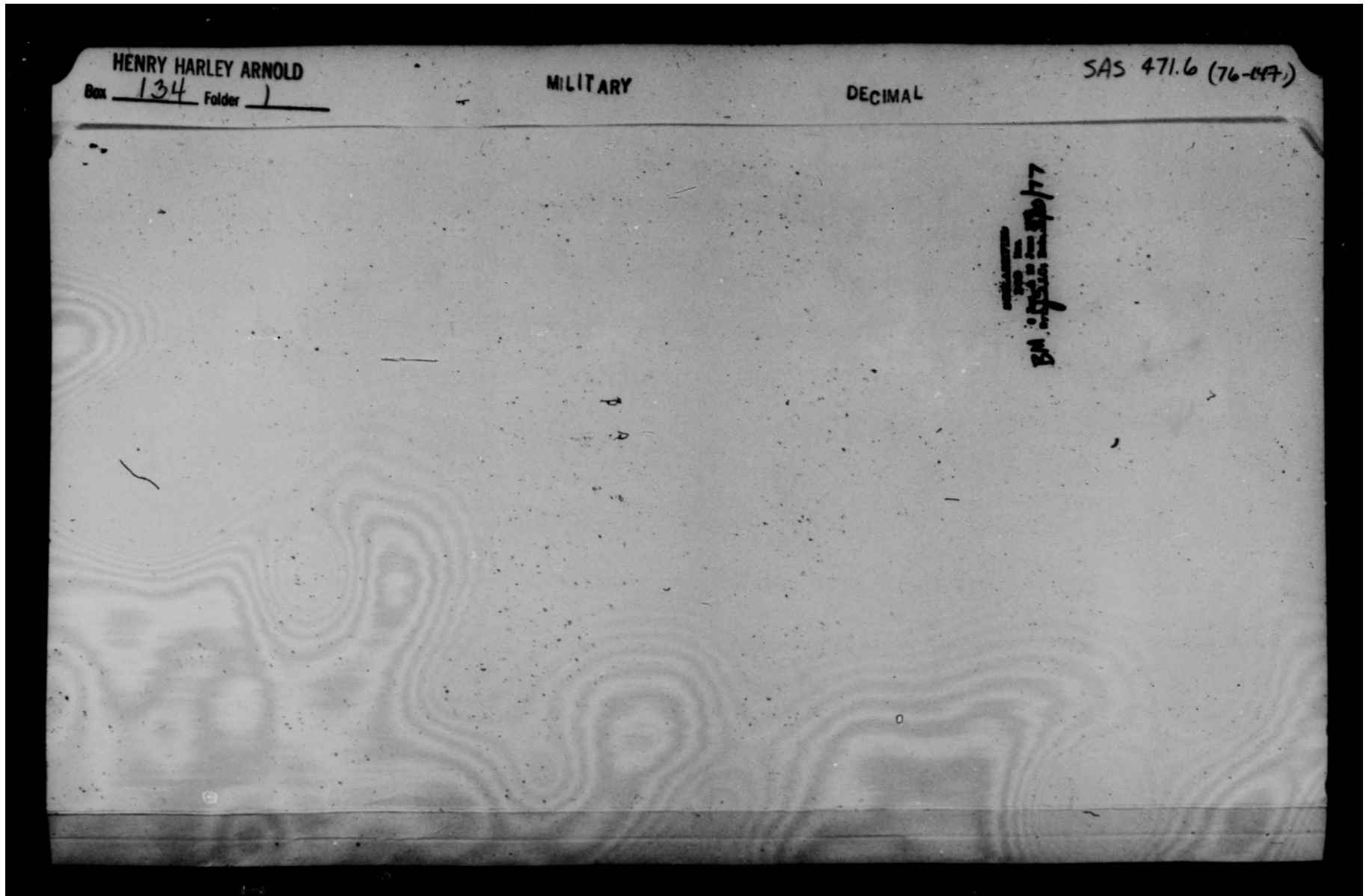
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Henry H. Arnold

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HENRY HARLEY ARNOLD
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MILITARY

DECIMAL

SAS 471.6 (76-447)

BM: [illegible] 1/77

DECLASSIFIED
DOD Item
9 Jan. & 20 June 1974
SAC/AFIC; Date: 3/16/77

~~SECRET~~
DECLASSIFIED

AAF/A-4/471-19

January 21, 1942.

Release of Bombs to AFCC and WDC.

II. 054

I. Ord.

I. TAG

II. AAF

I. SW directs.

19 22 42

AAF/A-4
ECB/mhh

I. Confirming telephone instructions issued to your office (Capt. Stone) January 19, 1942 (Serial 1093) and January 20, 1942 (Serial 1098) from Col. Schneider and Lt. Col. Burgess, A-4, Air Staff, it is desired that the following bombs be released as follows:

REPLY TO
JAN 22 1942 to 2/1/42
AAG

To: Air Force Combat Command;
200 ea. 5000 Demolition Bombs

To: Western Defense Command
250 ea. 10000 Demolition Bombs

II. To be advised of above action.

NOTED. *[Signature]* Chief of the Air Staff:

HEADQUARTERS			ARMY AIR FORCES			COORDINATION				
Chief of Staff	Sec'y of Staff	A.A.G.	A-1	A-2	A-3	A-4	A-WD	A-Inspr.	Budget	Sec. - Physics
	<i>[Signature]</i>					<i>[Signature]</i>				
						To: <u>COL. HANLEY, JR.,</u> Colonel, Air Corps, Assistant Chief of the Air Staff, A-4.				

MEMORANDUM FOR THE RECORD: Above action taken to provide bombs for AFCC and WDC to build up stocks.

DECLASSIFIED

AAF-39

[Handwritten] 25 471-6 197

DECLASSIFIED
DOD ltr.
GPO, 4 20 June 1974
By: ~~SP-1~~ PLC: Date: 1/27/77

SECRET

3707

AS 471.6 (1-20-42)M30-0

DECLASSIFIED

MMH/kia - 1705.

January 22, 1942.

DECLASSIFIED
~~SECRET~~

SUBJECT: Shipment of Incendiary Bombs
to "X".

Auth:.....T.A.G.....

Initials:.....DRV.....

TO : Chief of Chemical Warfare Service.

Date: JAN 22 1942

Confirming telephone instructions issued to your office (Lt. Lowry) January 17, 1942 from Lt. Colonel Ruggen, A-4, Air Staff, it is desired that the following bombs be shipped to "X":

Bombs. - 100,000, 1/2 Incendiary

By order of the Secretary of War

R.R. Van Hooker

Adjutant General.

COPIES TO: ✓ Chief of the Army Air
Forces;
Assistant Chief of Staff, G-4.

471.6
144
141

File
Hors

AN 1942

DECLASSIFIED

SECRET

AS 471.6 (144)

DECLASSIFIED
DOD Use
8 Jan & 30 June 1979
By SP-10/10/77

DECLASSIFIED
GLOWEY

AAF/A-4/471-18

January 28, 1942.

Shipment of Incendiary Bombs to "X".

II. G-4

I. TAG

II. NS

I. CSB

I. Letter

AAF/A-4
NSB/ahh

I. Confirming telephone instructions issued to your office (Lt. Lohy) January 17, 1942 from Lt. Col. Burgess, A-4, Air Staff, it is desired that the following bombs be shipped to "X":

Bombs. - 100,000, of Incendiary

II. To be advised of action taken.

For the Chief of the Air Staff:

NOTED *EPC* 1/21/42
Chief of the Air Staff

T. J. HANLEY, JR.,
Colonel, Air Corps,
Assistant Chief of the Air Staff, A-4.

HEADQUARTERS ARMY AIR FORCES - COORDINATION					
REMARKS FOR THE MONTH	DATE	INITIALS	STATUS	APPROVED	REMARKS
Approved for the shipment of 100,000 incendiary bombs for the combat use of airplanes to be shipped through budget tistics					

WJF

NS

DECLASSIFIED

AAF-38
Ans AS 471.6 (144)

DECLASSIFIED
DOD ltr.
8 Jan. & 20 June 1974
By: [Signature] Date: [Signature]
AAF/ A-4/471-16

~~SECRET~~
DECLASSIFIED

JAN 20 1942

Shipment of 200 Clusters of Incendiary Bombs (24 ea. cluster).

25
88
471.6
9
1167

II. [unclear]

II. AIR

JAN 22 1942

OUT



OUT

(1-20-42)
(14)

OFFICE OF CHIEF OF STAFF

AF/4
[Signature]

I. Letter

II. 1. Confirming telephone instructions issued to your office (14 Leroy) Jan. 14, 1942 from Lt. Col. Burgess, A-4, Air Staff, it is desired that the following Chemical Bombs be shipped as follows:

To: China Defense Supplies Corporation
C & O Terminal
Rupert News, Virginia

JAN 22 1942

17874-62

JAN 22 1942

NOTED-OFFICE CHIEF OF STAFF

Noted for "Walker"
200 Clusters of Incendiary Bombs



To be advised of above action.

For the Chief of the Air Staff:

NOTED
Chief of the Air Staff

T. J. HANLEY, JR.,
Colonel, Air Corps,
Assistant Chief of the Air Staff, A-4.

Recommendation for Record: Above action taken to provide of Incendiary bombs for project [unclear]

~~SECRET~~

"Comeback" Copy.

25
88
471.6
9
1167

ACTION TAKEN: Ltr. 1-24-42, to
C/OWS, v/cys to O-4 & O/AAV.

NOTED/14-1706.

3 85
JAN 22 1942
[Signature]

SECRET

JAN 23 1954



MAILED
NOV 23 1953
MAIL ROOM

RECEIVED MISC. DIV. AGO.
S.A.C. Section



MAILED-OFFICE CHIEF OF DIVISION

JAN 23 1954

OFFICE OF CHIEF OF BUREAU



JAN 23 1954

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DECLASSIFIED
SECRET

JAN 23 1954

DECLASSIFIED
DOD Use

1 Jan. & 20 June 1974
By: SMC/LO; Date: 3/12/77

SECRET
DECLASSIFIED

3706

AO 471.6
(1-20-42)MBC-0

MSE/hls - 1705.

January 22, 1942.

DECLASSIFIED

SUBJECT: Shipment of Bombs to Newport News,
Virginia and Release of Bombs to G.W.

Auth:.....T.A.G.....

Initials: DEV

TO : Chief of Ordnance.

Date: JAN 22 1942

1. Confirming telephone instructions issued to your office (Capt. Stone) January 16, 1942 (Serial 1065) from Lt. Colonel Burgess, A-4, Air Staff, it is desired that the following bombs be released and shipped as follows:

To: China Defense Supplies Corporation
C & G Terminal
Newport News, Virginia

Marked for Air Corps Project "Halpre"

476 ea. 500# Demolition
620 ea. 100# Demolition

2. These bombs must reach Newport News, Virginia by January 20, 1942.

3. The reserve of 476 ea. 500# Bombs at Delaware Ordnance Depot is cancelled and these bombs are to be replaced at the same depot for the AFOS at the earliest opportunity.

4. It is desired that you release the following bombs for G.H.G. Shipping instructions will be furnished by them. 124 ea. 1000# Demolition Bombs.

By order of the Secretary of War:

*File
H03*

S.A. Van Orman

Adjutant General

COPIES TO: Chief of the Army Air Forces;
Assistant Chief of Staff, G-4;
Commanding General, Field Forces.

24 1942

DECLASSIFIED
SECRET

Rev 46-4716 (142)

*471.6
142*

DECLASSIFIED
DOD NA
8 Feb. & 23 June 1974
By: ~~SP-1~~ LCJ Data 3/16/77

~~SECRET~~

JAN 20 1942

AF 471-17

Shipment of Bombs to Newport News, Virginia and Release of Bombs to CHN.

II 24

I 24

I 24

II AF

I AF 24

I Letter

~~SECRET~~

1. In confirming telephone instructions issued to your office (Capt. Stone) January 16, 1942 (Serial 1045) from Lt. Col. Burgess, 2-4, Air Staff, it is desired that the following bombs be released and shipped as follows:

To: China Defense Supplies Corporation
C & O Terminal
Newport News, Virginia

Marked for Air Corps Project "Halcyon"

475 ea. 500# Bombition
400 ea. 100# Bombition

2. These bombs must reach Newport News, Virginia by January 20, 1942.

3	HEADQUARTERS	ARMY AIR FORCES	COMBINATION	OTHER

DECLASSIFIED
~~SECRET~~

air 471-17 (142)

~~SECRET~~

I. Release the following bombs for C.I.O. Shipping instructions to be furnished by them. 124 ea. 1,000# Hamilton Bombs.

II. To be advised of above action.

For the Chief of the Air Staff:

NOTED... 12/1/42 - EPC
Chief of the Air Staff

T. J. HANLEY, JR.,
Colonel, Air Corps,
Assistant Chief of the Air Staff, A-4.

Memorandum for Record: Above action taken to provide bombs for 20 B-24 B's being shipped to "Malaya". 124 1,000# Bombs for Hawaii.

HEADQUARTERS ARMY AIR FORCES - COORDINATION										
Chief of Staff	Sec'y of Staff	A.A.G.	A-1	A-2	A-3	A-4	A-WPD	A-Insp.	Budget	Statistics

~~SECRET~~

AAF-39

DECLASSIFIED
30D Inr.
8 Feb & 20 June 1974
By: ~~SP-6~~ C; Date: 3/18/77

SECRET

3705

AG 471.6
(1-20-42)MSC-G

MR/ra-1705.

January 22, 1942.

SUBJECT: Shipment of Ammunition, Bombs and
Pyrotechnics to "X".

TO: Chief of Ordnance.

SECRET
DECLASSIFIED

TAG.....

I.G.S.....

JAN 22 1942

Confirming telephone instructions issued to your office
(Lt. Col. Rice), January 17, 1942 (Serial 1069) from Lt. Col. Burgess,
A-4, Air Staff, it is desired that the following ammunition, bombs
and pyrotechnics be shipped to "X":

Bombs

265	2,000# Demolition
3,201	900# Demolition
1,340	300# Demolition
5,000	100# Demolition
25,000	20# Fragmentation

Ammunition

70,000 rounds .20 mm Aircraft
50,000 rounds .37 mm Aircraft

Pyrotechnics

1,000	Signals M8
5,000	Flares M9
10,561	Signals M11
1,000	Flares M13
5,000	Signals M14
6,060	Signals M15
4,921	Signals M16
2,072	Bombs Photo Flash M23
1,170	Flares M24
10,000	Signals M25.

1771
141

File
HCS

By order of the Secretary of War:

J.G. Brankin

Adjutant General.

COPIES TO: Chief of the Army Air Forces,
Lt. C. of S.

SECRET

air 20-471/6 (141)

SECRET
DECLASSIFIED

JAN 20 1942

AAF/A-4/471-15

DECLASSIFIED
DOD 107A
8 Jan. & 20 June 1974
By: SP4/C; Date: 3/8/77

Shipment of Ammunition, Bombs and Pyrotechnics to "X".

II C-4

I Ord.

I T&S

II AAF

I SW Directs

I Letter

AAF/A-4
REC/and

I. 1. Confirming telephone instructions issued to your office (Lt. Col. Rice) January 17, 1942 (Serial 1069) from Lt. Col. Burgess, A-4, Air Staff, it is desired that the following ammunition, bombs and pyrotechnics be shipped to "X":

Bombs

285	2,000#	Demolition
3,261	500#	Demolition
1,340	250#	Demolition
8,000	100#	Demolition
25,000	20#	Fragmentation

Ammunition

70,000 rounds 20 mm aircraft
80,000 rounds .57 mm aircraft

(See over)

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AA 28471-6 (101)

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9-16-42
21
101

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Pyrotechnics

1,000	Signals	MS
5,000	Flares	MS
10,001	Signals	MS1
1,000	Flares	MS1
5,000	Signals	MS4
5,000	Signals	MS5
4,921	Signals	MS6
2,072	Bombs Photo Flash	MS2
1,170	Flares	MS4
10,000	Signals	MS5

ACTION TAKEN: 1-22-42 by
ltr to Ch/Ord. Cys to
G/AAF and G-4.
MMR/Tm-1705



II. To be advised of action taken above.

For the Chief of the Air Staff,
IN

WAR DEPARTMENT
OFFICE OF CHIEF OF STAFF

NOTED.....
Chief of the Air Staff

T. J. HANLEY, JR.,
Colonel, Air Corps,
Chief of the Air Staff, A-4.

Memorandum for Record: Above action was taken to provide ammunition, bombs and pyrotechnics for combat life of partial shipment of airplanes to "I".

JAN 22 1942

JAN 22 42 PM



JAN 22 1942

NOTED-OFFICE CHIEF OF STAFF
LH



RECEIVED MISC. DIV., AGO.
S. & C. Section

- 2 -
DECLASSIFIED
SECRET

228471.0141

DECLASSIFIED
DOD ltr.
Dec. & 20 June 1974
By: ~~SP-1~~LC; Date: 3/2/77

WAR PLANS DIVISION
WAR DEPARTMENT GENERAL STAFF
DISPOSITION FORM

3679
~~SECRET~~
BY AUTHORITY OF A. C. OF S., WPD

AG
G- WPD 4630-43

1/23/42
Date

SUBJECT: Chemical Bombs

Date January 23, 1942.

TO:	<input type="checkbox"/> C/S	<input type="checkbox"/> G-1	<input type="checkbox"/> G-2	<input type="checkbox"/> G-3	<input type="checkbox"/> G-4	<input type="checkbox"/> Air Staff	
	<input type="checkbox"/> TAG	<input type="checkbox"/> WPD	<input type="checkbox"/> USW	<input type="checkbox"/> ASW	<input type="checkbox"/> ASWA	<input type="checkbox"/> CG	<input type="checkbox"/> Army
	<input type="checkbox"/> AC	<input type="checkbox"/> BLP	<input type="checkbox"/> BOWD	<input type="checkbox"/> ExRA	<input type="checkbox"/> NGB	<input type="checkbox"/> CG	<input type="checkbox"/> Army Corps
	<input type="checkbox"/> INF	<input type="checkbox"/> FA	<input type="checkbox"/> CAV	<input type="checkbox"/> CA	<input type="checkbox"/> ENGR	<input type="checkbox"/> CG	<input type="checkbox"/> CA
	<input type="checkbox"/> ORD	<input type="checkbox"/> QMG	<input type="checkbox"/> CSO	<input type="checkbox"/> SO	<input type="checkbox"/> FIN	<input type="checkbox"/> CG	<input type="checkbox"/> Dept.
	<input type="checkbox"/> GHQ	<input type="checkbox"/> JAG	<input type="checkbox"/> CWS	<input type="checkbox"/> IG	<input checked="" type="checkbox"/> B/PR	<input checked="" type="checkbox"/> X	<input type="checkbox"/> A-4 through C/AAF

FOR:	<input type="checkbox"/> S/W directs	<input type="checkbox"/> Comment or concurrence	<input type="checkbox"/> Necessary action
	<input type="checkbox"/> Draft of reply	<input type="checkbox"/> Remark and recommendation	<input type="checkbox"/> Information for reply
	<input type="checkbox"/> Direct reply	<input type="checkbox"/> Inviting attention to	<input type="checkbox"/> Ind. approved
	<input type="checkbox"/> Approved	<input type="checkbox"/> See notation of	<input type="checkbox"/> Primary interest
	<input type="checkbox"/> Disapproved	<input type="checkbox"/> Information	<input type="checkbox"/> Notation and return
	<input type="checkbox"/> File	<input type="checkbox"/> Consult	<input type="checkbox"/> Noted

By: Spcl Mgr | Radio | Air Mail | Immed Action Ltr | Letter

1. It is not understood from your memorandum dated January 19, 1942, above subject, what information is desired from War Plans Division.

2. If the information requested in paragraph 5 pertains to stockage of toxic gases for use in chemical bombs, your recommendation with respect thereto, together with an estimate of the additional troops and material required to accomplish the desired stockage, is requested.

C. E. Gailey, Jr.
C. E. GAILEY, Jr.
Lt. Col., G. S. C.
Executive, WPD

1 Incl.
Memo fm Hq AAF, 1-19-42

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See also 4716 (140)

DECLASSIFIED
DOD ltra.
8 Jan. & 20 June 1974
By: SP4/CLC; Date: 3/10/77

~~SECRET~~

WAR DEPARTMENT
HEADQUARTERS OF THE ARMY AIR FORCES
WASHINGTON

JAN 19 1942

MEMORANDUM FOR THE ASSISTANT CHIEF OF STAFF, WPD:
(Attention: Colonel Gerow)

Subject: Chemical Bombs.

1. In connection with the shipment of bombs to "X" the question of whether or not 100# chemical bombs should be supplied to provide a stockage at that place would appear to be a pertinent one at this time.
2. The requirement for 100# chemical bombs is computed at the rate of one mission per airplane equipped to carry 100# bombs, per month.
3. On one mission the bombers, heavy, medium, and light could carry anywhere from 14 to thirty of these bombs depending upon the type bomber used.
4. Four hundred eighty-two bombers of all types are scheduled to be sent to "X" in the next few months which would require approximately 53,020 chemical bombs to provide for the combat life of these airplanes.
5. Request information as to whether or not it is desired to stock chemical bombs in "X" at this time, and if so, the priority of the chemical loading of bombs of this type.

For the Chief of the Air Staff:

J. G. ...
Colonel, Air Corps,
Assistant Chief of the Air Staff, A-4.

WPD. WOGS



JAN 20 12 PM
4620-43



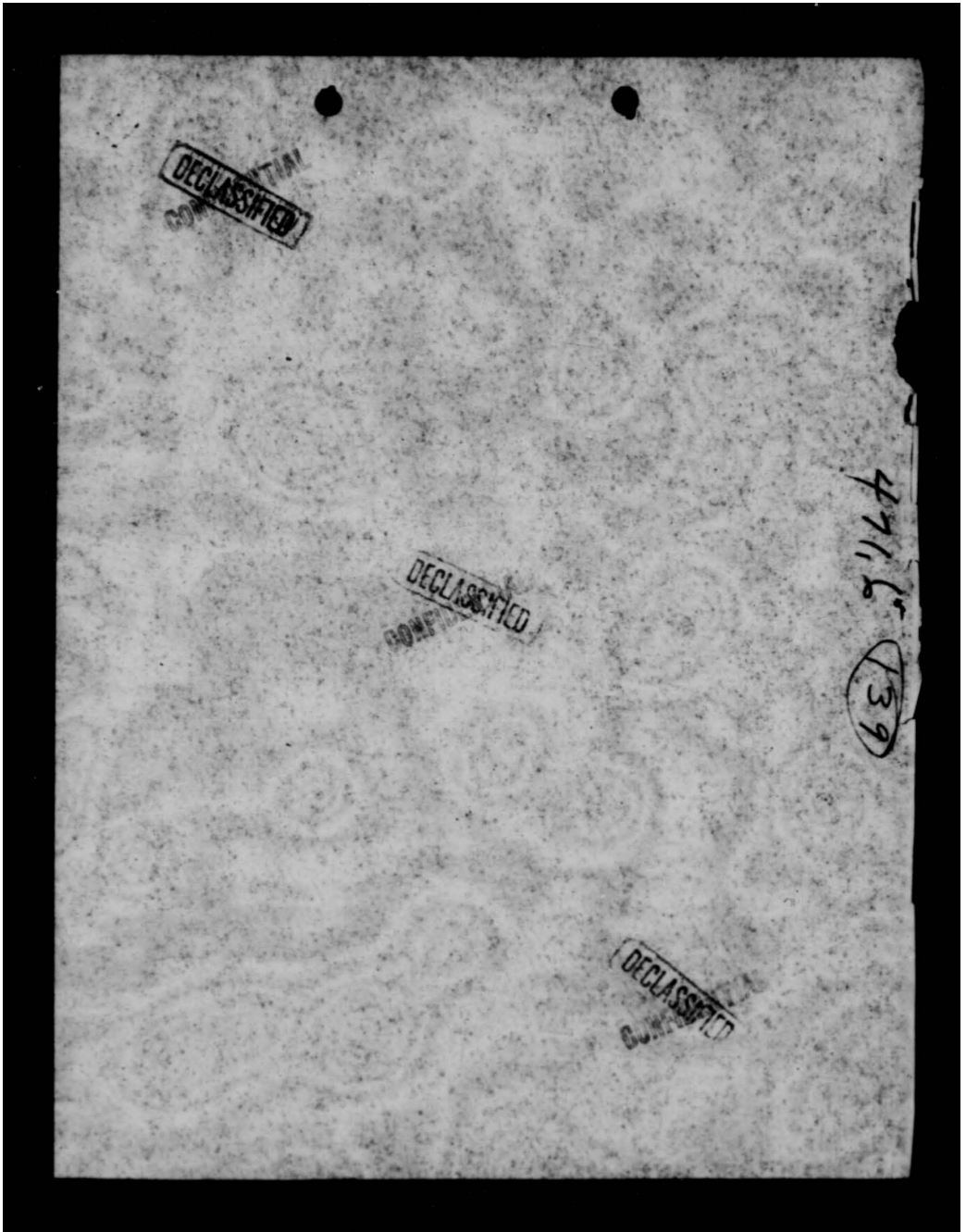
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WPD. WOGS

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JAN 20 12 PM

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471.6 (140)



DECLASSIFIED

DOD Form

4 Jan 48 20 June 1975

NS: SPEC: Date: 3/27

CONFIDENTIAL

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3471

MM/104-1705.

AS 471.6
(1-10-42)MPC-C

January 15, 1942.

SUBJECT: Project Schedule Covering Optimum
Spacing of Bombs in Train.

TO: Air Corps Board,
Eglin Field, Florida.

Authority is granted to expand the following bombs
in connection with Air Corps Board Study No. 7:

600 bombs, practice, 100 lb. M 20A2.
12 bombs, demolition, 500 lb. M25.

By order of the Secretary of War:

S. G. Brackinridge
Adjutant General.

COPIES TO:

Chief of the Army Air Forces.
Chief of the Air Corps.
Chief of Ordnance.
A. G. of S., G-4.

CONFIDENTIAL

21 471.6 (139)

DECLASSIFIED
DOD Itrs.
8 Jan. & 20 June 1974
By: HAGE/LC; Date: 3/16/77
AAF/a-4/471-11

~~SECRET~~
DECLASSIFIED

JAN 16 1947

Release of Ammunition, Bombs and Pyrotechnics for Shipment 6814 and I 89702.

II Sub

I Sub

I T&E

II AAF

I AF Circs

I Letter

AAF/a-4
HAG/and

I. 1. Confirming telephone instructions issued to your office (Lt. Col. Rice) January 14, 1942 (Serial 1011) from Lt. Col. Burgess, A-4, Air Staff, it is desired that the following ammunition, bombs and pyrotechnics be released as follows:

For shipment 6814:

Port Quartermaster
San Francisco Port of Embarkation
San Francisco, California.

Bombs

200 ea. 500# Bombition

Ammunition

JAN 20 1942
AAS

HEADQUARTERS				ARMY AIR FORCES				COORDINATION			
Chief of Staff	Secy of Staff	Air Staff	A.A.G.	A-1	A-2	A-3	A-4	A-WD	A-Inspr.	Budget	Statistics
											(See over)

AAF-39

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See ab 471.6 (138)

~~SECRET~~

Expenditures

50 Signals HQ
 4,500 Signals H11
 4,500 Signals H14
 4,500 Signals H15
 4,500 Signals H16
 50 Signals H17

2. For Shipment to "X"
 San Francisco Port of Embarkation

Bombs

504 1000# Bombition
 5,000 300# Bombition
 6,245 100# Bombition

Ammunition

67,200 rounds 20 mm aircraft

II. To be advised of action taken above.

For the Chief of the Air Staff:

I. J. HANNEY, JR.,
 Colonel, Air Corps,
 Assistant Chief of the Air Staff, A-4.

Responsibility for Bombs: Above action taken to provide for 25 P-59's (3 mos. supply), bomb stockpile at "X" and 80 P-40's (3 mos. supply 20 mm ammunition.)

HEADQUARTERS ARMY AIR FORCES - COORDINATION										
Chief of Staff	Sec'y of Staff	A.A.G.	A-1	A-2	A-3	A-4	A-WPD	A-Inspr.	Budget	Statistics
	WJF				- 2 -	HW HCS				

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air 25 471 6 (38)

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DOD Itra.
8 Jan. & 20 June 1974
By: SP-1 C; Date: 5/12/77

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DECLASSIFIED

JAN 16 1942

AAF/A-1/471-1G

Shipment of 300 Clusters of Incendiary Bombs (34 ea. Cluster).

II. C-1

I. T-6

II. AAF

I. IN Circuits

I. Letter

Handwritten:
1
471.6
137
C. O. De Witt

AAF/A-1
IN/AC

I. 1. Confirming telephone instructions issued to your office (Col. Gillat) January 12, 1942 from Lt. Col. Burgess, A-4, Air Staff, it is desired that the following Chemical Bombs be shipped as follows:

IAN 21 1942

The China Defense Supplies Corporation
6 & 8 Terminal
Burgess Base Virginia
Marked for Air Corps Project "Halpro"
300 Clusters of Incendiary Bombs (34 ea. Cluster)

OUT

be advised of above action.



JAN 21 1942
NOTED-OFFICE CHIEF OF STAFF For the Chief of the Air Staff:

OFFICE OF THE CHIEF OF STAFF

85 A G O

JAN 21 1942

Received

File
HCS
of the Air Staff

T. J. HENNEY, JR.,
Colonel, Air Corps,
Assistant Chief of the Air Staff, A-4.

Enclosure for Bombs Above action was taken to provide the of Bombs, Incendiary
for Project Halpro (P-47's).

ACTION TAKEN: By IAF 1-22-42,
to C/CIS,w/cys to C/AAF;C/AC
ACoFS,G-4. MNE/vad-1705.

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003/17170-59
471.6 (137)

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JAN 22 42 PM



RECEIVED MISC. DIV., AGO
JAN 22 1942
Section

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DECLASSIFIED
DOD ltra
8 Jan. & 20 June 1974
By SP1/MLG; Date 3/12/77

~~SECRET~~

3710

AS 471-6
(1-16-42)WDC-G

HRV/vod-1705.

January 22, 1942.

SUBJECT: Shipment of 300 Clusters of Incendiary Bombs (24 ea. Cluster).

TO: Chief of Chemical Warfare Service.

~~SECRET~~
Auth: T.A.G.
DECLASSIFIED
Initials: HRV
Date: JAN 22 1942

Confirming telephone instructions issued to your office (Col. Gillet) January 12, 1942; from Lt. Col. Burgess, A-4, Air Staff, it is desired that the following Chemical Bombs be shipped as follows:

TO: China Defense Supplies Corporation
C & O Terminal
Newport News Virginia
Marked for Air Corps Project "Halper"
300 Clusters of Incendiary Bombs
(24 ea. Cluster).

By order of the Secretary of War:

G. E. Van Stokler

Adjutant General.

COPIES TO:
A. G. of S., G-4.
Chief of the Army Air Forces ref
AAF/A-4/471-10, January 16, 1942.
Chief of the Air Corps.

471/6
137

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DECLASSIFIED
~~SECRET~~ Air 25 471/6 127

DECLASSIFIED
DOD ltr.
8 Jan. & 20 June 1974
By: 3/10/77

~~SECRET~~
DECLASSIFIED

JAN 16 1942

AAF/A-1/471-10

Shipment of 300 Clusters of Incendiary Bombs (34 ea. Cluster).

II. G-1

I. G-2

II. AAF

I. TAG

I. SH directs

I. Letter

AAF/1/4
HEB/and

I. 1. Confirming telephone instructions issued to your office (Col. Gillet) January 12, 1942 from Lt. Col. Burgess, A-4, Air Staff, it is desired that the following Chemical Bombs be shipped as follows:

To: China Defense Supplies Corporation
c/o O Terminal
Hampers News Virginia
Market For Air Corps Project "Halpro"
300 Clusters of Incendiary Bombs (34 ea. Cluster)

II. To be advised of above action.

Disposition:
JAN 20 1942
AAG

NOTED C.P.C. 1/19/42
Chief of the Air Staff

For the Chief of the Air Staff:

HEADQUARTERS				ARMY AIR FORCES			COORDINATION			
Chief of Staff	Sec'y of Staff	A.A.G.	A-1	A-2	A-3	A-4	A-5	Budget	Statistics	
Assistant Chief of the Air Staff, A-4										

Recommendation: This shipment should be taken to provide the A/B Bombs, Incendiary sub-project Halpro (S B - 24's).

~~SECRET~~

AAF-39

CAF 28 471-6 (137)

DECLASSIFIED

DOD - Hqs.

8 Jan. & 20 June 1974
By: ~~XXXX~~ LC; Date: 3/2/77

DECLASSIFIED

Subject: Modification of B-17 and B-24 Airplanes to Carry 4,000# Bombs.

2	AAF	AAF	1942
	A-3	C/AS	1/15

AAF/A-3
CNSO-66

1. The Material Division has advised A-3 that the installation outlined in paragraph 3, RFR 1, is dangerous and undesirable. It is estimated that it will take 3 weeks to complete this type of installation.

2. A more satisfactory installation, which provides

DECLASSIFIED

DECLASSIFIED

Modification of B-17 and B-24 Airplanes to Carry 4,000# Bombs.

2	AAF A-3	AAF G/AS	1942 1/15	for suspending the bombs under the wings is being made in production models, which should be completed in about 2 months.
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3. In view of the above, it is recommended that the modification be delayed the additional 5 weeks required for the more satisfactory means of carrying the 4,000# bomb.

EEJ
G/A-1

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 DOD ltra.
 8 Jan. & 20 June 1974
 By: ~~SP-1~~ LC: Daws 3/17

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 DECLASSIFIED

(Air AG)

A C 147

January 19, 1942

SUBJECT: Technical orders

TO : The Chief of the Air Corps

1. Existing technical orders specify in some detail the types of bombs that may be carried in aircraft.
2. It is directed that you initiate immediate action to incorporate in these technical orders instructions relative to the carriage and release of all types of standardized bombs, depth bombs, etc., now being procured for, or made available to the Army Air Forces.
3. The technical instructions should be sufficiently complete to provide the information necessary for storage, release, and the technical aspects of utilization.

By command of Lieutenant General ARNOLD:

JOHN B. COOLEY
 Lt. Col., A.G.D.
 Assistant Air Adjutant General.

Dispatched
 JAN 19 1942
 AAG

HEADQUARTERS		ARMY AIR FORCES				COORDINATION				
Chief of Staff	Sec. y A.C. Staff	AAG	A 1	A 2	A 3	A 4	A WD	A Insp	Budget	See L. STICR
	✓	19C				✓				

AAF 39

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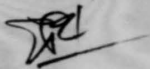
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 8 Feb. & 20 June 1976
 By: [redacted] LC; Date: 3/2/77

HEADQUARTERS ARMY AIR FORCES
 ROUTING AND RECORD SHEET
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Note:—A line will be drawn across sheet after each comment.

File No.,
 Tally No. AAF.....

SUBJECT: Technical Orders.

NO.	FROM	TO	DATE	COMMENTS
1	AAF A-4	AAF AAG	1942 1/15	<p>1. It is desired that a letter, substantially as follows, be forwarded to the Chief of the Air Corps:</p> <p>"1. Existing technical orders specify in some detail the types of bombs that may be carried in aircraft.</p> <p>2. It is ^{desired} desired that you initiate immediate action to incorporate in these technical regulatory ^{regulatory} instructions relative to the carriage and release of all types of standardized bombs, depth bombs, etc., now being procured for, or made available to the Army Air Forces.</p> <p>3. The technical instructions should be sufficiently complete to provide the information necessary for storage, release, and the technical aspects of utilization."</p> <p style="text-align: right;">  WJS TSH, Jr. C/A-4 </p>

AAF/A-4
MFS/and

1942
1/15
AAG

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 Page No. -1- 471.6 (135)

DECLASSIFIED
 DOD Hqs.
 20 June 1974
 BY: S/MAO; Date: 3/10/77

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(AIR AG)

A C 174

January 21, 1942

DECLASSIFIED
 BY AUTHORITY OF THE
 OFFICE OF THE SECRETARY OF DEFENSE
 DATE 10/11/83

SUBJECT: Bomb Racks for Pursuit Airplanes.
TO : The Chief of the Air Corps

1. The Commanding General, Newfoundland Base Command, has requested that pursuit airplanes assigned to his command be fitted with bomb racks to hold one #300# bomb or two 100# bombs, the loading to be that best suited to the airplanes designed. He states further that this will increase their value and make them more suitable for local use.

By command of Lieutenant General ARNOLD:

JOHN B. COOLEY
 Lt. Col., A.G.D.
 Assistant Air Adjutant General.

JAN 22 1942
 AAG

HEADQUARTERS			ARMY AIR FORCES				COORDINATION				St a
Chief of Staff	Sec'y Air Staff	A.A.G.	A 1	A 2	A 3	A 4	A WPD	A Insp	Budget	St a	ct. a. s.
	EPC TAC	gpc				✓					

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 AM 471.6 (133)

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DOD Use
8 Jan. & 30 June 1974
E.O. 11652; Date 3/12/77

HEADQUARTERS UNITED STATES AIR FORCE
ROUTING AND RECORD SHEET

File No.
Tally No. AAF

Note. - A line will be drawn across sheet after each comment.

SUBJECT: Bomb Racks For Pursuit Airplanes.

NO.	FROM	TO	DATE	COMMENTS
1.	AAF A-4	AAF AAG	1942 1/15	<p>1. It is requested that a letter, substantially as follows, be sent to the Chief of the Air Corps:</p> <p>"The Commanding General, Newfoundland Base Command, has requested that pursuit airplanes assigned to his command be fitted with bomb racks to hold one 300# bomb or two 100# bombs, the loading to be that best suited to the airplanes designed. He states further that this will increase their value and make them more suitable for local use.</p> <p style="text-align: right;"><i>JMS</i> for T.J.H., Jr. C/A-4</p>

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8-4071, AC, Rev. 8/18/61

Page No. _____

air 222 471.6 (133)

DECLASSIFIED
DOD ltra.
8 Jan. & 20 June 1974
By: JPE/LC; Date: 3/8/77

Director's No. 4-25

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WAR DEPARTMENT
HEADQUARTERS OF THE ARMY AIR FORCES
WASHINGTON

January 14, 1942.

DIRECTIVE MEMO FOR: A-4

SUBJECT: Movement of Bombs

1. Take necessary actions to move the 100 - 4000⁺ bombs at the Savanna Ordnance Depot to the East Coast.

By direction of the Chief of the Air Staff:

John T. Yerk,
Colonel, Air Corps,
Secretary of the Air Staff.

4716
132

HEADQUARTERS ARMY AIR FORCES					COORDINATION					
Chief of Staff	Sec y Air Staff	AAG	A 1	A 2	A 3	A 4	A WPD	A irsp	Budge:	S a t a l s

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AAF 19

DECLASSIFIED
DOD Form
8 Jan. & 20 June 1974
By: SP6ELC; Date: 3/27/77

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3282

ALL COMMUNICATIONS SHOULD BE ACCOMPANIED BY CARBON COPY AND ADDRESSED TO

SECRET
DATE CONTROLLED
Date DEC 30 1941

81
TO BRING PROMPT ATTENTION
IN REPLYING REFER TO

WAR DEPARTMENT
OFFICE OF THE CHIEF OF ORDNANCE

WASHINGTON

ATTENTION OF
OO No. 400.356

31690 Hawaii

A. S. RICE/oks

December 30, 1941

MEMORANDUM FOR: Chief of the Army Air Forces,
Washington, D.C.

Attn: Lt. Col. Max F. Schneider, A-4.

Subject: Request for Fuses.

1. There is inclosed secret radiogram from the
Commanding General, Hawaiian Department, reference request
for 25% increase in fuses for bombs.

For the Chief of Ordnance:

P. M. Seleen
P. M. SELEEN,
Major, Ord. Dept.,
Executive Assistant.

2A ✓
* Incl.
OO 400.356/31020-Haw. accpy

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NO FURTHER ACTION NECESSARY

FILE

*File
11/23*

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air 05 471.6 (131)

DECLASSIFIED
DOD No.
3 Jan. & 30 June 1974
By: ~~SECRET~~ Date: 1/20/77

~~SECRET~~

RADIOGRAM

December 27, 1941

5:48 A.M.

PARAPHRASE

From Hawaii

To Ordnance

Fuses should be stored in separate locations to prevent loss of magazines reducing usefulness of bombs remaining. Request twenty-five per cent average on fuses and 5% average on inert components including fins and arming wires.

Bombs

Exact copy burned:

Witness: H. C. Burgess

DECLASSIFIED
~~SECRET~~

Am 244766 (131)

DECLASSIFIED
DOD Mtr.
8 Jan & 20 June 1974
By: 3/8/77 C.C. Data: 3/8/77

SECRET
DECLASSIFIED

9/8-1/95

JBC/rrb

(Air AG)
AG 13E

January 16, 1942.

SUBJECT: Bands for Carrying American Bombs on British Bomb Racks.

TO: Chief of Air Corps.

1. It is directed that shipment be made of the following bands suitable for carrying British Bombs on American racks to "X" clearly marked as to their purpose and use:

10,000 for the following bombs (the same bands being applicable):

- 1000/ bomb, A.S. Mk-IV.
- 250/ bomb, G.P. Mk-I, II, and III.
- 250/ bomb, S. A. P. Mk-II and III.
- 250/ bomb, A. S. Mk-III.
- 450/ bomb, A. P.

5,000 bands for the following bombs (same band being applicable to all):

- 250/ bomb, L. C., Mk-I, II, and I/B.V.
- 500/ bomb, G. P., Mk-I, II, and III.
- 500/ bomb, G. P., Mk-I, II, and III.
- 500/ bomb, S. A. P., Mk-II and III.
- 500/ bomb, A. S., Mk-III.
- 1000/ bomb, C. P.

5,000 bands suitable for the following bombs: (same band being applicable to all)

- 250/ bomb, "X".
- 750/ bomb, Depth Charge Mk-VII.
- 1000/ bomb, M type E.
- 1000/ bomb, Depth Charge.

DVV
7961 LT NTC
[unclear]

2. It is also directed that procurement of standard shackles be expedited to accommodate British type bombs to American racks in accordance with the following table:

Chief of Staff	Sec. y of Staff	AAG	A 1	A 2	A 3	A 4	A WFO	A (unclear)	Judge	S. W. (unclear)

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Am 471.6 (13)

HEADQUARTERS ARMY AIR FORCES
ROUTING AND RECORD SHEET

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DOD Itrs.
8 Jan. & 20 June 1974
By: ME/LC; Date: 3/10/77

~~SECRET~~

File No. _____

Note: A line will be drawn across sheet after each comment.

Tally No. AAF _____

SUBJECT: Bands for Carrying American Bombs on British Bomb Racks.

NO	FROM	TO	DATE	COMMENTS	AAF/A-4 RCC/cmy
1.	AAF A-4	AAF AAG	1942 1/13	<p>1. Request that the O.C.A.C. be directed to ship the following bands suitable for carrying British Bombs on American racks to "X" clearly marked as to their purpose and use:</p> <p>10,000 for the following bombs (the same bands being applicable):</p> <p>100# bomb, A.S. Mk-IV. 250# bomb, G.P. Mk-I, II, and III. 250# bomb, S. A. P. Mk-II and III. 250# bomb, A. S. Mk-III. 450# bomb, A. P.</p> <p>5,000 bands for the following bombs (same band being applicable to all):</p> <p>250# bomb, L. C., Mk-I, II, and I/B.V. 500# bomb, G. P., Mk-I, II, and III. 500# bomb, G. P., Mk-I, II, and III. 500# bomb, S.A.P., Mk-II and III. 500# bomb, A. S., Mk-III. 1000# bomb, G. P.</p> <p>5,000 bands suitable for the following bombs: (same band being applicable to all)</p> <p>250# bomb, "B" 450# bomb, Depth Charge Mk-VII. 1000# bomb, M type E 1000# bomb, Depth Charge</p> <p>2. It is also requested that the O. C. A. C. be instructed to expedite the procurement of standard shackles to accommodate British type bombs to American racks in order to meet requirements of Task Forces now being organized.</p> <p>Incl. For the Assistant Chief of Air Staff, A-4 R&R abv. subj. fmOCAC to AAF/A-4, 1/4/42.</p>	

Hq. Army Air Forces
JAN 13 1942
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Rbb RCC
AAF/A-4 *Rd*

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Form 4071, AC. Rev. 9/14/41

Page No. _____

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4716 (130)

DECLASSIFIED
 DOD ltr.
 8 Jan. & 20 June 1974
 By: ~~SP-1~~ LC: Data: 3/20/77

OFFICE OF THE CHIEF OF THE AIR CORPS
 ROUTING AND RECORD SHEET

3119

(To be filed with correspondence)

Note.—A line will be drawn across sheet after action by each office concerned.

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SUBJECT: Bands for Carrying American Bombs on British Bomb Racks.

NO.	FROM	TO	DATE	DATA
1.	OCAC Assistant For Procurement Services (4-E)	AAF/A-4	1942 1/4	<p>1. In accordance with directive from your office, the following bands for carrying American bombs on British bomb racks, particularly with reference to those airplanes being taken off of British production lines, have been procured in the following quantities:</p> <p style="padding-left: 40px;">10,000 for 100 pound bombs. 10,000 for 300 and 600 pound bombs (same band is applicable to both of these bombs). 5,000 for 1000 and 1100 pound bombs (same band applicable to both of these bombs).</p> <p>2. Shipment of these bands has been directed in accordance with the following schedule, which was based on information from your office as to the location of the B-7 and A-20C airplanes, for which these bands are necessary:</p> <p style="padding-left: 40px;">To 12th Bombardment Group, McCord Field, Tacoma, Washington:</p> <p style="padding-left: 80px;">2,365 for 100 pound bomb 2,365 for 300 and 600 pound bomb 1,182 for 1000 and 1100 pound bomb</p> <p style="padding-left: 40px;">To 48th Bombardment Group, Oklahoma City, Oklahoma:</p> <p style="padding-left: 80px;">2,501 for 100 pound bomb 2,501 for 300 and 600 pound bomb 1,281 for 1000 and 1100 pound bomb</p> <p style="padding-left: 40px;">To 45th Bombardment Group, Manchester, New Hampshire:</p> <p style="padding-left: 80px;">2,501 for 100 pound bomb 2,501 for 300 and 600 pound bomb</p>

(Do not use reverse side)

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OFFICE OF THE CHIEF OF THE AIR CORPS
ROUTING AND RECORD SHEET

(To be filed with correspondence)

Note.—A line will be drawn across sheet after action by each office concerned.

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SUBJECT: Bands for Carrying American Bombs on British Bomb Racks.

NO.	FROM	TO	DATE	DATA
1. Continued	OCAC Assistant For Procurement Services (4-X)	AAF/h-4	1942 1/4	<p>2. Continued:</p> <p>To 45th Bombardment Group, Manchester, New Hampshire:</p> <p style="padding-left: 40px;">1,251 for 1000 and 1100 pound bomb</p> <p>To 47th Bombardment Group, Fresno, California:</p> <p style="padding-left: 40px;">2,408 for 100 pound bomb 2,408 for 300 and 600 pound bomb 1,204 for 1000 and 1100 pound bomb</p> <p>To 13th Bombardment Group, Orlando, Florida:</p> <p style="padding-left: 40px;">2,633 for 100 pound bomb 2,633 for 300 and 600 pound bomb 1,316 for 1000 and 1100 pound bomb</p> <p>3. In addition to the above, the following quantity of bands, suitable for carrying British bombs on American bomb racks, have also been procured. Storage for these bands has been directed until definite application and shipping instructions are received from your offices:</p> <p style="padding-left: 40px;">10,000 for the following bombs (the same bands being applicable):</p> <p style="padding-left: 80px;">100 lb. bomb, A.S. Mb-IV. 250 lb. bomb, G.P.Mb-I, II, and III. 250 lb. bomb, S.A.P. Mb-II and III. 250 lb. bomb, A.S., Mb-III. 450 lb. bomb, A.P.</p>

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N-4091, AC

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OFFICE OF THE CHIEF OF THE AIR CORPS
ROUTING AND RECORD SHEET

(To be filed with correspondence)

Note.—A line will be drawn across sheet after action by each office concerned.

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SUBJECT: Bands for Carrying American Bombs on British Bomb Racks.

NO.	FROM	TO	DATE	DATA
1. Continued	OCAC Assistant For Procurement Services (4-E)	AAF/A-4	1942 1/4	<p>3. Continued:</p> <p>5,000 bands for the following bombs (same band being applicable to all):</p> <p>250 lb. bomb, L.C., Mb-I, II, and I/B.V. 500 lb. bomb, G.P., Mb-I, II, and III. 500 lb. bomb, G.P., Mb-I, II, and III. 500 lb. bomb, S.A.P., Mb-II and III. 500 lb. bomb, A.S., Mb-III. 1000 lb. bomb, G.P.</p> <p>5,000 bands suitable for the following bombs: (same band being applicable to all)</p> <p>250 lb. bomb, "B" 450 lb. bomb, Depth Charge Mb-VII. 1000 lb. bomb, M type B 1000 lb. bomb, Depth Charge</p> <p>4. Shackles suitable for carrying American bombs on the British bomb racks installed in the A-29 airplane have been procured from the Lockheed Aircraft Corporation and will be supplied with 153 A-29 airplanes being obtained from that Company.</p> <p style="text-align: right;">TFO O. P. E. Assistant For Procurement Services</p>

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DOD ltr.
 8 Jan. & 20 June 1974
 By: ~~SP-1~~ LC; Date: 3/18/77

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To insure Prompt Attention
 in Replying Refer to

WAR DEPARTMENT
 OFFICE OF THE CHIEF OF ORDNANCE
 WASHINGTON

No. _____
 Attention of _____

December 27, 1941.

MEMORANDUM FOR: Assistant Chief of Staff, G-4
 Attention: Lt. Col. A. C. Mahaffee

SUBJECT: Day of Supply for Antitank Mines, H.E.,
 Complete with Fuse.

1. Pursuant to verbal request from your office, the following informal information is submitted:

2. Planning to date has been based on an approximate day of supply equal to one-fifth (1/5th) of the T.B.A. issue of Antitank Mines to Engineer combat units. These work out as follows:

	No. of Mines/Day
(1) Triangular Division, other than Armored Force: Bn. Per Ltr. Co., Combat Regt. 3 Ltr. Cos. in Bn.	38 108
(2) Square Division: Per Ltr. Co., Combat Regt. 6 Ltr. Cos. in Regt.	24 144
(3) Corps Troops: Hqr. & Serv. Co., Combat Regt.	200
(4) Armored Force: Per Ltr. Co., Armored Bn. 3 Ltr. Cos. in Bn. Hqr. Co., Armored Bn.	300 600 240
(5) Air Force: Per Ltr. Co., Avn. Regt. or Bn. (Sep) 3 Ltr. Cos. in Bn. 9 Ltr. Cos. in Regt.	36 108 324

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CONFIDENTIAL

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Memorandum for: A.G.S., G-4

December 27, 1941

b. The present established requirement for a troop basis of 3,635,000 men is 5,008,770 Mines, Antitank, M1, of which 3,145,970 are included in approved expenditure program. 3,606,000 mines are on order and are scheduled for delivery as follows:

February (1942)	10,000 per month
March	100,000 per month
May	200,000 per month
August	300,000 per month
December, and thereafter	500,000 per month

g. It is suggested that the day of supply for Mines, Antitank, M1, as indicated below is a reasonable basis for procurement and storage:

No. of Mines Per Day

Triangular Division (other than Armored Force)	110
Square Division	150
Division, Armored Force	840
Engineer, Combat Bn. (Sep.) with Air Force	110
Engineer, Combat Regt., Corps Troops	200

/s/ EARL McFARLAND
 Brigadier General
 Assistant to the Chief of Ordnance

- 2 -

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8-4/30779-18

1st Ind.

Office of the Assistant Chief of Staff, G-4 Division, General Staff,
Washington, D. C. - To: The Chief of Ordnance.

1. It is requested that the question of Day of Supply for antitank mines be referred to the Ordnance Technical Committee for recommendations.

2. It is decided that questions relative to Day of Supply of ammunition be referred to the Ordnance Technical Committee, as this seems to be the most expeditious manner in which the views of the Supply Service and the using Arms can correlate their views.

By authority of the Secretary of War:

7
BRENON SOMERVILLE,
Brigadier General,
Assistant Chief of Staff.

/s/ R. A. Case
Lt. Colonel, General Staff,
Chief, Requirements Section

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O.O. 471.6/2191

Att: Am. Div., Ind. Service

6-4/20779-18

2nd Ind.

Guthill/amj

War Department, Ordnance Office, Washington, January 8, 1942

To: The Adjutant General

1. The question of a Buy of Supply for H. E. Antitank Mines has been referred to the Ordnance Technical Committee for recommendation. Accordingly, there is forwarded herewith a copy of the report of the Subcommittee of the Ordnance Technical Committee dated January 5, 1942, which report has been approved by the Ordnance Committee and by the Chief of Ordnance and is recorded as Item 17998 , Ordnance Committee Minutes.

/s/ EARL McFARLAND

Brigadier General

Assistant to the Chief of Ordnance

1 Incl. added

O. G. M. Item 17998

- 4 -

CONFIDENTIAL
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SUBJECT: Day of Supply for Antitank Mine, M.S., Complete with Fuse.

AG 471.6 (12-27-43)MSS-2

2nd Ed.

LFL/Am - 1705.

War Department, A.G.O., January 13, 1944. - To: Chief of Ordnance.

The recommendations of the Ordnance Technical Committee, January 8, 1942, approved by the Ordnance Committee and by you, concerning a "Day of Supply" for the Mine, Antitank, M.S., for the following units are approved:

No. of Mines per Day

Triangular Division (other than Armored Force)	120
Square Division	120
Division, Armored Force	240
Engineer, Combat Bn. (Sep.) with Air Force	120
Engineer, Combat Regt., Corps Troops	240

By order of the Secretary of War:

Joseph L. Clark
Adjutant General.

1 Incl. w/s.

COPI TO: (w/ty. of Basis, 1st & 2nd Inds.)

- Chief of Engineers.
- Chief of Infantry.
- Chief of Armored Forces.
- ✓ Chief of the Army Air Forces.
- Liaison Officer of the Armored Force.

AG 471.6 (12)

JAN 14 1942
AGO Received

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AG 471.6 (12)

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DECLASSIFIED
DOD Inv.
8 Feb & 28 June 1974
By: [unclear], Date: 3/10/77

**SUBJECT: Flotation Gear for Demolition Bunk, Paragraph 2 of Report
No. 6 of J. A. C. Case No. 227.**

48 471.6 (12-18-41)WEO-C 3rd Ind. 121/vod-1709.

War Department, A.S.C., January 23, 1942. - To: Chief of Ordnance.

You are authorized to cancel the development project for a flotation gear for demolition bunks as inaugurated by Item 16113, Ordnance Committee Minutes.

By order of the Secretary of War:

Frank L. Owsen

1 Incl. w/c

Adjutant General.

COPIES TO:

**Chief of the Army Air Forces ref his
Risp Form AAF/A-4/471-13, January 17, 1942.
Recorder, Joint Aircraft Committee, ref his
Memo 12-18-41 to TAG, w/cys 1st, 2nd Inds.**

Chief of the Air Corps w/cys basic, 1st, 2nd Inds.

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JAN 1942

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DOD Item
8 Jan. & 20 June 1974
Hy. Sec. 1.1. Data 5/277

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JAN 17 1942

AAF/A-4/471-13

AAF/A-4
EBB/eln

(Written January 14, 1942)

Flotation Gear for Demolition Bombs.

I Ord.

I CAG

II C/AF II Joint Aircraft Committee

I SH Abstracts

II Information

AAF/A-4
EBB/eln

I. The Chief of Ordnance is authorized to cancel the development project for a flotation gear for demolition bombs as inaugurated by Item 16113, Ordnance Committee Minutes.

II. Advice of action taken.

Incl.

Bomb to AG, 12/18/41, abv.
subj., in JAC, w/2 ind.;
report No. 6 of Case No. 217.
Copy No. 33

For the Chief of the Air Staff:

NOTED *ERC 1/19/42*
T. J. HANLEY, Jr.,
Chief of the Air Staff, Air Corps,
Assistant Chief of Air Staff, A-4

HEADQUARTERS		ARMY AIR FORCES			COORDINATION					
Chief of Staff	Sec'y of Staff	AAG	A-1	A-2	A-3	A-4	A-WD	A-Insps.	Budget	Scen- erics

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AAF-39

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Recommendation for Cancellation: A military requirement for flotation gear for demolition bombs was established on June 18, 1940. On the basis of this requirement, the Ordnance Department initiated a project for the development of such an item. Since that time, the Special Sub-Committee for the Standardization of Bombs of the Joint Aircraft Committee has recommended that the Ordnance Department investigate the use of Navy type aerial mines in place of flotation devices attached to demolition bombs. The Ordnance Department, in view of this recommendation, has further recommended that development work on such a flotation device be abandoned. Accordingly, it is requested that authority be given the Chief of Ordnance to cancel the development of the subject project.

HEADQUARTERS			ARMY AIR FORCES				COORDINATION			
Chief of Staff	Sec'y of Air Staff	A.A.G.	A-1	A-2	A-3	A-4	A-WPD	A-Insp.	Budget	Statistics
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DOD Hqs.
8 Jan. & 20 June 1974
By: SP4/ELC/Dab/vcl/7

JOINT AIRCRAFT COMMITTEE

Washington, D. C.

December 18, 1941

MEMORANDUM TO: Adjutant General

SUBJECT: Flotation Gear for Demolition Bomb, Paragraph g of Report No. 6 of J.A.C. Case No. 217

1. Transmitted herewith is a copy of Report No. 6 of Case No. 217, which was approved by the Joint Aircraft Committee at the meeting of December 8, 1941.
2. The Joint Aircraft Committee has been informed that the Ordnance Department is considering the development of flotation gear for demolition bomb. The Joint Aircraft Committee recommends that this be withdrawn with view to the use of an aircraft mine as a substitute thereof.

P. W. TIMBERLAKE
Lieut. Colonel, Air Corps
Recorder, Joint Aircraft
Committee

Incl.
Case No. 217 (Rept. #6)

~~CONFIDENTIAL~~
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CONFIDENTIAL

SUBJECT: Flotation Gear for Demolition Bomb, Paragraph C of Report
No. 6 of J.A.C. Case No. 217.

AG 471.6 (12-18-41)MSC

1st Ind.

RPM/fdp-1712

War Department, A.G.O., December 22, 1941. -To: Chief of Ordnance.

For remark and recommendation.

By order of the Secretary of War:

Adjutant General

1 Incl. n/c

O.O. 350.05/1339

AG 471.6 (12-18-41)MSC

2nd Ind.

Adelman/emj

War Department, Ordnance Office, Washington, December 31, 1941
To: The Adjutant General

1. A development project for a flotation gear for demolition bombs was inaugurated by Item 16113, Ordnance Committee Minutes, based on a statement contained in Second indorsement dated June 18, 1940, AG 471.6 (5-25-40) (M-B) that a military requirement for this item existed.

2. The action was inaugurated by the Chief of Air Corps. It is recommended that authority be given for the cancellation of this project.

For the Chief of Ordnance:

G. M. BARNES
Brig. Gen., Ord. Dept.
Asst. Chief of Industrial Service
Research and Engineering

1 Incl. n/c

- 2 -

DECLASSIFIED

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1-28-42

DECLASSIFIED
A DOD ltr.
8 Feb. & 20 June 1974
By: ~~SP-1~~ C; Date: 3/12/77

AAF/a-4/471-9
Bombs, Conversion of Artillery Shell.

I G-4 II WPD

Comment or concurrence

~~XXXXXXXX~~ returns
Air Staff
AAF/a-4
RCC/mb

471.6
129

- Incl.: Memo for C/S, abv. subj.
(AAF/a-4/471-9) 1/9/42
w 3 incls:
1. Table showing depot stocks and harbor defense stocks of armor-piercing and deck piercing projectiles in the Continental United States.
 2. Memo. frn WPD, 1/21/42, abv. subj.
 3. Memo frn G-4/22396-101, 1/16/42, above subj.

For the Chief of the Air Staff:

T. J. HANLEY, Jr.
Colonel, Air Corps
Assistant Chief Air Staff, A-4

Dispo: 1-1
FEB 6 1942
AAG

HEADQUARTERS ARMY AIR FORCES - COORDINATION										
Chief of Staff	Deputy Chief of Staff	A.A.G.	A-1	A-2	A-3	A-4	A-WPD	A. Insp.	Budget	Statistics

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AAF-30

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DECLASSIFIED
DOD ltr.
8 Feb. & 20 June 1974
By: SP-6/C; Date: 3/10/77

January 12, 1942

1-4/h71-9

Bombs, Conversion of Artillery Shells.

1-4

II WPD

~~XXXXXXXX~~ XXXXXXXX

~~XXXXXXXX~~ return to Air Staff

AAF/A-4
HCC/1hr

For the Chief of the Air Staff:

John Y. York, Jr.

Colonel, Air Corps

Acting Assistant Chief of Air Staff, A-4

Incl:

Memo for C/S (AAF/A-4/h71-9)
1/9/42, abv subj, w/Incl.

HEADQUARTERS ARMY AIR FORCES - COORDINATION											
Chief of Staff	Secy of Staff	A. A. G.	A-1	A-2	A-3	A-4	A- WPD	A. insp.	budget	Sta- tistics	

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AAF-39

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AAF/A-4
RCC/mja

DOD: Hqs.
8 Jan. & 20 June 1974
By: [Signature], Date: 3/17/77

January 9, 1948

AAF/A-4/471-9

MEMORANDUM FOR THE CHIEF OF STAFF:

Subject: Bombs, Conversion of Artillery Shells

I. Mission.

1. The 1046 15" mortar projectile has been converted into a satisfactory armor-piercing bomb by the addition of a suspension band, tail assembly and modified fuse. Informal information has been received from the Chief of Ordnance that satisfactory bombs can be made by conversion of any armor-piercing or deck-piercing projectiles ranging in size from 10" to 16" inclusive.

2. There are large quantities of these projectiles in harbor defenses of the Continental United States, Overseas Possessions, and Ordnance Depot stocks which can be made available to the Air Force in case of extreme emergency, if special bands, fuses, and tail assemblies are provided and stored near the location of the projectiles.

II. Action Recommended.

1. The Secretary of War directs the Chief of Ordnance to design, test, and procure the necessary material, such as suspension bands, boosters, fuses and tail assemblies to convert 25 per cent of all A.P. and D.P. projectiles, ranging in sizes from 10" to 16" inclusive, for conversion of these projectiles into bombs. This material should be stored with or near the projectiles and the conversion facilities as well as the projectiles to be made available to the Air Force in cases of extreme emergency.

III. Comments.

A.C. of S., G-4
A.C. of S., WPD

{ }

For the Chief of the Air Staff:

Incl.

Subsidiary report

HEADQUARTERS, AIR FORCES - COORDINATION

Chief of Staff	AF	AG	AS	ASST. CHIEF OF STAFF	ASST. CHIEF OF STAFF	ASST. CHIEF OF STAFF	ASST. CHIEF OF STAFF	ASST. CHIEF OF STAFF	ASST. CHIEF OF STAFF

See next page for consideration of non-concurrences.

AF-39

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AA7 - 4/47-9

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AAF/A-4
RCC/hhh
Rewritten 1-31-42

Subject: Bombs, Conversion of Artillery Shell.

IV. Consideration of non-concurrence.

1. Tab A cites non-concurrence by Assistant Chief of Staff, War Plans Division, War Department. Tab B cites non-concurrence by Assistant Chief of Staff, G-4, War Department.

2. The utilization of amces gun and mortar projectiles amounting to some 17,000 will meet the requirements of the Army Air Forces until such time as standard A. P. bombs become available.

V. Final Action Recommended.

1. The Secretary of War directs the Chief of Ordnance to design, test and procure the necessary material such as suspension bands, boosters, fuses and fin assemblies to convert approximately 17,000 15" armor-piercing and 12" deck-piercing projectiles in excess of Coast Artillery requirements into bombs for use by the Army Air Corps.

VI. Final Concurrence.

A.S. of S., G-4
A.S. of S., WPD

{ LLL } 1/30/42
{ RMC } 2/5/42

For the Chief of the Air Staff:

NOTED *ERC* 2/5/42
Chief of the Air Staff

4/4/42

Incl.

- 1. Table showing depot stocks and harbor defense stocks of armor-piercing and deck piercing projectiles in the Continental United States.
- 2. Memo. frn WPD, 1/21/42, abv. subj.
- 3. Memo frn G-4/22396-101 1/26/42, abv. subj.

T. J. HANLEY, Jr.
Colonel, Air Corps
Assistant Chief Air Staff, A-4

HEADQUARTERS ARMY AIR FORCES							COORDINATION			
Chief of Staff	Deputy Chief of Staff	A.A.S.	A-1	A-2	A-3	A-4	A. WPD	A. Insp.	Subst.	Statistics

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RAF/A-4
REC/Smith
dated 1/22/42

~~IV. Consideration of Recommendations~~

~~1. Tab A cites non-concur cited by Assistant Chief of Staff, War Plans Division, War Department. Tab B cites non-concur cited by Assistant Chief of Staff, G-4, War Department.~~

~~2. The utilization of excess gun and mortar projectiles amounting to some 17,000 will meet the requirements of the Army Air Forces until such time as Standard A. P. bombs become available.~~

~~V. Final Action Recommended~~

~~The Secretary of War directs the Chief of Ordnance to design, test and procure the necessary material such as suspension bands, boosters, fuses and fin assemblies to convert all armor-piercing and deck-piercing projectiles in excess of Coast Artillery requirements into bombs for use by the Army Air Corps.~~

~~VI. Final Comment~~

~~A. C. of S., G-4
A. C. of S., WPD~~

For the Chief of the Air Staff:

Incl.

1. Table showing depot stocks and harbor defense stocks of armor-piercing and deck piercing projectiles in the Continental United States.

2. Memo. from WPD, 1/21/42, abv. subj.

3. Memo from G-4/22396-101 1/16/42, abv. subj.

T. J. HANLEY, Sr.
Colonel, Air Corps
Assistant Chief Air Staff, A-4

HEADQUARTERS ARMY AIR FORCES - COORDINATION											
Chief	Deputy	A.A.G.	A-1	A-2	A-3	A-4	A-WPD	A. Insp.	Subst.	Strat.	Statistics
Chief Staff	Air Staff										

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471.6 (127)

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Harbor Defense Stocks for Armor Piercing and Deck Piercing Projectiles

10" Guns, 617-lb.	Columbia	301	Portland	324
	Puget Sound	1268	Portsmouth	243
	San Diego	428	Long Is. Sd.	180
	Galveston	216	Boston	294
	Charleston	756		
12" Mortar, 700-lb. D.P.	Boston	1424	Portland	800
	Los Angeles	750	Chesa. Bay	400
	San Francisco	2100	Pensacola	400
	Columbia	1007	San Diego	799
	Puget Sound	2198	Galveston	400
	Narr. Bay	1000	Charleston	170
	Long Is. Sd.	1000	Key West	400
12" Mortar, 824-lb. D.P.	Charleston	300		
12" Mortar, 1046-lb. D.P.	Los Angeles	350	Key West	99
	San Francisco	928	Narr. Bay	300
	Columbia	620	Pensacola	201
	Puget Sound	940	Chesa. Bay	200
	San Diego	400	Portland	400
	Galveston	200	Long Is. Sd.	720
	Charleston	200		
12" Guns, M1888-95, 870-lb. A.P.	San Francisco	600	Sandy Hook	800
	Puget Sound	482	S. New York	480
	Chesapeake Bay	200	Portland	720
	Delaware	270	Long Island	400
	Boston	870	Narr. Bay	480
975-lb. A.P.	Sandy Hook	1200	Delaware	540
	San Francisco	300	Portland	118
	Pensacola	100	Boston	100
1070-lb.	San Francisco	1298	Narr. Bay	480
	Puget Sound	960	Long Is. Sd.	400
	Galveston	520	Chesapeake Bay	300
	Key West	400	S. New York	480
	Pensacola	324	Portland	732
	Boston	300	Portsmouth	432
	New Bedford	300		
12" Guns, M1888-95, Navy 870-lb.	Charleston	259		
14" Gun, M1910, 1400-lb. A.P.	Los Angeles	869		
16" Guns, 2100-lb.	Boston	180	Sahdy Hook	250
	San Francisco	800	Narr. Bay	100
16" Howitzer, A.P. 2100-lb.	Chesa. Bay	640	Long Is. Sd.	250

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DOD Hqs.

8 Jan. & 26 June 1974

By ~~SECRET~~ / JAL/CLC; Date 3/21/77

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Depot Stocks for Armor-Piercing and Deck Piercing Projectiles.

Shell, A.P., 617-lb., 10" gun

Char	83
Rar	<u>12</u>
	95

Shot, A.P., 617-lb., 10" gun

Ben	41
Rar	<u>74</u>
	115

Projectile, A.P., 870-lb., 12" gun

Ben	450
Ben	34 - empty
Char	40
Del.	3003
Man	72
Man	10 empty
Rar	<u>127</u>
	3736

Projectile, A.P., 975-lb., 12" gun

Char	309
------	-----

Shell, A.P., 1070-lb., 12" gun

Ben	1-empty
Char	101
Char	207 "
Del	161 empty M1916
Rar	82
Rar	<u>5</u> " M1912B
	557

Shot, A.P., 1070-lb., 12" Gun

Char	16
Char	1 empty
Rar	<u>190</u>
	207

Shell, D.P., 700-lb., 12" mortar

Ben	1031
Char	867
C.B.	<u>222</u>
	2850

Shell, D.P., 824-lb., M1893 12" mortar

Rar	151
-----	-----

Shell, D.P., 824-lb., M1898 12" mortar

Char	386
Rar	<u>214</u>
	1800

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Shell, D.P., 1046-lb., Mx. XVIII 12" mortar

Char	99
Rar	1829
Rar	<u>1</u> - empty
	2029

Shell, D.P., 1046-lb., M1898 12" mortar

Ben	302 - empty
Ben	1070
Char	8
Char	99 empty
C.B.	118
Del	93 empty
Man	111
Man	330 empty
Rar	21
Rar	<u>1867</u> empty
	4009

Shell, D.P., 1046-lb., M1893 M1. 12" mortar

Ben	47
Rar	<u>132</u>
	186

Shell, D.P., 1046-lb., M1895 12" mortar

Rar	150
-----	-----

Projectile, A.P., 1400-lb., Mx. VII. 14" gun

Ben	75
Man	<u>422</u> (empty-mod. 5)
	574

Projectile, A.P., 1400-lb., Mx. VIII 14" gun

Ben	85
Man	87
Rar	<u>12</u> (empty)
	184

Shell, A.P., 1400-lb., Mx. VIII (for target practice)

Man	426 (empty)
-----	-------------

Shell, A.P., 1400-lb., Mx. II

Man	empty
-----	-------

Projectile, A.P., 1400-lb., Mx. I 14" gun

Ben	10 - empty
-----	------------

Projectile A.P., 2100-lb., 16" gun

Rar	19
-----	----

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NOTE: 12" gun and mortar projectiles are being renovated.

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DOD Hqs.
8 Feb. & 20 June 1974
By SP4BLC/DAW/17

~~SECRET~~

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G-4/22396-101

January 26, 1942

MEMORANDUM FOR THE CHIEF OF THE ARMY AIR FORCES:

Subject: Bombs, Conversion of Artillery Shells.

1. Reference is made to your memorandum (AAF/A-4/271-9, January 9, 1942), relative to the conversion of armor piercing and deck piercing projectiles into armor piercing bombs for use in emergencies.
2. G-4 has no objection to the design and test of suspension bands, boosters, fuzes and tail assemblies to convert armor piercing and deck piercing projectiles into bombs for emergency use by the Air Force.
3. Armor piercing and deck piercing projectiles from 10-inches to 16-inches in size are used exclusively by the Coast Artillery Corps in Harbor Defense projects both in the Continental United States and Overseas Departments. The Chief of Coast Artillery, in a memorandum to the Assistant Chief of Staff, G-4, January 16, 1942, states that there are no armor piercing or deck piercing projectiles for 12-inch guns, 14 inch guns or 16 inch guns in excess of the Coast Artillery Corps requirements at this time. He further states that a tentative estimate indicates that there are about 4,000 projectiles for the 10-inch gun and 12-inch mortar now on hand in Harbor Defense of the Continental United States in excess of war reserve allowances. The Chief of Coast Artillery recommends that the above ammunition, together with surplus U. S. depot stocks of about 13,000 10-inch guns and 12 inch mortar projectiles, be made available to the Army Air Forces for conversion into bombs.
4. In view of the above G-4 does not concur in the recommendation of the Chief of the Army Air Forces that 25% of all armor piercing and deck piercing projectiles from 10 inches to 16 inches in size be made available for conversion into bombs in the event

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Tab B

G-4/22396-101

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of an emergency. G-4 is of the opinion that the necessary materiel should be provided for the conversion of only those projectiles which are recommended for such purpose by the Chief of Coast Artillery.

/s/ Brehon Somervell
BREHON SOMERVELL
Brigadier General
Assistant Chief of Staff.

Incls:

Memo for CoS fm
Hq, AAF (1-9-42)
w/l Incl.

-2-

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DOD IAW

8 Jan. & 20 June 1994
By: SP4/CJC; Date 3/16/77

SECRET
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AAF/A-4/471-9

1/21/42

MEMORANDUM FOR THE CHIEF OF THE ARMY AIR FORCES:

Subject: Bombs, Conversion of Artillery Shells.

1. Reference is made to your memorandum AAF/A-4/471-9, January 9, 1942, subject: Bombs, Conversion of Artillery Shells.

2. It is the opinion of the War Plans Division that all 10-inch gun and 12 inch mortar projectiles which are in excess of war reserve allowances should be made available to the Army Air Forces for conversion into bombs.

3. Ammunition allowance for large caliber sea-coast cannon are the minimum necessary for the performance of missions assigned to such weapons. Tentative diversion of 25 percent of the ammunition allocated to these weapons would necessitate the procurement of additional ammunition to replace that diverted. It appears that it would be preferable to increase the procurement schedule for bombs rather than to make such diversion. Therefore, the War Plans Division does not concur in the proposal, except as indicated in Paragraph 2 above, to procure material to convert 25 percent of all AP and DP projectiles, 10" to 16" inclusive, into bombs.

L. T. GEROW
Brigadier General
Assistant Chief of Staff.

By: /s/ R. W. Crawford
R. W. CRAWFORD,
Brigadier General, G.S. C.

1 Incl.
AAF/A-4/471-9
(1-17-42) w/Incls.

C O P Y

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Tab A

DECLASSIFIED
DOD Mem.
8 Jan. & 20 June 1974
By: ~~SP-1~~ C; Date: 3/12/77

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1-28-42

AAF/A-4/471-9
Bombs, Conversion of Artillery Shell.

I G-4 II WFD

471.6 (127)

Comment or concurrence

~~RECORDED~~ return to
Air Staff

AAF/A-4
HOC/whh

- Incl.: Memo for C/S, abv. subj.
(AAF/A-4/471-9) 1/9/42
w 3 incls:
1. Table showing depot
stocks and harbor defense
stocks of armor-piercing and
deck piercing projectiles in
the Continental United States.
2. Memo. frn WFD, 1/21/42,
abv. subj.
3. Memo frn G-4/22396-101,
1/16/42, above subj.

For the Chief of the Air Staff:

T. J. HANLEY, Jr.
Colonel, Air Corps
Assistant Chief Air Staff, A-4

JAN 19 1942
447

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AAF/A-4
PCC/Amk

DECLASSIFIED
DOD Itra.
8 Jan. & 20 June 1974
By: SP-1/PLC; Date: 3/12/77

January 9, 1942

AAF/Amk/471-9

MEMORANDUM FOR THE CHIEF OF STAFF:

Subject: Bombs, Conversion of Artillery Shells

I. Discussion.

1. The 1046th 12" Mortar projectile has been converted into a satisfactory armor-piercing bomb by the addition of a suspension band, tail assembly and modified fuse. Informal information has been received from the Chief of Ordnance that satisfactory bombs can be made by conversion of any armor-piercing or deck-piercing projectiles ranging in size from 10" to 16" inclusive.

2. There are large quantities of these projectiles in harbor defenses of the Continental United States, Overseas Possessions, and Ordnance Depot stocks which can be made available to the Air Forces in case of extreme emergency, if special bands, fuses, and tail assemblies are provided and stored near the location of the projectiles.

II. Action Recommended.

1. The Secretary of War directs the Chief of Ordnance to design, test, and procure the necessary material, such as suspension bands, boosters, fuses and tail assemblies to convert 25 per cent of all A.P. and D.P. projectiles, ranging in sizes from 10" to 16" inclusive, for conversion of these projectiles into bombs. This material should be stored with or near the projectiles and the conversion units as well as the projectiles to be made available to the Air Forces in cases of extreme emergency.

III. Concurrences.

A.C. of S., G-4
A.C. of S., WPD

{ }

For the Chief of the Air Staff:

Incl.

Table showing depot stocks and harbor defense stocks of armor-piercing and deck-piercing projectiles in Continental United States.

T.J. HANLEY, Jr.
Colonel, Air Corps
Assistant Chief Air Staff, A-4

		COORDINATION									
Chief of Staff	Sec'y Air Staff	AAG	A1	A2	A3	A4	A WPD	A JAG	Adgc	Sa	
		See next page for consideration of non-concurrences.									

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Am 05 471.6 (137)

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IV. Specifications of ammunition.

a. The A-1 rocket launcher used by Assistant Chief of Staff, War Plans Division, War Department. The B class ammunition used by Assistant Chief of Staff, G-4, War Department.

b. The utilization of excess gas and mortar projectiles amounting to over 27,000 will meet the requirements of the Army Air Force until such time as standard A. P. tanks become available.

V. Final Action Recommended.

In the company of War directs the Chief of Ordnance to design, test and produce the necessary material such as suspension tanks, hardware, fuses and fin assemblies to convert all non-igniting and duds of projectiles in excess of Coast Artillery requirements into tanks for use by the Army Air Corps.

VI. Final Comments.

A. C. of S., G-4
A. C. of S., W-2

{ }

For the Chief of the Air Staff:

Encl.

1. Table showing types of stocks and War Dept stocks of non-igniting and dud projectiles in the Continental United States.

2. Memo, for W-2, 1/21/42, etc. subj.

3. Memo for G-4/WH-2-101 1/21/42, etc. subj.

T. J. HANBY, Sr.
Colonel, Air Corps
Assistant Chief Air Staff, and

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DOD ltra.

8 Jan. & 20 June 1974
By: ~~SP4~~ELC: Data 3/24/17

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AAF/A-4/471-9

1/21/42

MEMORANDUM FOR THE CHIEF OF THE ARMY AIR FORCES:

Subject: Bombs, Conversion of Artillery Shells.

1. Reference is made to your memorandum AAF/A-4/471-9, January 9, 1942, subject: Bombs, Conversion of Artillery shells.

2. It is the opinion of the War Plans Division that all 10-inch gun and 12 inch mortar projectiles which are in excess of war reserve allowances should be made available to the Army Air Forces for conversion into bombs.

3. Ammunition allowance for large caliber sea-coast cannon are the minimum necessary for the performance of missions assigned to such weapons. Tentative diversion of 25 percent of the ammunition allocated to these weapons would necessitate the procurement of additional ammunition to replace that diverted. It appears that it would be preferable to increase the procurement schedule for bombs rather than to make such diversion. Therefore, the War Plans Division does not concur in the proposal, except as indicated in Paragraph 2 above, to procure material to convert 25 percent of all AP and DP projectiles, 10" to 16" inclusive, into bombs.

L. T. GERON
Brigadier General
Assistant Chief of Staff.

By: /s/ R. W. Crawford
R. W. CRAWFORD,
Brigadier General, G.S. C.

1 Incl.
AAF/A-4/471-9
(1-17-42) w/incls.

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Sub "A"

DECLASSIFIED
DOD Rm.
8 Jan. & 20 June 1974
By: J/MLC; Date: 3/6/77

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G-4/2296-101

January 26, 1942

MEMORANDUM FOR THE CHIEF OF THE ARMY AIR FORCES:

Subject: Bombs, Conversion of Artillery
Shells.

1. Reference is made to your memorandum (AAF/A-4/271-9, January 9, 1942), relative to the conversion of armor piercing and deck piercing projectiles into armor piercing bombs for use in emergencies.
2. G-4 has no objection to the design and test of suspension bands, boosters, fuzes and tail assemblies to convert armor piercing and deck piercing projectiles into bombs for emergency use by the Air Force.
3. Armor piercing and deck piercing projectiles from 10-inches to 16-inches in size are used exclusively by the Coast Artillery Corps in Harbor Defense projects both in the Continental United States and Overseas Departments. The Chief of Coast Artillery, in a memorandum to the Assistant Chief of Staff, G-4, January 16, 1942, states that there are no armor piercing or deck piercing projectiles for 12-inch guns, 14 inch guns or 16 inch guns in excess of the Coast Artillery Corps requirements at this time. He further states that a tentative estimate indicates that there are about 4,000 projectiles for the 10-inch gun and 12-inch mortar now on hand in Harbor Defense of the Continental United States in excess of war reserve allowances. The Chief of Coast Artillery recommends that the above ammunition, together with surplus U. S. depot stocks of about 13,000 10-inch guns and 12 inch mortar projectiles, be made available to the Army Air Forces for conversion into bombs.
4. In view of the above G-4 does not concur in the recommendation of the Chief of the Army Air Forces that 25% of all armor piercing and deck piercing projectiles from 10 inches to 16 inches in size be made available for conversion into bombs in the event

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Tab "B"

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G-4/22396-101

of an emergency. G-4 is of the opinion that the necessary material should be provided for the conversion of only those projectiles which are recommended for such purpose by the Chief of Coast Artillery.

/s/ Brehon Somervell
BREHON SOMERVELL
Brigadier General
Assistant Chief of Staff.

Incls:

Memo for CoS fm
Hq, AAF (1-9-42)
w/1 Incl.

-2-

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DECLASSIFIED
DOD ltr.
8 Jan. & 20 June 1974
By: DAF/LC: Date 3/10/77

DECLASSIFIED

1/15/42

X AG
AAF/A-4/471-14

Supply of Incendiary Munitions to the Navy

III G-3

II WPD

I GWR

Di-05
471.6
(128)

X

SW directs

X

JAN 17 1942
AAG

AAF/A-4
WFO/mjn

- I. 1. When suitable cluster racks become available, you are authorized to release to the Navy Department two-thirds of the production of 4¢ incendiary bombs until a total quantity of 200,000 such bombs has been so released.
2. Thereafter, and until production meets combined Army-Navy needs, 15 per cent of the weekly production of 4¢ incendiary bombs accruing to the United States will be released to the Navy Department.

For the Chief of the Air Staff:

WFO
EPC 1/16/42
Chief of the Air Staff

Incl. *15 (excl. A-1)*

Tr. 12/1/41, MEMORANDUM FOR ARMY AIR FORCES - *T. J. HANLEY, JR.*
COMBAT GROUP

War Dept.	AG	NAVY	A-1	A-2	A-3	ASST. DIR.	ASST. DIR.	ASST. DIR.	ASST. DIR.	ASST. DIR.	ASST. DIR.	ASST. DIR.

MEMORANDUM FOR RECORD: Army requirements for 4¢ incendiary bombs to January 1, 1942 are estimated at 40,000,000. Navy requirements for 1942 are about 7,000,000 bombs.

(SEE OVER)

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AAF-39

DECLASSIFIED

DDA. ltra.

8 Jan. 20 June 1974

By: *[Signature]*; Date: *3/11/77*

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based on the estimated immediate expenditure rate of 400,000 per month and the War Plan expenditure rate of 600,000 bombs per month cited in the Navy Request. The Navy requirement of 7 million bombs thus approximates 15 per cent of the combined Army-Navy requirement of 47 million bombs (to January 1, 1943).

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HEADQUARTERS			ARMY AIR FORCES				COORDINATION			
Chief of Staff	Sec'y of Staff	AAG	A1	A2	A3	A4	A WFO	A. Insp.	Bdgc.	S. & S.
<i>[Signature]</i>					<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>			

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44-16471-6 (26) AAF 19

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NAVY DEPARTMENT
Bureau of Ordnance
Washington, D.C.

12/8/41

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DOD Hist.
4 Jan. & 20 June 1974
By: ~~SP-1~~ J.C. Date: 3/2/77

MEMORANDUM

From: The Chief of the Bureau of Ordnance.
To: The Chief of the Chemical Warfare Service,
War Department

Subject: Supply of Incendiary Munitions to the Navy.

Reference: (a) BuOrd. memo to the Chief of Chemical Warfare Service, War Dept.
EW/577 (524) (Re2b) dated 14 July 1941.
(b) CWS confidential memo CWS 38/247 of 12 April 1941 to Commander
Hoover with enclosure.

1. The Bureau of Ordnance desires further to amplify reference (a) in view of recent developments. The initial requirement for Navy purposes of 4 pound incendiary bombs is 2,700,000 such bombs. The desire is primarily for AN-M50 and AN-M50X bombs encastered in cluster adapter. Bureau of Ordnance requisition 1088 has been submitted to the Chemical Warfare Service for the immediate delivery of 200,000 AN-M54 and AN-M54X bombs. It is the desire of the Bureau of Ordnance to fill the complete requirements at as early a date as possible.

2. The War Plan expenditure rates of 4 pound bombs is computed to be 600,000 such bombs per month. It is requested that the Chemical Warfare Service set up production facilities to cover this amount for issue to the Navy. It is desired to initiate production of AN-M54 and AN-M54X bombs, which production will be converted into AN-M50 bombs and AN-M50X bombs as material becomes available. Requirements to cover expenditure rates will be submitted from time to time covering such amounts as are dependent upon demand and availability. Estimated immediate expenditure rates are 400,000 per month.

3. The usual requirement forms covering the above items are being submitted to the Chief of Naval Operations for transmittal to the War Department.

/s/ W.P. Blandy

FPB/ccg

Copy to:
CNO

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DOD ITR

8 Jan. & 20 June 1974
By: *[Signature]* Date: *3/21/77*

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1/3/42 SM

12-18-41

1st Ind.

War Department, C-C of CWS, January 3, 1942 - to: The Adjutant General

1. The cluster adapter being manufactured at this time is provided with two suspension lugs which are 14 inches apart. This is not adaptable to a single lug suspension such as desired by the Navy Dept. The Chemical Warfare Service is attempting to develop a cluster adapter that can be suspended from either one lug or two lug suspension racks.

2. The manufacture of approximately 75,000,000 of AN-M50, AN-M50X, AN-M54, and AN-M54X, 4-pound incendiary bombs was begun on December 30, 1941. The first of 51,000 bombs produced have been shipped to "Destination X" in accordance with instructions of the Air Staff.

3. The present production rate of these incendiary bombs, 4-pound, is 10,000 per day. It is expected that this production will be 30,000 within ten days and 30,000 within one month.

4. It is recommended that after cluster adapters suitable to the Navy Dept. are available, the next 300,000 bombs produced be made available to the Navy Dept. to meet the immediate requirement mentioned in paragraph one basic letter. It is further recommended that after the delivery of 200,000 bombs to the Navy, future deliveries be equally divided between the Army and Navy until the Navy requirement has been satisfied, unless unforeseen contingencies make other distribution desirable.

For the Chief of the Chemical Warfare Service:

/s/ E. Montgomery
Colonel, C.W.S.
Chief, Field Service

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DOD Itr.
8 Feb & 20 June 1974
SAC: Date 3/14/77

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RECEIPT

DATE _____

SUBJECT: Supply of Incendiary Munitions to the Navy

1. Received from the Headquarters, Army Air Forces,
one disposition form above subject @/incls:-

ltn. 12/8/41, fr. Navy Dept.
C/Dir. Ord. to, C/Chm. Warfare Ser.
War Dept. 21st Ind.

OFFICER _____ RANK _____

OFFICE _____

RECEIPT

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II. Action Recommended.

The Secretary of War directs:

1. That the "Basis for the Computation of Requirements for Standard Air Corps Ordnance and Chemical Warfare Service Items," as approved in Memorandum GOS 17074-33, dated December 19, 1941, (attached as Tab B) be revised as follows:

Page 1, line 23, reading, "Load: Computations to be based on the maximum alternate load," to be amended to read, "Load: Computations to be made in accordance with the following schedule:

- Heavy Bombers - 90% maximum load, 90% normal load.
- Medium Bombers - " " " " " " " " " "
- Light Bombers - 75 1/2% max. " 66 2/3% normal load.
- Amphibians - 100% normal load.

2. That the Divisions of the General Staff, the Chiefs of the Arms and Services and interested agencies of the War Department be notified of this action.

III. CONCURRENCE.

A.C. of S., G-4 ()

For the Chief of the Air Staff:

Incl.
Tab A
Tab B

I. J. HANLEY, Jr.,
Colonel, Air Corps,
Assistant Chief of Air Staff, A-4

Dispatched
JAN 17 1942
AAG

HEADQUARTERS			ARMY AIR FORCES			COORDINATION				
Chief of Staff	Sec'y of Staff	AAG	A-1	A-2	A-3	A-4	A-WPD	A-Insp.	Budget	Statistics
					<i>REC'D</i>	<i>REC'D</i>	<i>REC'D</i>			

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AAF-39

008 471-C (25)

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DOD Item
8 Jan. 8-20 June 1974
Synchro/CLC; Date 1/10/77

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Revision of Basis for Completion of Debt Requirements.

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III
 Site Being
 Examined
 in Funds

IV
 Adjustment
 Recommended by A-4
 Plane Life Lead in Funds.

60,000

No Change •

60,000

No Change •

60,000

112,000

60,000

140,000

50,000

225,000

50,000

275,000

60,000

180,000

REMARKS

120,000

No Change •

120,000

No Change •

100,000

185,000

120,000

No Change •

120,000

170,000

30,000

115,000

REMARKS

90,000

No Change •

90,000

121,000

75,000

No Change •

90,000

135,000

REMARKS

90,000

90,000

If these planes was completed prior to

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DOD Item
N Jan. & 20 June 1974
By: ~~SP4~~ L.C.; Date: 3/10/77

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WAR DEPARTMENT
Office of the Chief of Staff
Washington

OCS 17874-53

December 19, 1941

MEMORANDUM FOR THE CHIEF OF THE ARMY AIR FORCES:

Subject: Revision of Basis for Computation of
Requirements for Items of Air Corps--
Ordnance Equipment.

1. In accordance with paragraph 2, section II of your memorandum for the Chief of Staff, dated November 11, 1941, subject same as above, AAF/292-1, that memorandum and enclosures are returned herewith for necessary distribution.
2. Tab B is approved temporarily and will be used as the basis for the computation of requirements for the items indicated therein until the further amendment directed below has been accomplished and approved.
3. The 20-pound fragmentation bombs, parachute type, and 30-pound chemical bombs will not be eliminated as standard types of fire from light bombardment airplanes except dive bombing types.
4. Necessary action will be initiated to procure racks suited for rapid installation and removal in light bombardment type airplanes (except dive bombing types) now under procurement or included in current programs. These racks are to permit the employment of 20-pound (approximate) fragmentation bombs, parachute type, and 30-pound (approximate) chemical bombs.
5. Concurrently with the procurement of these racks, action will be initiated to further amend subject paper to include appropriate quantities of parachute type and chemical bombs.

By direction of the Deputy Chief of Staff:

/s/ L. S. Kuter

L. S. KUTER,
Major, General Staff,
Asst. Sec., General Staff.

Copies to
A.C. of S., G-3
A.C. of S., G-4

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C-158, A.C.

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DOD ltr.
8 Jan. & 20 June 1974
By: [unclear] C: Date: 3/10/77

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TAB B

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 DOD ltrs
 8 Jan. & 26 June 1974
 By SMC/LC; Date 3/2/77

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 TAB "B"

BASIS FOR THE COMPUTATION OF REQUIREMENTS FOR STANDARD
 AIR CORPS ORDNANCE AND STANDARD CHEMICAL WARFARE SERVICE ITEMS.

The Attrition rates shall be as follows:

- (1) Theatre of Operations - all types 20% a month.
- (2) Zones of Interior and Overseas Departments - all types 3% a month.

Mission rates shall be as follows:

- (1) Heavy Bombardment - 8 missions per plane per month, of which 5 will be bombing missions.
- (2) Medium Bombardment - 15 missions per plane per month, of which 10 will be bombing missions.
Light Bombardment,) - 15 missions per plane per month, of
including Dive Bombers) which all will be bombing missions.
Transports - 15 missions per plane per month.
Amphibians - 15 missions per plane per month, of
which 5 will be bombing missions.
- (3) Pursuit aircraft) - 20 missions per month, of which 2-1/2
equipped to carry) missions will be bombing missions.
bombs)
- (4) All other types - 20 missions per plane per month.

Load: Computations to be based on the maximum alternate load.

Ammunition requirement shall be computed to provide a reserve of ammunition for each airplane procured, based on the attrition and mission rates stated above.

Item

1. Gun, machine, Browning, aircraft, caliber .30, M2, fixed, (Drg. 51-57).
2. Gun, machine, Browning, aircraft, caliber .30, M2, flexible, (Drg. 51-76).
3. Gun, machine, Browning, aircraft, caliber .50, M2, fixed (Drg. 51-72).
4. Gun, machine, Browning, aircraft, caliber .50, M2, flexible (Drg. 51-73).
5. Gun, automatic, 37 mm., M4, (Drg. 51-92).
6. Gun, automatic, 20 mm., M1, (Drg. 54-105).

The basis for the computation of requirements of these items is established by airplane model specifications listing the number of each carried by each airplane by type and model designation. No other basis can be established. The Chief of the Army Air Forces will keep the Ordnance Department advised of the number of each of the above items required for each type and model airplane.

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CONFIDENTIALItem

7. Ammunition (Fixed) 37 mm HE.
8. Ammunition (Fixed) 20 mm HE - Incendiary.
9. Ammunition (Fixed) 20 mm AP.
10. Cartridge .50 caliber AP.
11. Cartridge .50 caliber Tracer.
12. Cartridge .50 caliber - Incendiary.
13. Cartridge .30 caliber AP.
14. Cartridge .30 caliber Tracer.
15. Cartridge .30 caliber - Incendiary.

The basis for the computation of requirements of these items is established by airplane model specifications setting forth the number of rounds carried for each gun installed by airplane type and model designation. No other basis can be established. The Chief of the Army Air Forces will keep the Ordnance Department advised of the ammunition loads specified for each type and model airplane.

An ammunition expenditure rate of 35% per weapon per mission is recommended.

The following percentage distribution by types of the above ammunition is recommended for procurement:

- a. Caliber .30 aircraft machine gun--50% AP; 30% Incendiary; 20% Tracer.
- b. Caliber .50 aircraft machine gun--50% AP; 30% Incendiary; 20% Tracer.
- c. 20 mm. aircraft gun-----40% HE-Incendiary; 60% AP.
- d. 37 mm. aircraft gun-----100% HE.

Item

16. Shotgun, Remington or Winchester, sporting 12-gauge or equal (commercial standard).
17. Powder, aluminum, bronze, Type A (Federal Spec. TT-A-476) with 1-liter glass Florence flasks.
18. Bomb, practice, 20 lb. fragmentation, stabilized.
19. Bomb, practice, pursuit aviation, simulating service, 20 lb., M45.
20. Bomb, practice, pursuit aviation, marksmanship (miniature) M36.
21. Bomb, practice, bombardment aviation, simulating service, 100 lb., M39.
22. Cartridge, ball, caliber .30, M1 (Drg. B10985).
23. Cartridge, dummy, caliber .30, M1906, (B6252).
24. Cartridge, ball, caliber .50, M1 (Drg. C44820).
25. Ammunition, practice, 20 mm.
26. Ammunition, practice, 37 mm.
27. Shell, shotgun, 12-gauge (Commercial Standard No. 9 shot).
28. Bomb, practice, M38-A2.
29. Targets, Pigeons, clay.

Computations of requirements for the above items must be based on the amount and kind of training contemplated and, in some cases, the place where specified training is to be conducted. It is, therefore, not feasible to establish a permanent basis for the computation of requirements in these training items based simply upon availability of personnel or equipment.

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- 2 -

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Requirements for these training items will, therefore, be calculated by the Chief of the Army Air Forces, and furnished to the Ordnance Department for inclusion in each annual or supplemental estimate.

Item

30. Pistol, pyrotechnic, M2, (Drg. 42-26).

A basis for computation of requirements of this item at the rate of one per life raft and one per airplane of the following types is recommended:

- Heavy Bombardment
- Medium Bombardment
- Light Bombardment (including Dive Bombers)
- Pursuit (all types)
- Reconnaissance (Air Force and Army)
- Observation, Corps and Division
- Amphibian
- Cargo or Transport

Item

31. Flare, aircraft, parachute, M9 (Drg. 78-0-11).

The following basis for computation of requirements is recommended:

5 M-9 observation flares per airplane of the following types:

- Corps and Division Observation
- Army Reconnaissance

Expenditure rate-----50% per mission.

Item

- 32. Signal, aircraft, red star, parachute, M11 (Drg. 78-0-10).
- 33. Signal, aircraft, red star, cluster, M14 (Drg. 78-0-14).
- 34. Signal, aircraft, white star, blinker, parachute, M15 (Drg. 78-0-16).
- 35. Signal, aircraft, green star, blinker, parachute, M16 (Drg. 78-0-16).

The following basis for computation of requirements is recommended:

<u>Type of Airplane</u>	<u>Load</u>	
	<u>Asserted Signals</u>	<u>Expenditure Rate Per Mission</u>
Heavy bombardment	9	20%
Medium bombardment.	9	20%
Light bombardment (including Dive Bombers)	9	20%
Night Interceptor	9	20%
Pursuit (all types)	4	25%
Air Force Reconnaissance	9	20%
Army Reconnaissance	15	75%
Observation, Corps and Division	15	75%
Amphibian	20	20%
Cargo or Transport	9	1%

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Procurement to be distributed equally between the four signals.

In addition: 5 M-11 Signals, aircraft, per life raft -- expenditure rate0.

Item

36. Pistol, automatic, caliber .45, M1911, A1 (Drg. 42-8).

Requirements for this item are tied in with the problem of providing means to assure adequate local security for Air Corps commands. This problem is under study in the Office, Chief of the Air Corps, and it is probable that the provision of a proportion of other organic weapons, such as rifles, sub-machine guns, light machine guns, et cetera, will be recommended. The basis for computation of requirements for pistol for Air Corps troops shall be reduced from the basis of one (1) per officer, warrant officer, flying cadet, and enlisted men of the Air Corps to: One (1) per officer, warrant officer, and non-commissioned officer of the first three grades.

Item

37. Cartridge, ball, pistol, caliber .45 M1911 (Drg. B503).

The standard Army allowance of this ammunition per pistol is recommended.

Item

38. Bombs, Armor Piercing.
 39. Bombs, Semi-armor piercing, 1000 lb.
 40. Bombs, Semi-armor piercing, 500 lb.
 41. Bombs, general purpose, 2000 lb.
 42. Bombs, general purpose, 1000 lb.
 43. Bombs, general purpose, 500 lb.
 44. Bombs, general purpose, 250 lb.
 45. Bombs, general purpose, 100 lb.
 46. Bombs, chemical, 100 lb.
 47. Bombs, fragmentation, stabilized.
 48. Bombs, incendiary, 4 lb. or smaller.
 49. Bombs, incendiary, 100 lb. gasoline.
 50. Bombs, depth, Navy Type.
 51. Aerial Mine, Navy Type.

It is recommended that the present basis for computation of requirements for these items as established by the War Department in letter to the Chief of Ordnance, May 27, 1940 -- subject: "Airplane Bomb Reserves" -- A.G. 471.6 (11-2-39)M-D be amended to read as follows:

- a. The requirement for Armor Piercing bombs shall be fixed at 15,000 tons.
- b. The requirement for Depth Bombs, Navy Type, shall be fixed at 6,000 tons.
- c. The requirement for Aerial Mines, Navy Type, shall be fixed at 3,000 tons.

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- 4 -

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- d. The requirement for Semi-Armor Piercing bombs, 1,000 and 500 lb. types, shall be computed as 30% of the total requirement for 500 and 1,000 lb. bombs.
- e. The requirement for 100 lb. chemical bombs shall be computed at the rate of one mission per plane, equipped to carry 100 lb. bombs, per month.
- f. The requirement for General Purpose Demolition Bombs and other types shall be computed independently of the Armor Piercing bombs, Depth bombs, Chemical bombs, and Aerial Mines, on an air-plane mission basis as follows:

- (1) For Heavy and medium Bombardment:
 - 2000 lb..... 8%
 - 1000 lb..... 16% (70% GP; 30% SAP)
 - 500 lb..... 23% (70% GP; 30% SAP)
 - 250 lb..... 24%
 - 100 lb..... 9%
 - Incendiaries..... 20%, of which 15% shall be 100 lb. gasoline filled; 85% shall be 4 lb. or smaller.
- (2) For Light Bombardment, other than Dive Bombers:
 - 1000 lb..... 12% (70% GP; 30% SAP)
 - 500 lb..... 22% (70% GP; 30% SAP)
 - 250 lb..... 24%
 - 100 lb..... 20%
 - 20 lb. fragmentation, stabilized..... 17%
 - Incendiaries..... 5%, of which 15% shall be 100 lb. gasoline filled; 85% shall be 4 lb. or smaller
- (3) For Dive Bombers (including combined loads for wing racks):
 - 1000 lb..... 40%
 - 500 lb. plus 2-100 lb..... 35%
 - 500 lb. plus 2-100 lb. clusters of 6-20 lb. fragmentation. 10%
 - 500 lb. plus 2-100 lb. incendiaries..... 5%
- (4) Pursuit:
 - 500 lb..... 60% - NOTE: If 250 lb. bomb is carried as alternate, divide percentage equally between 250 and 500 lb. bombs.

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20 lb. fragmentation bombs ~~DECLASSIFIED~~ ... 40% - NOTE: If airplane will not carry 20 lb. fragmentation bomb on wing racks, add percentage to 500 lb. bomb.

- (5) Amphibians:
 - 1000 lb..... 25% (70% GP; 30% SAP)
 - 500 lb..... 50% (70% GP; 30% SAP)
 - 100 lb..... 25%

(6) Requirements of bomb reserves for all other types of airplanes will be computed on the basis of assigned bombing missions per month and in types to be determined by the Chief of the Army Air Forces, predicated upon the bombs which such airplanes are equipped to carry.

g. The requirement of smoke tanks and chemicals shall provide for five missions for each airplane capable of carrying this equipment.

h. Cluster adapters for bombs.

The following basis for computation of requirements is recommended:

20 lb. fragmentation bombs:

100% of the procurement will be clustered in adapters for 100 lb. bomb stations.

4 lb. incendiary bombs:

70% of procurement will be clustered in adapters for 100 lb. bomb stations; 30% of procurement will be clustered in adapters for 500 lb. bomb stations.

i. Suspension and Trunion Bands for Bombs.

The following basis for computation of requirements is recommended:

Suspension Bands will be procured for any bomb or cluster of bombs used on external wing racks of Dive Bombers.

Trunion Bands will be procured for all 1000 lb. and 500 lb. bombs used under fuselage of Dive Bombers.

Item

51. Signal, drift.

The following basis for computation requirements is recommended:

- Load per heavy bombardment and reconnaissance (long range) and amphibian airplane..... 10
- Load per medium bombardment and reconnaissance (medium) airplane. 7
- Expenditure rate - 10% per airplane of the above types per mission.

52. Flare, aircraft, landing, parachute, M8A1 (Drg. 78-0-7).

It is recommended that this item be eliminated for future procurement other than for training type aircraft.

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53. Flare, aircraft, parachute, bombing and reconnaissance.

An expenditure rate of one (1) flare per mission per airplane of the following types is recommended:

Heavy Bombardment.
Medium Bombardment.
Light Bombardment.
Air Force Reconnaissance.
Army Reconnaissance.
Observation, Corps and Division.
Amphibian.

Item

54. Bomb, photo-flash.

The following basis for computation of requirements is recommended:

Army Reconnaissance.
Observation, Corps and Division.
Air Force Reconnaissance.
Bombardment.

Expenditure rate - one (1) per mission per airplane of the Observation Corps and Division and Army Reconnaissance types, and an expenditure of 25% per mission per airplane of Air Force Reconnaissance and Bombardment types.

Item

55. Signal, distress, (smoke grenade, M8)

The following basis for computation of requirements is recommended:

Load one (1) per combat airplane of all types.
Expenditure rate -- 0.

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- 7 -

C-158,AC.

CONFIDENTIAL
WAR DEPARTMENT
HEADQUARTERS ARMY AIR FORCES
DISPOSITION FORM

DECLASSIFIED
DOD - Itra
8 Jul 4 30 June 1974
By: SP-1 C; Date: 3/2/77

Date JAN 10 1942

AG
AAF/A-4/471-5

SUBJECT: Revision of Basis for Computation of Bomb Requirements.

	USW	ASW	ASWA	B-LP	BOMB	BPR
	C/S	G-1	G-2	G-3	X G-4	WPD
	Sec. G/S	NGB	JAG	IG	QMG	SG
TO:	OCAC	CSO	Fin.	Ord.	Ex. R. A.	ENGR
	AFCC	Inf	FA	Cav	CAC	CMS
	TAG					

FOR: SW directs
Draft of reply attached
Approved
Disapproved
File

X ~~See below~~ concurrence
Direct reply made
Inviting attention to
See notation of
Information

Information for reply
 Ind. approved
Primary interest
~~See below~~ return to
Noted Air Staff


AAF/A-4
EBB/ala

Incl.
Memo to C/S, 1/9/42,
abv. subj, with Tab A
and Tab B attached.

For the Chief of the Air Staff:

T. J. Hanley
T. J. HANLEY, Jr.,
Colonel, Air Corps,
Assistant Chief of Air Staff, A-4

JAN 12 1942



IN IN

G-4 DIVISION
WAR DEPT. GEN. STAFF

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OUT-G-4 JAN 14 1942

4-4689, A.C.
air aty 471 G-4

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DOD ltra.
8 Jan. & 20 June 1974
By: SP4MLC; Date: 3/14/77

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JAN 10 1962

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AAF /A-1/473-8

Storage of Aircraft Ammunition, Bombs and Pyrotechnics for "X" and Shipment to Copper.

II G-4

I G-4

I G-2

II AAF

I HQ Airbase

I Letter

AAF/A-1
HQ/AF

I. 1. Confirming telephone instructions issued to your office (Lt. Col. Ride) January 6, 1942 (Serial 935) from Lt. Col. Burgess, A-4, Air Staff it is desired that the following ammunition be stored at Wings Ordnance Depot for shipment to "X":

Bombs

- 265 on 2000# Demolition
- 504 on 1000# Demolition
- 3,781 on 500# Demolition
- 6,348 on 300# Demolition
- 6,288 on 100# Demolition
- 5,610 on 20# Fragmentation

Ammunition

HEADQUARTERS, ARMY AIR FORCES				COORDINATION			
Chief of Staff	Sec'y of Staff	Air Staff	Air Staff	A-WPD	A-Insp.	Budget	Statistics
							(See over)

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AAF-39

SECRET

Requisition

300 Signals IS
 300 Flares HAA1
 30 Flares IS
 1,000 Signals H11
 1,000 Signals H14
 1,000 Signals H15
 1,000 Signals H16
 1,000 Bombs H13
 1,000 Bombs H14
 500 Signals H15

2. Continuing telephone instructions issued to your office (Lt. Col. Rice) January 8, 1942 (Serial 935) from Lt. Col. Burgess, A-4, Air Staff, it is desired that the following bombs be shipped to "Copper."

230 2000 Bombs
 2,000 3000 Bombs

II. To be advised of action taken above,

For the Chief of the Air Staff:

NOTED *Epc 1/12/42*
 Chief of the Air Staff

JOHN Y. YORK, Jr.
 Col. Air Corps
 T. J. HANLEY, JR.,
 Colonel, Air Corps,
 Assistant Chief of the Air Staff, A-4.

actg.

Memorandum for Records: Above action was taken to provide ammunition, bombs and paraphernalia for 80 P-400, 20 P-47, 136 P-40E for "X", 114 B-26, 15 B-24, reinforcement for "Y", 200 P-39B (25 each of four incidents). 30 days supply.

HEADQUARTERS		ARMY AIR FORCES				COORDINATION				
Chief of Staff	Sec'y Air Staff	A.A.G.	A-1	A-2	A-3	A-4	A-WPD	A-Inspr.	Budget	Statistics
	<i>PC</i>					<i>W</i> <i>1/13</i>				

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DOD Form
8 Jan. & 29 June 1914
By: D/nc: Date: 3/19/77

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JAN 10 1942

AAF/
/A-4/471-7

Project Schedule Covering Optimum Spacing of Bombs in Train.

II - 2nd

II - 2nd

I - 2nd

II - 2nd

I Air Corps Board

I - 2nd

AAF/A-4
HEB/and

I. Authority is granted to expand the following bombs in connection with Air Corps Board Study No. 74:

606 bombs, practice, 100 lb. M 38A2.
12 bombs, demolition, 500 lb. M43.

II. To be advised of above action.

For the Chief of the Air Staff:

NOTED EPC 1/12/42
Staff

JOHN Y. YORK, Jr.,
Y. J. HANLEY, JR.,
Colonel, Air Corps

HEADQUARTERS		POST-AIR FORCES								
Chief of Staff	Sec'y of Staff	A.A.G.	A-1	A-2	A-3	A-4	A-WD	A-Inspr.	Budget	Statistics
Handwritten notes		Air Corps Board	requests	authority	to	expand	above			

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AAF-39

air 284716 (123)

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DOD Itra. 4
9 Jan. & 20 June 1974
By: 11/11/77

SECRET
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JAN 1 0 1947

AAF /A-4/ Release of Ammunition, Bombs and Pyrotechnics for Shipment to 5402 and 4591.

II Sci

I Sci.

I 708

II AAF

I 81 Aircraft

I Letter

AAF/A-4
HW/WH

I. 1. Confirming telephone instructions issued to your office (Lt. Col. Rice) January 10, 1942 (Serial 945) from Lt. Col. Burgess, A-4, Air Staff, it is desired that the following ammunition, bombs and pyrotechnics be released as follows:

a. For shipment to 5402.

- 25,500 37 mm Aircraft H.E.
- 100 500# Bombs
- 50 Signals M2
- 150 Flares M9
- 4,500 Signals M11
- 4,500 11 M14
- 4,500 Signals M15
- 4,500 Signals M16

b. For shipment to 4591

HEADQUARTERS ARMY AIR FORCES - COORDINATION							
Chief of Staff	Sec'y of Staff	Asst. Sec'y of Staff	A-4	A-WPD	A-insp.	Budget	Statistics
		25,500 37 mm Aircraft H.E.					
		100 500# Bombs					
		50 Signals M2					
(See over)							

DECLASSIFIED

AAF-39

471.6 (122)

~~SECRET~~
DECLASSIFIED

150 Flares M9
4,500 Signals M11
4,500 Signals M14
4,500 Signals M15
4,500 Signals M16

II. To be advised of action taken above.

For the Chief of the Air Staff:

off
NOTED *1/2/42*
Chief of the Air Staff

Acting

JOHN Y. YORK, Jr.
T. J. HANLEY, Jr.,
Colonel, Air Corps,
Assistant Chief of the Air Staff, A-4.

Memorandum for Record: Above action was taken to provide ammunition, bombs and pyrotechnics for 25 P-39-D airplanes to each destination. 90 days supply.

10 1942

HEADQUARTERS		ARMY AIR FORCES				COORDINATION				
Chief of Staff	Sec'y Air Staff	A.A.G.	A-1	A-2	A-3	A-4	A-WPD	A-Insp.	Budget	Sta-tistics
	<i>[Signature]</i>					<i>[Signature]</i> <i>MS</i>				

~~SECRET~~

AMP-39
An 471.6 (72)

DECLASSIFIED
DOD ltr.
8 Feb. & 20 June 1974
By: SP5/ELC; Date: 3/10/27

~~SECRET~~
DECLASSIFIED

AAF/A-4
LWD/omd

JAN 7 1942

AAF/A-4(32-3)

MEMORANDUM FOR THE ADJUTANT GENERAL:

Subject: Fuses for 1000# and 4000# Bombs.

The Secretary of War directs:

1. That a secret letter, substantially as follows, be sent to the Chief of Ordnance:

It is desired that 9000 M32 1/10 Second Delay Fuses be modified for use with the 1000# AF Bombs (modified from 12" mortar projectiles) and that 900 M32 fuses now on hand for 4000# Bombs be converted from 1/10 Second Delay to instantaneous.

For the Chief of the Air Staff:

NOTED EPC 1/9/42

 _____ of the Air Staff

8 1942

T. J. HANLEY, JR.,
 Colonel, Air Corps,
 Assistant Chief of the Air Staff, A-4.

Memorandum for Ordnance: The M32 Fuses are designed for a smaller bomb and it is necessary to modify them for use with the 1000# AF Bomb. The M32 needs an instantaneous fuse to get desired effect before the light bomb case breaks up as would be the case with a delay fuse.

HEADQUARTERS		ARMY AIR FORCES			COORDINATION					
Chief of Staff	Sec'y of Air Staff	A.A.G.	A-1	A-2	A-3	A-4	A-WD	A-Inspr.	Budget	Statistics
	EPC									

J. 10 1942
AAG

DEC ~~SECRET~~

AAF-39

Ans 28471.6(120)

DECLASSIFIED
A - DOD Rm
9 Dec 8 20 June 1974
Braswell, C. Dan. Jcl/77

SECRET

WAR DEPARTMENT
THE ADJUTANT GENERAL'S OFFICE
WASHINGTON

3082

IN REPLY
REFER TO

AG 371
(12-26-41)MSC-G

LFL/enk-1705.

January 7, 1942.

DECLASSIFIED

Auth: T.A.G.

Initials: *JWM*

Date: *JAN 7 1942*

SUBJECT: Shipment of Bombs to "X".

TO: Chief of the Army Air Forces.

You are authorized to arrange for the shipment to "X" of the bombs listed in Paragraph 3, of inclosed comeback copy of your memorandum for the Chief of Staff, December 26, 1941, AAF/A-4/471-1, subject as above, at as early a date as production and shipping permit.

471.6
9/17/6
119

471.6
9 1942
AAG Received

By order of the Secretary of War:

John W. M. Cornick
Adjutant General.

1 Incl.
Comeback copy of Memo.
from C/AAF to C. of S.,
12/26/41.

119

File
Hcz

DECLASSIFIED
SECRET

471.6 (119)

To
40,000 lbs CW of British
40,000 mgmt of British

U.S. 200,000 lbs

(725 million per year)
470 " incendiaries
20 " for powder

Enough material
for 3 months supply

Schedule
Dec - 2000
Jan - 10000
Feb - 19,500
Mar - 15,000
April: 11,500

32000

Maja L Pasternak

DECLASSIFIED
DOD Mfr.
8 Jul & 20 June 1974
By: SP4/C: Data/3/8/77

SECRET

SUBJECT: Parachute Flare M-26.

2nd Ind.

War Department, Headquarters, Army Air Forces, Washington, D. C. March 21, 1942.
To: Commanding General, Services of Supply, Ordnance Department

1. The problem of effective bombing at night rests greatly upon the amount of illumination that can be obtained by flares. The present M-26 flare with 800,000 candle power is actually not as efficient as desired. Obviously the 575,000 candle power flare produced by the alternate composition is less satisfactory.

2. It is desired that action be taken to place bombing flares on sufficiently high priority so that magnesium metal powder can be obtained for their manufacture.

3. The 4&1,645 flares of the substitute composition contracted for, as indicated by your first indorsement, will be unsatisfactory for tactical bombing, but may be satisfactory for training purposes.

4. It is requested that the following action be taken, and this office be advised.

a. That magnesium be substituted for barium nitrate as soon as possible on the contract for 4&1,645 flares.

b. That this office be furnished a schedule of the production of M-26 flares using magnesium. Telephone conversation with Major Pasternak of the Ordnance Department, indicated that 50,000 of these flares are being produced.

c. It is desired that at least 200,000 of the bombing flares to be produced during 1942 be M-26 type with magnesium.

Dispatched
on 24 1942
AAG

Edgar P. Sorensen
Colonel, Air Corps
Director of Bombardment

Incl:
n/s

370
2766 90 300

HEADQUARTERS—ARMY AIR FORCES—COORDINATION											
Chief of Staff	Deputy Chief of Staff	A A G.	A-1	A-2	A-3	A-4	A-WPD	A-Insps	Budget	Statistics	

DECLASSIFIED

471.6 (118)

DECLASSIFIED
BOD ltr.
24, & 20 June 1974
By: SA/MLC; Date: 3/12/77

~~DECLASSIFIED~~
~~SECRET~~

475.716/2340

1st Ind.

War Department, Ordnance Office, Washington, D. C. January 23, 1942.
To: Chief of the Army Air Forces.

1. In view of the fact that no magnesium is at present available for the construction of the M26 Bombardment Flare, the Ordnance Department has contracted for the manufacture of 481,645 Flares of the substitute composition (Barium Nitrate). This is only about 25% of requirements as now known. It is felt that any delay in initiating production of this elaborate device would be most unwise.

2. Every effort will be made to secure powdered magnesium for these flares when the production of the virgin metal increases to the point where such may be obtained under allocation, at which time magnesium will replace the substitute under amended contracts.

C. M. WESSON
Major General, Chief of Ordnance

1 Incl.
Incl. 1 w/its 2 Inds.

Jan 26 1942
AAG Received

HEADQUARTERS - ARMY AIR FORCES - COORDINATION										
Chief of Staff	Acty Air Chief	A-1	A-2	A-3	A-4	A-5 (PT)	A-6 (Imp)	Director	Statistics	

DECLASSIFIED

AAF-95

DECLASSIFIED
 DOD ltra.
 8 Jan. & 20 June 1974
 By: DM/CLC; Date: 3/2/77

SECRET

WAR DEPARTMENT
 OFFICE OF THE CHIEF OF THE ARMY AIR FORCES
 WASHINGTON

January 13, 1942.

SUBJECT: Parachute Flare, M-26.

TO: Chief of Ordnance.

1. Reference letter from the Chief of Ordnance to the Chief of the Air Corps, dated December 13, 1942, above subject, with two indorsements, copies attached.

2. The action contemplated by the Chief of Ordnance is procuring 431,645 flares, using the substitute composition, is not in accordance with the desires of the Chief of Air Corps, expressed in paragraph 4 of the 1st Indorsement. This paragraph states in part, "A small quantity of alternate composition flares will be acceptable to the Air Corps***** this should not be construed as an acceptance of the alternate composition flares."

3. Your attention is invited to papagraph 3 of the 1st Indorsement, which states that action has already been initiated by the Air Corps for the purpose of obtaining additional allotment of magnesium.

4. It is desired that any commitments for the manufacture of a large quantity of flares, using the substitute composition be cancelled and that the matter be re-studied with a view to providing magnesium metal flares.

For the Chief of the Air Staff:

Incls:
 Cy.ltb.frm.C/O to C/AC,
 DATED 12/13/42, ABOVE

HEADQUARTERS ARMY AIR FORCES - COORDINATION

Subj: W/2 lnds.

Chief of Staff	Asst. Chief of Staff	A. A. G.	A-1	A-2	A-3	A-4	A-WPD	A-Ins.	Budget	Statistics
						/s/	T. J. Hanley, Jr.			
							T. S. HANLEY, JR.,			
							Colonel, Air Corps,			
							Assistant Chief of the Air Staff, A-4.			

AAF-68

DECLASSIFIED
DOD Ltr.
8 Jan. & 20 June 1974
By: SP-1C; Date: 3/20/77

~~SECRET~~

Boschen/dn

December 13, 1941

Subject: Parachute Flare, M-26

To: Chief of the Air Corps,
Washington, D. C.

1. Information is requested relative to the desires of the Air Corps concerning the type of illuminating composition to be used in the M-26 Bombing Flare now under procurement by the Ordnance Department.

2. The standard composition stipulates the use of magnesium metal powder and provides a minimum of 800,000 candle power. The alternate composition does not require the use of magnesium powder and only provides a minimum of 575,000 candle power.

3. The requirements for the flare, should the magnesium composition be adopted, will be approximately 450,000 pounds of magnesium powder per month over and above the present very limited allocation from the Office of Production Management, which is being used entirely on tracer ammunition carrying a priority rating of A-1-b or better.

4. Because of the large demand for magnesium powder to be used in these flares and because of the scarcity of magnesium metal which may be allocated for grinding into powder, your attention is invited to the fact that should the Air Corps decide upon the magnesium containing illuminant, it will be necessary for the Office of Production Management to have permission to deduct the requested magnesium from the Air Corps monthly allocation until such time as the production of magnesium is sufficient to provide for all military uses.

5. An immediate reply is requested on this subject in view of the fact that this office is currently engaged in making the awards for the flares and these awards must of necessity be determined by the type of composition to be used.

6. Should the Air Corps decide to accept the alternate (575,000 candle power) composition, it is requested that you so indicate in reply to this letter.

HEADQUARTERS - ARMY AIR FORCES - COORDINATION

Chief of Staff	Chief of Air Staff	A.A.O.	A-1	A-2	A-3	A-4	A-5/PTD	A-5/imp.	Budget	Statistics
C. M. WESSON, Major General, Chief of Ordnance										

~~SECRET~~
DECLASSIFIED

AAF-39

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~~SECRET~~
DECLASSIFIED

SUBJECT: Parachute Flare, M/26.

DECLASSIFIED

DOD

Jan. & EO June 1974

SP-10/77

1st Ind.

D.O. 475.716/1833

War Department, Office, Chief of the Air Corps, Washington, D.C. Dec. 20 1941
To: Chief of Ordnance.

1. The use of an alternate composition for bombardment flares is not concurred in by the Air Corps. It is the recommendation of this office that bombardment flares be manufactured from magnesium metal composition. Tests conducted at Langley Field indicated that altho the present magnesium flare as used was satisfactory for night bombing the using services preferred two such flares in order to obtain all the illumination the desired. In addition the Air Force Combat Command has for the past year or more continuously requested a flare of at least one million candlepower implying that only with such high illumination can successful bombings be accomplished.

2. Reduction in allocation of magnesium to the Air Corps for aircraft and other purposes particularly incendiary bombs cannot be condoned and, therefore, every effort should be made to obtain additional allocations of this material from the Office of Production Management or thru the Joint Aircraft Committee. In this connection it is pointed out that information is available to the effect that magnesium has been allotted to the British to permit manufacture of all their flares from this material. It is believed that due to the state of emergency this quantity should be either re-allocated for the time being or divided to permit at least an equivalent production of magnesium flares in this country.

3. Action has already been initiated by the Air Corps to the Joint Aircraft Committee for the purpose of obtaining an additional allotment of magnesium for aircraft tracer ammunition and aircraft bombardment flares. A copy of this memorandum is attached for your information.

4. A small quantity of alternate composition flares will be acceptable to the Air Corps due to the urgent need and the lack of any such type flares providing magnesium compound flares cannot be immediately obtained. However, this should not be construed as an acceptance of the alternate composition flares until such time as magnesium production facilities become such that all military and foreign needs can be satisfied.

For the Chief of the Air Corps

HEADQUARTERS—ARMY AIR FORCE									
Chief of Staff	Asst. Chief of Staff	A. A. G.	A-1	A-2	A-3	A-4	Asst. Exec. Officer	Statistical	
	Incl.						F. L. CHURCH, JR. Asst. Exec., Mat. Division.		
		Memo for the Joint Aircraft Committee 12/15/41							

~~SECRET~~
DECLASSIFIED

AAF-40

~~SECRET~~

C
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DECLASSIFIED
DOD Hqs.
8 Jan. & 20 June 1974
By: *[Signature]* L.C. Date: *3/18/77*

OO 475.716/1833

2nd Ind.

War Department, Ordnance Office, Washington, D. C. December 29, 1941
To: Chief of the Air Corps, Washington; D. C.

1. In accordance with Paragraph 4 of the 1st Ind., dated December 20, 1941, from the Chief of the Air Corps, the Ordnance Department, in this time of emergency, is proceeding on the present procurement of 431,645 flares, M26, using the substitute (barium nitrate) composition. When the supply of magnesium is sufficient, provision will be made to furnish the flare with the magnesium metal composition.

/s/ C. M. Wesson

C. M. WESSON,
Major General, Chief of Ordnance.

1 Incl. a/c

HEADQUARTERS—ARMY AIR FORCES—COORDINATION										
Chief of Staff	No. 7 Air Staff	A. A. C.	A-1	A-2	A-3	A-4	A-5/PD	A. Insp.	Budget	Statistics

~~SECRET~~

AAP-20

DECLASSIFIED
DOD ltr.
Jan. & 20 June 1974
By: SP-1 LC; Date: 3/8/77

~~SECRET~~
~~UNCLASSIFIED~~

AAF/A-4
TJH/gwd

January 13, 1942.

Parachute Flare, M-26.

Chief of Ordnance,

1. Reference letter from the Chief of Ordnance to the Chief of the Air Corps, dated December 13, 1941, above subject, with two indorsements, copies attached.
2. The action contemplated by the Chief of Ordnance in procuring 451,045 flares, using the substitute composition, is not in accordance with the desires of the Chief of Air Corps, expressed in paragraph 4 of the 1st Indorsement. This paragraph states in part, "A small quantity of alternate composition flares will be acceptable to the Air Corps this should not be construed as an acceptance of the alternate composition flares."
3. Your attention is invited to paragraph 3 of the 1st Indorsement, which states that action has already been initiated by the Air Corps for the purpose of obtaining additional allotment of magnesium.
4. It is desired that any commitments for the manufacture of a large quantity of flares, using the substitute composition be cancelled and that the matter be re-studied with a view to providing magnesium metal flares.

Incls.:
Cy.ltr. fr. C/O to C/AC,
dated 12/13/41, above
subj. w/2 Incls.

For the Chief of the Air Staff,

Dispatched
JAN 17 1942
AAG

T. J. HAWLEY, JR.,
Colonel, Air Corps,
Assistant Chief of the Air Staff, A-4.

HEADQUARTERS			ARMY AIR FORCES			COORDINATION				
Chief of Staff	Sec'y of Staff	A.A.G.	A-1	A-2	A-3	A-4	A-WPD	A-Insp.	Budget	Statistics

AAF-39

~~SECRET~~

Orig. 449716 975

WAR DEPARTMENT
OFFICE OF THE CHIEF OF ORDNANCE
WASHINGTON

Boschen/dn

December 13, 1941

Subject: Parachute Flare, M-26

To: Chief of the Air Corps,
Washington, D. C.

1. Information is requested relative to the desires of the Air Corps concerning the type of illuminating composition to be used in the M-26 Bombing Flare now under procurement by the Ordnance Department.

2. The standard composition stipulates the use of magnesium metal powder and provides a minimum of 800,000 candle power. The alternative composition does not require the use of magnesium powder and only provides a minimum of 575,000 candle power.

3. The requirements for the flare, should the magnesium composition be adopted, will be approximately 450,000 pounds of magnesium powder per month over and above the present very limited allocation from the Office of Production Management, which is being used entirely on tracer ammunition carrying a priority rating of A-1-b or better.

4. Because of the large demand for magnesium powder to be used in these flares and because of the scarcity of magnesium metal which may be allocated for grinding into powder, your attention is invited to the fact that should the Air Corps decide upon the magnesium containing illuminant, it will be necessary for the Office of Production Management to have permission to deduct the requested magnesium from the Air Corps monthly allocation until such time as the production of magnesium is sufficient to provide for all military uses.

To: Chief of the Air Corps

December 13, 1941

5. An immediate reply is requested on this subject in view of the fact that this office is currently engaged in making the awards for the flares and these awards must of necessity be determined by the type of composition to be used.

6. Should the Air Corps decide to accept the alternate (575,000 candle power) composition, it is requested that you so indicate in reply to this letter.

C. M. WESSON,
Major General, Chief of Ordnance

SUBJECT: Parachute Flare, M-26.

1st Ind.

O.O. 475.716/1833
War Department, Office, Chief of the Air Corps, Washington, D.C. Dec. 20 1941
To: Chief of Ordnance.

1. The use of any alternate composition for bombardment flares is not concurred in by the Air Corps. It is the recommendation of this office that bombardment flares be manufactured from magnesium metal composition. Tests conducted at Langley Field indicated that altho the present magnesium flare as used was satisfactory for night bombing the using services preferred two such flares in order to obtain all the illumination they desired. In addition the Air Force Combat Command has for the past year or more continuously requested a flare of at least one million candlepower implying that only with such high illumination can successful bombings be accomplished.
2. Reduction in allocation of magnesium to the Air Corps for aircraft and other purposes particularly incendiary bombs cannot be condoned and, therefore, every effort should be made to obtain additional allocations of this material from the Office of Production Management or thru the Joint Aircraft Committee. In this connection it is pointed out that information is available to the effect that magnesium has been allotted to the British to permit manufacture of all their flares from this material. It is believed that due to the state of emergency this quantity should be either re-allocated for the time being or divided to permit at least an equivalent production of magnesium flares in this country.
3. Action has already been initiated by the Air Corps to the Joint Aircraft Committee for the purpose of obtaining an additional allotment of magnesium for aircraft tracer ammunition and aircraft bombardment flares. A copy of this memorandum is attached for your information.
4. A small quantity of alternate composition flares will be acceptable to the Air Corps due to the urgent need and the lack of any such type flares providing magnesium compound flares cannot be immediately obtained. However, this should not be construed as an acceptance of the alternate composition flares until such time as magnesium production facilities become such that all military and foreign needs can be satisfied.

For the Chief of the Air Corps.

/s/ F. I. Ordway, Jr.
F. I. ORDWAY, JR.
Major, Air Corps,
Asst. Exec., Mat. Division.

Incl.

Memo for the Joint Aircraft
Committee 12/15/41

COPY

PP 475.716/1833

2nd Ind.

War Department, Ordnance Office, Washington, D. C., December 29, 1941
To: Chief of the Air Corps, Washington, D. C.

1. In accordance with Paragraph 4 of the 1st Ind., dated December 20, 1941, from the Chief of the Air Corps, the Ordnance Department, in this time of emergency, is proceeding on the present procurement of 431,645 flares, M26, using the substitute (barium nitrate) composition. When the supply of magnesium is sufficient, provision will be made to furnish the flare with the magnesium metal composition.

/s/ C. M. Wesson

C. M. WESSON,
Major General, Chief of Ordnance.

1 Incl. n/c

COPY

DECLASSIFIED
 DOD Ltr.
 8 Jan. & 20 June 1974
 By: NSP/LC; Date: 5/2/77

~~SECRET~~

OFFICE OF THE CHIEF OF THE AIR CORP

3069

ROUTING AND RECORD SHEET

Note: -- A line will be drawn across sheet after each comment.

File No. _____

Tally No. _____

Subject: **Parachute Flare, M-26.**

NO.	FROM	TO	DATE	COMMENTS
1.	Asst. for Procurement Services (4-E-1)	AAF/A4	1942 1-7	<p>1. Attached are copies of correspondence between the Chief of Ordnance and this office reference the manufacture of the standardized M-26 bombardment flare. It will be noted from this correspondence that recommendations were made to the Ordnance Department to the effect that substitute material for manufacture of bombardment flares was not acceptable to the Air Corps except in very limited quantities for immediate use, and that the Ordnance Department was requested to obtain additional allocation of magnesium or an allocation to permit manufacture at least comparable with British allocation and manufacture.</p> <p>2. In second indorsement from the Chief of Ordnance, that office stated that 431,645 Flares, M-26, were being procured from substitute composition.</p> <p>3. It is the opinion of this office that the substitute composition flares are not satisfactory for bombardment purposes and that action should be initiated by your office to obtain flares manufactured from magnesium.</p>
	Incl.:			
	Cy. Ltr. 12/15/41 with 2 inds.			Assistant for Procurement Services.

FWD
 O. P. E.

~~SECRET~~
 By Authority of
 the Chief of the Air Corps
 Date _____ Initials _____

(Do not use reverse side)

DECLASSIFIED

Page No. 1

N-0071, AC, Rev. 8/1/41

air 08 471.6 (118)

DECLASSIFIED
 DOD Ref.
 8 Jan. & 20 June 1974
 By: ~~DAAG~~ C. Date: 3/20/77

DECLASSIFIED

JBC/gr
 (Air AG)

AG 37

January 7, 1942

SUBJECT: Torpedo As Alternate Load For Bombers.

TO: The Chief of Air Corps:

It is directed that:

a. Action be initiated to provide carrying of torpedo as alternate load in all future medium and light bomber production.

b. Procurement be continued of torpedo-carrying facilities for all B-26 series airplanes.

c. Action be initiated to convert B-25B and later models so that a torpedo can be carried as alternate load.

d. Action be initiated to strengthen A-20 series so that torpedo can be carried. Present production line will not be held up to accomplish this, but change will be incorporated in later models.

By Command of Lieutenant General ARNOLD:

Dispatched
 JAN 7 1942
 AAG

JOHN B. COOLEY,
 Lieutenant Colonel, A. C. D.,
 Assistant Air Adjutant General.

Chief of Staff	HEADQUARTERS		ARMY AIR FORCES				COORDINATION			
	Sec'y Air Staff	A.A.G.	A 1	A 2	A 3	A 4	A WPD	A Insp	Budget	Sec'y A.I.C.S.
	✓	JBC			✓					

~~CONFIDENTIAL~~
 DECLASSIFIED

AMP 39
 Air AG 271-6(19)

DECLASSIFIED
DOD IAW
8 Aug. & 20 June 1974
By: SP-6/ELC, Date: 3/12/77

~~CONFIDENTIAL~~
~~CONFIDENTIAL~~

WAR DEPARTMENT
OFFICE OF THE CHIEF OF THE ARMY AIR FORCES
WASHINGTON

January 5, 1942
*Out AG.
AC*

MEMORANDUM FOR THE AIR ADJUTANT GENERAL:

^L Subject: Torpedo As Alternate Load For Bombers.

1. It is requested that the following instructions be transmitted to the Chief of Air Corps:

- IT is noted that:*
a. ^{is initiated} Initiate Action to provide carrying of torpedo as alternate load in all future bomber production.
- b. ^{is continued} Continue Procurement of torpedo-carrying facilities for all B-26 series airplanes.
- c. ^{is initiated} Initiate Action to convert B-25B and later models so that a torpedo can be carried as alternate load.
- d. ^{is initiated} Initiate Action to strengthen A-20 series so that torpedo can be carried. ^{Do not hold up} Present production line ^{is not to} to accomplish this, but ^{will be incorporated} incorporate change in later models.

For the Chief of the Air Staff

Earl L. Naiden
EARL L. NAIDEN
Colonel, Air Corps

Assistant Chief of the Air Staff, A-3

copy for A3 etc

(Handwritten initials)

~~CONFIDENTIAL~~
~~CONFIDENTIAL~~

air AG 471-6 (115)

~~CONFIDENTIAL~~

DECLASSIFIED
DOD Hqs.
8 Jan. 4 20 June 1977
By: *SP-6/CAC, Dab/3/15/77*

MEMORANDUM FOR: Assistant Chief of Air Staff, A-4.

FEB -7 1942

SUBJECT: Bombing Equipment for Pursuit Airplanes.

1. In accordance with directive as contained in memorandum from your office dated January 5, 1942, subject as above, action has been taken to incorporate bombing equipment, including aiming and safe devices, on pursuit airplanes. As a result of this action the following airplanes now have provisions for carrying and releasing 500, 500 and 600 lb. bombs.

Type	Serial No.
P-38E	AG-2117
P-38D	AG-15805, AG-15875
P-38 E-1	AG-22, AG-126
P-38 F and P-38 J	AG-15875
P-38 K, L and M	AG-20710
P-38B	AG-15824
P-40E	AG-15824, AG-15802
P-40F	AG-15802
P-40E and L	AG-20714
P-40E-1	NAV AG-3

AG 20 4776

11/1

2. In this connection, however, it is pointed out that the operating limit of the type M-7 bomb chocks used for purposes indicated above is 20°. Tests are now being conducted to determine ways and means of releasing bombs at steeper angles of glide.

For the Chief of the Air Corps

file

F. I. ORDWAY, JR.
Major, Air Corps,
Asst. Exec., Mat. Div.

DECLASSIFIED

~~CONFIDENTIAL~~

C-442

AG 20 4776 (112)

CONFIDENTIAL

DECLASSIFIED

JBC/GR

DECLASSIFIED
DOD Itra.
8 Jan & 20 June 1974
By: DMM/C: Date: 3/6/77

(Air AG)

A G 2 /

January 5, 1942

SUBJECT: Bombing Accessory Equipment for Pursuit Airplanes.

TO: The Chief of the Air Corps.

1. It is desired that immediate action be taken to provide necessary accessory equipment and instructions pertinent to the use of P-40 and P-39 airplanes for the carrying and launching of 300, 500, and/or 600 pound bombs.
2. It is understood that it will be relatively easy to attach a shackle for this purpose and that in connection therewith it will not be particularly difficult to provide a cockpit control to release the bombs either in armed or safe condition.
3. It is further understood that technical orders are being prepared with respect to each of the models mentioned, governing the installation, maintenance and operation of the accessories which will permit bombing with the airplanes. It is desired that these instructions be expedited and that same be checked by actual test (Air Corps Proving Ground test is suggested) in order that operating instructions may specifically state the limitations as to angle of glide at release, as well as any necessary limitations on speed at release.
4. It is further desired that any accessory equipment in connection with this problem, not now with the airplanes, be procured and distributed to all using units at the earliest practicable date.

By Command of Lieutenant General ARNOLD:

Dispatched
JAN 5 1942
AAG

JOHN B. COOLEY,
Lt. Col., A.G.D.

Assistant Air Adjutant General.

HEADQUARTERS				ARMY AIR FORCES				COORDINATION			
Chief of Staff	Sec y Air Staff	AAG	A 1	A 2	A 3	A 4	A WPD	A Insp	Budget	Sta tistics	
		JBC				✓					

~~CONFIDENTIAL~~

MAP-39
Air 28 671-6112

HEADQUARTERS AIR FORCE
CONFIDENTIAL
 ROUTING AND RECORD SHEET

DECLASSIFIED
 DOD ltr
 8 Jan. & 20 June 1974
 BY: SP4 JG; Date: 3/6/77

Note.--A line will be drawn across sheet
 after each comment.

File No.

Tally No. AAF

SUBJECT: Bombing Accessory Equipment for Pursuit Airplanes.

NO.	FROM	TO	DATE	COMMENTS
1.	AAF A-4	AAF AAG	1942 1/2	<p style="text-align: right;">AAF/A-4 EPS/gwd</p> <p>It is desired that a directive, as follows, be transmitted to the Chief of the Air Corps:</p> <p style="margin-left: 40px;"><i>It is desired that</i></p> <p>1. Immediate action will be taken to provide necessary accessory equipment and instructions pertinent to the use of P-40 and P-39 airplanes for the carrying and launching of 300, 500, and/or 600 pound bombs.</p> <p>2. It is understood that it will be relatively easy to attach a shackle for this purpose and that in connection therewith it will not be particularly difficult to provide a cockpit control to release the bombs either in armed or safe condition.</p> <p>3. "It is further understood that technical orders are being prepared with respect to each of the models mentioned, governing the installation, maintenance and operation of the accessories which will permit bombing with the airplanes. It is desired that these instructions be expedited and that same be checked by actual test (Air Corps Proving Ground test is suggested) in order that operating instructions may specifically state the limitations as to angle of glide at release, as well as any necessary limitations on speed at release.</p> <p style="margin-left: 40px;"><i>Further</i></p> <p>"It is desired that any accessory equipment in connection with this problem, not now with the airplanes, be procured and distributed to all using units at the earliest practicable date."</p> <p style="text-align: right;"><i>Eff</i> EPS C/A-4</p>

(Do not use reverse side)

W-4071, AC. Rev. 8/14/41

CONFIDENTIAL

Am 284716

112

~~CONFIDENTIAL~~

DECLASSIFIED
 DOD ltr.
 8 Jan. & 20 June 1974
 By: [Signature] Date: 3/14/77

DECLASSIFIED

AAF/A-4
 JOS/emd

JAN 2 1942

MEMORANDUM FOR THE CHIEF OF ORDNANCE: (Attention Col. Eats)
Subject: Banks of Computation for Procurement of Bomb Fuses and Primer Detonator Assembly.

1. With reference to Case 8035 "Standardization of Aircraft Bomb Fuses" approved by the Joint Aircraft Committee November 10, 1941, it is suggested that the following basis of Computation for Procurement of Bomb Fuses and Primer-Detonator Assembly be used in connection with the procurement of General Purpose and Demolition Bomb for the Army Air Forces.
 - a. That for the AN-8000A1, AN-8100A1, and AN-8100A2 type tail fuse, 100% should be provided, or one for each general purpose or demolition bomb which uses the particular fuse involved. This 100% should be initially loaded and delivered with the 0.1 second delay primer-detonator.
 - b. For additional primer-detonator to be used in tail fuse listed above 75% should be of the 0.025 second delay, and 25% each of the 0.01 second delay and non-delay.
 - c. For spares, it is suggested that 5% of each type of fuse be procured without primer-detonator.
2. Recommendation by the Air Staff has been made to the Joint Aircraft Committee that for the AN-8112, AN-8113, and AN-8114 Series of tail fuses the 11 second delay (referred to as 12 second delay by JAG) be standardized for the Army Air Forces. Upon approval by the Joint Aircraft Committee it is requested this type of delay fuse be procured for 25% of the general purpose and demolition bombs.

JAN 5 1942

For the Chief of the Air Staff:

HEADQUARTERS		ARMY AIR FORCES				COORDINATION				
Chief of Staff	Sec'y Air Staff	A.A.G.	A-1	A-2	A-3	A-4	A-WPD	A-Inspr.	Budget	Sta- istics
					<i>EUN</i>	<i>GA</i>				
					HENRY P. SOMMER, Colonel, Air Corps,					
					Assistant Chief of the Air Staff, A-4.					

~~CONFIDENTIAL~~

AAF-39

(111 12471.6/111)

DECLASSIFIED

DECLASSIFIED
 DOD ltr.
 8 Jan 80 June 1974
 By: [Signature] Date: 3/2/77

DECLASSIFIED

AAF/A-6
 RCC/cay

JAN 1 1942

Air Marshal A. T. Harris
 Royal Air Force Delegation
 Benjamin Franklin Station, Box 778
 Washington, D. C.

My dear Harris:

Reference is made to your letter of January 2, 1942, concerning inter-availability of American and British bombs on either American or British airplanes.

All future production of American bombs will be in accordance with the details outlined by the Joint Aircraft Committee on Standardization and all bombs produced will be adaptable to British racks as well as American.

It is understood that your service is also taking the necessary steps to produce bombs adaptable to both American and British racks, in accordance with our standardization agreement. With respect to bombs on hand, special adapters in the form of shackles or bands will be required. These two items have already been provided to a limited extent.

Recently a suitable shackle has been designed which was acceptable to all concerned. This shackle is now being placed in production and will be made available in the near future.

Very truly yours,

(Signed) H.H. ARNOLD
 Lieutenant General, U. S. Army
 Chief of Army Air Forces

JAN 12 1942
 AAF

HEADQUARTERS				ARMY AIR FORCES				COORDINATION			
Chief of Staff	Sec. 3	AAG	A1	A2	A3	A4	A WD	A sup	B.d.g.c	S	

DECLASSIFIED

AAF 19
 471.6 (110)

ASC 21 (RAF)

TELEPHONE HOBART 1840

~~CONFIDENTIAL~~

BOX 772

BENJAMIN FRANKLIN STATION
WASHINGTON, D. C.

By *[Signature]* L.C. Date *3/16/77*

ROYAL AIR FORCE DELEGATION
(BRITISH AIR COMMISSION)

2812

YOUR REF:

~~CONFIDENTIAL~~

OUR REF:

~~BRITISH SECRET~~
~~U.S. CONFIDENTIAL~~

2nd January 1942.

Dear *Arnold*

I know you agree with me as to the importance of enabling U.S. built aircraft to employ British instead of U.S. bombs at short notice. Adaptation of these aircraft is naturally somewhat difficult to arrange, but I understand that you already have a plan for producing adaptors for the bombs themselves. This problem of inter-availability of bombs is becoming of ever greater importance in view of developments in the Far East and elsewhere and I therefore hope that no efforts will be spared to speed up as rapidly as may be the production of the adaptors in question. As however this method of adapting bombs rather than aircraft can never provide more than a makeshift solution to the problem, I also trust that measures to expedite the production of items required for the adaptation at least of the U.S. heavy bombers to take British bombs are being pressed forward with the minimum of delay.

Yours

A. T. Harris

Lieutenant-General H.H. Arnold,
Chief of the Army Air Corps,
War Department,
WASHINGTON,
D.C.

A-4
Prepare reply
What about w.k. [unclear]
[Signature]

~~CONFIDENTIAL~~

4726 (10)

1/3/42

DECLASSIFIED
DOD ltr.
8 Jan. & 20 June 1974
RYS: JLC; Date 3/16/77

~~SECRET~~
~~DECLASSIFIED~~
WAR DEPARTMENT
GENERAL STAFF
SUPPLY DIVISION G-4
WASHINGTON, D. C.

G-4/32001

Dec. 31, 1941

MEMORANDUM FOR THE CHIEF OF THE ARMY AIR FORCES:

Subject: Aircraft Bombs and Ammunition
and Ordnance Company (Avn) (AB)
- Bermuda.

1. Reference GHQ/471-SBC-Ord dated 5dDec 41, it is requested that:

a. You inform the G-3 Division, W.D.G.S., the date it is desired to transfer one company Ordnance (Avn) (AB) to Bermuda.

b. Shipment of bombs be made when the company referred to above will be available to handle the shipment.

BREHON SOMERVELL,
Brigadier General,
Assistant Chief of Staff.

/s/

C. P. TOWNSLEY
Lieut. Col., General Staff,
Chief, Planning Section, R. & D. Branch

Incl
Cy Memo frn GHQ, U.S.
Army (12-5-41)
Cy Memo G-4/32001 to
Ch/AAF (12-6-41)
Cy Memo Ch/AAF to G-4
(12-13-41)
Cy G-4/32001 to G-3
(12-23-41)
Cy G-3/50030 to G-4
(12-24-41)

DECLASSIFIED
~~SECRET~~

6109 4714 (109)

~~SECRET~~
DECLASSIFIED

471 - BBC - Ord.

December 5, 1941.

DECLASSIFIED
DOD Item
4 Jan. & 20 June 1974
By: SP5/ALC; Date: 5/10/77

MEMORANDUM FOR ASSISTANT CHIEF OF STAFF, G-4, W.D.

Subject: Aircraft Bombs and Ammunition and Ordnance Company,
Aviation (Air Base) - Bermuda.

1. In view of expected augmentation of the forces of the Bermuda Base Command, it is requested that the following items of aircraft ammunition be made available and shipped to Bermuda:

1000 lb. bombs, demolition	48
500 lb. bombs, demolition	300
500 lb. bombs, SAP	200
100 lb. bombs, demolition	200
325 lb. aircraft depth bombs, Mk XVII, (Navy)	64
Caliber 130 (AP and Tracer)	344,000
Caliber .50 (AP and Tracer)	100,000

This relatively small quantity should be shipped without delay, and well ahead of the arrival of any air units. It will serve the purpose of an initial operating reserve for whatever air units utilize the facilities of the base, and should presumably be augmented later. The fifth item above (aircraft depth bomb) is particularly desired, in view of the approach of winter, and the consequent likelihood of submarine operation in the more southerly shipping routes.

2. The Commanding General, Bermuda Base Command, has been alerted and is prepared to receive and store the above, except in the matter of bomb handling equipment.

3. It is therefore recommended that one ordnance company, aviation, air base (4 officers, 60 enlisted men), with complete unit equipment and heavy tentage, be ordered to Bermuda in order to handle arms, ammunition and bombs, and to service such air corps units as may utilize the base, either temporarily or permanently. It is desired to have this company arrive at an early date, and not later than December 15, 1941. In any case it should arrive not later than the shipment of the bombs requested above.

For the CHIEF OF STAFF:

HARRY J. MALONEY,
Brig. General, G. S. C.,
Deputy Chief of Staff.

DECLASSIFIED
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01971.6 (109)

DECLASSIFIED
DOB ltr.
8 Jan. & 20 June 1974
By: SP2/CJ Data/1/117

~~SECRET~~

G-4/32001

December 6, 1941.

MEMORANDUM FOR THE CHIEF OF THE ARMY AIR FORCES:

Subject: Aircraft Bombs and Ammunition and
Ordnance Company, Aviation (Air
Base) - Bermuda.

1. Your comments and recommendations are requested relative to the recommendations contained in the attached memorandum to the Assistant Chief of Staff, G-4, from the Chief of Staff, General Headquarters, U. S. Army, December, 5, 1941, on the above subject.

2. It is further requested that the basic memorandum, together with your comments and recommendations, be returned with the least possible delay to the Assistant Chief of Staff, G-4, for further action.

BRENON SOMERVELL,
Brigadier General,
Assistant Chief of Staff.

DON C. FAITH
Lt. Col., General Staff,
Asst. Executive.

Incl.
Memo fm GHQ, U.S.
Army (12-5-41)

DECLASSIFIED

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DECLASSIFIED
SECRET

DECLASSIFIED
DOD Item
3 Jan & 29 June 1974
By: ZMLC: Dab-300/77

December 13, 1941.

MEMORANDUM FOR THE ASSISTANT CHIEF OF STAFF, G-4, W.D.

Subject: Aircraft Bombs and Ammunition and
Ordnance Company, Aviation (Air
Base) - Bermuda.

1. Reference memorandum dated December 6, 1941 from the Assistant Chief of Staff to the Chief of the Army Air Forces, above subject, together with inclosed memorandum dated December 5, 1941 from the Deputy Chief of Staff to the Assistant Chief of Staff, G-4, W.D., it is recommended that:

a. Demolition Bombs 100#, 500# and 1000# and machine gun ammunition in the quantities requested be shipped to Bermuda from available stocks or production at such time as personnel is available in Bermuda to handle the shipments.

b. Depth Bombs 325# Mark 17 are being procured from the Navy, and the Secretary of the Navy has been urgently requested to make deliveries as soon as practicable. No immediate deliveries are expected.

c. 500# SAF bombs are not available and the quantities requested should be filled from existing stocks of 500# demolition bombs.

For the Chief of the Army Air Forces:

EDWARD P. CURTIS,
Major, Air Corps,
Secretary of the Air Staff.

Incls:
Memo. fr. G-4/32001 to
C/AAF, 12-6-41 w/Memo.
fr. DC/S to AC/S, G-4,
W.D., 12-5-41.

DECLASSIFIED
SECRET

DECLASSIFIED
-DOB-
6 Jan. & 20 June 1974
By SP-1/CLC Date 3/16/77

~~SECRET~~
DECLASSIFIED

G-4/32001

December 23, 1941.

MEMORANDUM FOR THE ASSISTANT CHIEF OF STAFF, G-3:

Subject: Aircraft Bombs and Ammunition and Ordnance
Company, Aviation, (Air Base) - Bermuda.

1. Your comments and recommendations are requested relative to the recommendations contained in paragraph 3 of the attached memorandum to the Assistant Chief of Staff, G-4, from the Chief of Staff, General Headquarters, U.S. Army, December 5, 1941, on the above subject.
2. It is further requested that the basic memorandum and attachments thereto with your comments and recommendations, be returned with the least possible delay to the Assistant Chief of Staff, G-4, for further action.

BREHON SOMERVILLE,
Brigadier General,
Assistant Chief of Staff.

Incls:
Memo fm OCh/AAF
(12-13-41)
w/1 incl. listed

R. A. CASE
Lt. Colonel, General STAFF,
Chief, Requirements Section

DECLASSIFIED
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DECLASSIFIED
DOD ltr.
8 Feb. & 20 June 1974
By: ~~SP-1~~ DAB/17

~~SECRET~~
DECLASSIFIED

G-3/50030

December 24, 1941

MEMORANDUM FOR THE ASSISTANT CHIEF OF STAFF, G-4:

Subject: Aircraft Bombs and Ammunition and Ordnance
Company, Aviation (Air Base) - Bermuda.

The G-3 Division recommends that one Ordnance Company (AVG) (AB) be transferred to Bermuda by the first available water transportation. The office of the Chief, Army Air Forces, has been contacted and states that the 702d Ordnance Company (AB), Tallahassee, Florida, is available for immediate transfer to Bermuda.

It is requested that G-3 Division be informed if this recommendation is approved so that movement orders can be issued transferring this unit to Bermuda.

HARRY L. TWADDLE,
Brigadier General,
Assistant Chief of Staff.

BY:

W. E. CHAMBERS,
Colonel, General Staff,
Executive.

Inclosure.
G-4/32001 Memo for G-3, 12-23-41
w/Ch AAF Memo for G-4, 12-13-41,
w/incls.

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AR 10-4 proposed by committee
DOCS of AR 2992

DECLASSIFIED
DOD ltr.
8 Jan. & 20 June 1974
By: [unclear]; Date: 3/17/77

JAN 5 1942

The Honorable,
The Secretary of the Navy.

Dear Mr. Secretary:

The relative effectiveness of the torpedo launched from aircraft, coupled with the fact that low cloud ceilings frequently restrict other types of attack against naval vessels from the air, strongly indicates the desirability of having that weapon available for use in some of our present theatres of war. Some of the airplanes which we will send to the Far East can be readily equipped to carry and launch the aerial torpedo which has been developed by and is being produced for the Navy.

It is requested that you advise, at your earliest convenience, how many aerial torpedoes can be furnished from your supplies for the use of the Army Air Forces and the approximate date they can be supplied to our forces in the Far East.

Sincerely yours,

HENRY L. STINSON

Secretary of War.

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JAN 5 1942
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Copy for Army Air Forces

STAMP
AR 10-4 4771.6 105

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DECLASSIFIED
DOD ltr.
8 Jan. & 20 June 1974
By: ~~SP-1~~ L.C. Date: ~~3/26/77~~

WAR DEPARTMENT
WASHINGTON

The Honorable,

The Secretary of the Navy.

NOT USED

Dear Mr. Secretary:

The relative effectiveness of the torpedo launched from aircraft, coupled with the fact that low cloud ceilings frequently restrict other types of attack against naval vessels from the air, strongly indicates the desirability of having that weapon available for use in some of our present theatres of war. Some of the airplanes which we will send to the Far East can be readily equipped to carry and launch the aerial torpedo which has been developed by and is being produced for the Navy.

how many

It is requested that you advise, at your earliest convenience, whether some aerial torpedoes can be furnished from your supplies for the use of the Army Air Forces. ~~The information desired includes the quantity which can be spared and how quickly they can be supplied to our forces in the Far East.~~ *and the above make date*

Sincerely yours,

Secretary of War.

NOT USED

~~SECRET~~ CLASSIFIED

~~SECRET~~ CLASSIFIED

December 31, 1941.

DECLASSIFIED
DOD ltr.
2 Jan. & 20 June 1974
By SP4/CLC: Date 3/2/77

Letter for Sec. of Navy re aerial torpedoes.

I Sec. 0/3

I Transmitted for signature

AAF/A-4
HPS/gnd

NOTED
EPC 1/1/42
Chief of the Air Staff

For the Chief of The Air Staff:

EDGAR P. SOMMERH,
Colonel, Air Corps,
Assistant Chief of The Air Staff, A-4.

Dispatched
JAN 2 1942

Incl. AAG

For from 0/3 to 0/3

Assigned HEAD CHARGERS

Chief of Staff	Sec'y of Staff	A.A.G.	A-1	A-2	A-3	A-4	A-WPD	A-Inspr.	Budget	Sta-tistics
	EP					EN				

AAF-39

DECLASSIFIED

28471.0108

DECLASSIFIED

Memorandum for Record. Aerial torpedoes are at present procured by the Navy. It is desired to make some of these available for use of the Army Air Forces in the Far East at the earliest possible moment. Letter for signature of the Secretary of War inquires as to number and possible date of delivery.

DECLASSIFIED
 A DOD ltr.
 8 Jun. & 20 June 1974
 BY: [Signature] / Date 3/6/77

HEADQUARTERS - ARMY AIR FORCES						COORDINATION						
Chief of Staff	Sec. y A-Staff	AAG	A 1	A 2	A 3	A 4	A WPD	A 101	B. dgc	S =		

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AAF 10

~~SECRET~~
DECLASSIFIED

AAF/A-4
RPE

DECLASSIFIED
DOD ltr.
8 Jan. & 20 June 1974
By: SP4ELC Date: 10/17

Written December 31, 1941.

The Honorable,

The Secretary of the Navy.

Dear Mr. Secretary:

The relative effectiveness of the torpedo launched from aircraft, coupled with the fact that low cloud ceilings frequently restrict other types of attack against naval vessels from the air, strongly indicates the desirability of having that weapon available for use in some of our present theatres of war. Some of the airplanes which we will send to the Far East can be readily equipped to carry and launch the aerial torpedo which has been developed by and is being produced for the Navy.

It is requested that you advise, at your earliest convenience, whether some aerial torpedoes can be furnished from your supplies for the use of the Army Air Forces. The information desired includes the quantity which can be spared and how quickly they can be supplied to our forces in the Far East.

Sincerely yours,

Secretary of War.

gwd

HEADQUARTERS			ARMY AIR FORCES			COORDINATION				
Chief of Staff	Sec'y of Staff	A.A.G.	A-1	A-2	A-3	A-4	A-WFD	A-Insp.	Budget	Statistics
						<i>gwd</i>				

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DECLASSIFIED

AAF-39

DECLASSIFIED

DOD. Rep.
8 Sep. 4 29 June 1984
By: [unclear] LC: Dets. 3/27

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DECLASSIFIED

WAR DEPARTMENT

THE ADJUTANT GENERAL'S OFFICE

WASHINGTON

MTE/mlh - 1713.

Auth: T.A.G.

Initials: Ch

Date: NOV 4 1941

IN REPLY
REFER TO

AG 471.6 (10-13-41)MC-D

November 4, 1941.

SUBJECT: Shipment of Air Corps Bombs to the Philippines.

TO: Chief of Ordnance.

1. Confirming telephone instructions issued your office, (Lt. Col. Rice), October 25, 1941, (Serial No. 234), it is desired that the following bombs be shipped at the earliest practicable date to the Commanding General, United States Army Forces in the Far East:

Bombs, demolition, 100-lb.	5,147 ✓
Bombs, demolition, 500-lb.	3,000 ✓
Bombs, demolition, 1,000-lb.	200 ✓
Bombs, fragmentation, 20-lb.	5,000

2. In connection with the above, attention is invited to the fact that the substitution of the 30 pound fragmentation bomb for the 20 pound fragmentation bomb is not desired.

By order of the Secretary of War:

Carl Robinson
Adjutant General.

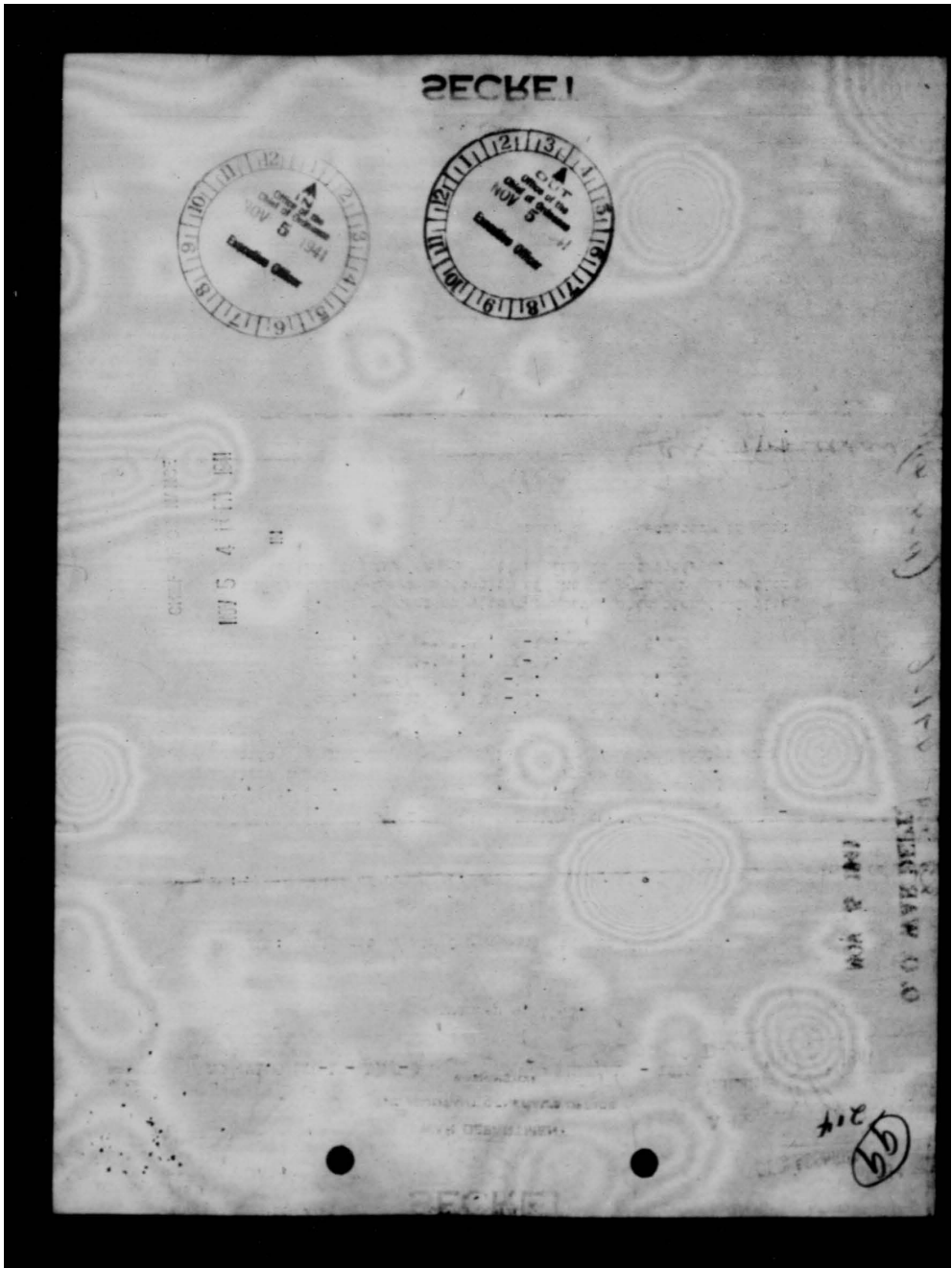
O.A. [unclear]
 471-6
 4-7-41
 471-6
 29082
 NOV 6 1941
 Philippines

(11-4-41)

DECLASSIFIED

SECRET

AG 471.6 (107)



~~SECRET~~

1st. Ind.

O.O. 400.356/28082 Philippines
Attn: Amm. Sup. Div., F.S.
AG 471.6 (10-13-41) MC-D.

Poudre/mdb

War Department, Ordnance Office, Washington, D. C., November 7, 1941.
To: The Adjutant General, Washington, D. C.

1. Reference basic communication it is advised that all of the bombs listed, with the exception of 5,000 Bombs, fragmentation, 20-lb. have been shipped. The remaining item will be shipped as it becomes available.
2. Return of this correspondence is requested.

For the Chief of Ordnance:

NOV 12 1941



45 A G O
NOV 12 1941
Rec'd Back

P. M. Seleen
P. M. Seleen,
Major, Ord. Dept.,
Executive Assistant.

~~SECRET~~

NOV 15 1941
22396-84



IN IN
G-4 DIVISION
WAR DEPT ORN STAFF

DECLASSIFIED

OFFICE
CHIEF OF ORDNANCE

NOV 12 10 59 AM '84

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DECLASSIFIED

SUBJECT: Shipment of Air Corps Bombs to the Philippines.

2739

U.O. 400-356 28082 Philippines 88
AG 471.6 (21-4-41)MC-D 2nd Ind.

RPM/bjs-1712.

War Department, A.G.O., November 18, 1941. - To: Chief of Ordnance.

Noted and returned in accordance with the request contained in Paragraph 2 of the preceding 1st Indorsement.

By order of the Secretary of War:

R. P. Schilder
Adjutant General.

9176

~~SECRET~~

U.O. 400.356/28082-Philippines
Attn: Amn. Sup. Div., F.S.
AG 471.6 (10-13-41)MC-D

3rd Ind.

A.S. RICE/es

War Department, Ordnance Office, Washington, D. C., December 23, 1941.
To: The Adjutant General, Washington, D. C.

1. Returned without further action in accordance with instructions received from the office of the Chief of the Army Air Forces, A-4, Lt. Col. Schnieder.

For the Chief of Ordnance:

26 A G O
DEC 29 1941
Rec'd Back

P. M. Seleen
P. M. SELEEN,
Major, Ord. Dept.,
Executive Assistant.

101

DEC 30 1941
22396-84

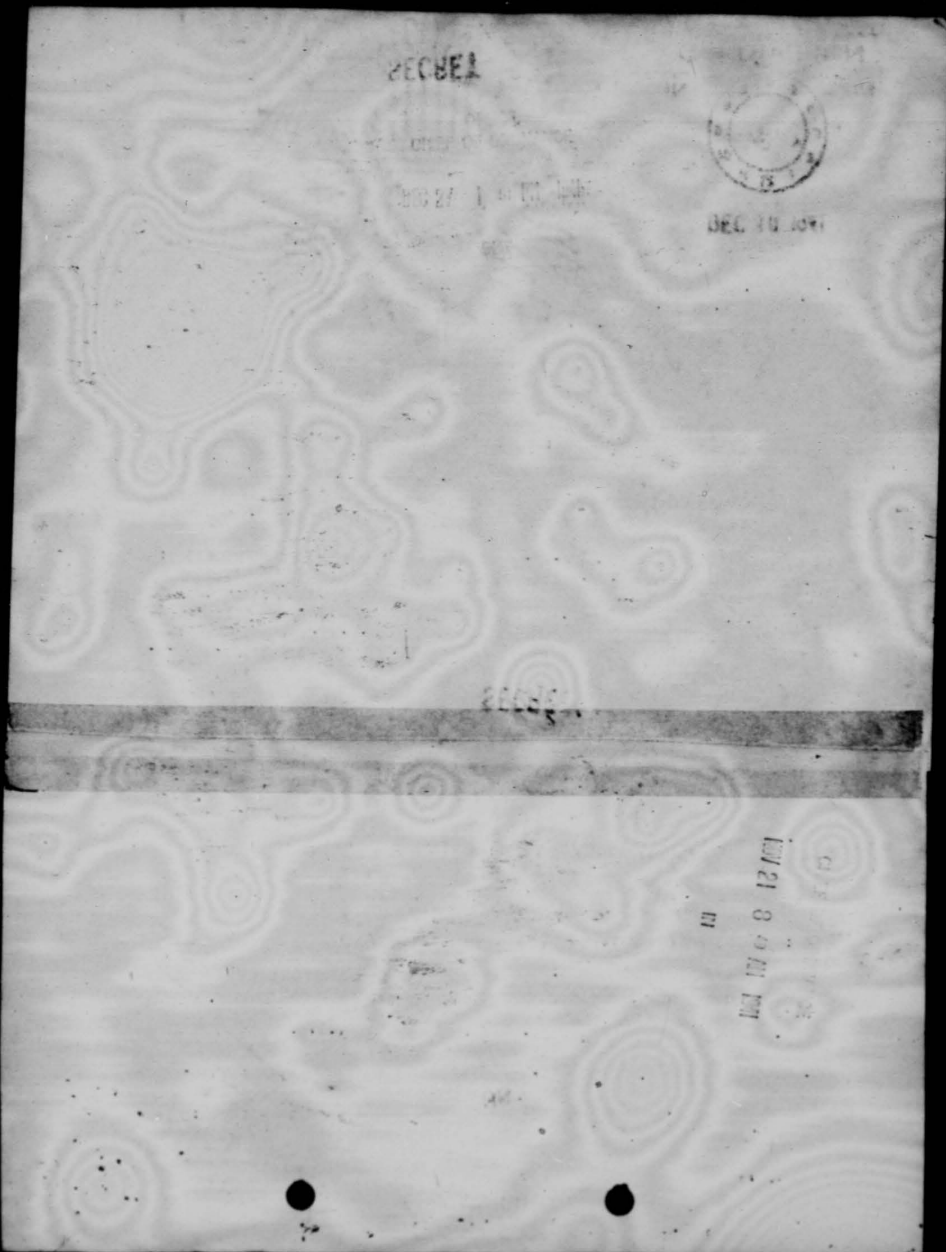


IN IN

G-4 DIVISION

Dec 25 71.0/107

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DISCLASSIFIED
By DOD ltr. ...
8 Jun. & 20 June 1974
Syst. ~~SECRET~~ Date 3/6/77

~~SECRET~~
DECLASSIFIED

Arm. Sup. Div., F.S.

December 19, 1941

Foudre/eh

Subject: Bombs made available to Western Defense Command.

To: Ordnance Officer,
Western Defense Command,
Presidio,
San Francisco, California.

1. Reference is made to letter OO.400.325/7047-Air Corps, this office, dated December 17. Under the heading "500-lb. M43", it is advised that upon instructions received from Ordnance Officer, GHI, Army War College, Washington, D. C., shipments to the Air Bases indicated have been cancelled, with the exception of the 1,000 to McChord Field, Washington, and the 820 to Gaiger Field, Washington, making a total of 8200 to be shipped to Commanding Officer, Ogden Ordnance Depot, for release to the Regulating Officer, Western Defense Command, for redistribution as desired. In addition, the 5,000 referred to in above letter, as set up for the WIC, have now been released, making a total shipment of 13,180 from Savannah Ordnance Depot to Ogden, for release to the WDC.

2. Inasmuch as the M103 nose fuses were not available at Savannah at the time of the previous release, it was necessary to order these from various other points. Therefore, a total of 6,420 Bombs, demolition, 500-lb. M43 will arrive at Ogden, less Fuse, bomb M103 (nose). In this connection, it is advised that these fuses are now distributed as follows, and as these Air Fields are under control of your office, shipment may be directed as necessary to meet the requirements of the location of the demolition bombs:

- | | |
|--------------------------|------------------------------|
| 500 at March Field | 3640 at Muroc Lake B. R. |
| 500 at Fyreside Air Base | 180 at Yakima Airport |
| 600 at Hamilton Field | 460 at Everett (Paine Field) |
| | 470 at Portland A. B. |

By order of the Chief of Ordnance:

A. S. Rice,
Lt. Col., Ord. Dept.,
Assistant.

INFORMATION
COPY

TO: *Col. Johnson*

~~SECRET~~
DECLASSIFIED

471.6
106

DECLASSIFIED
DOD ltr.
4 Jan. & 20 June 1974
By: [unclear] Date: 3/6/77

~~CONFIDENTIAL~~

DECLASSIFIED

(AIR AG)

January 19, 1942

SUBJECT: Project Schedule Covering Optimum Spacing of Bombs in Train.

TO : The Chief of the Air Corps

Transmitted for your information and necessary action is correspondence pertaining to above subject.

By command of Lieutenant General ARNOLD:

JOHN B. COOLIDGE
Lt. Col., A.S.C.
Assistant Air Adjutant General.

1 Incl.
Copy, M&R OCAC, 12-23-41
w-2 incls.

47167
①

Dispatched
JAN 20 1942
AAG

HEADQUARTERS		ARMY AIR FORCES				COORDINATION				
Chief of Staff	Sec'y of Staff	AAG	A 1	A 2	A 3	A 4	A WPD	A Insp	Budget	Sea. Affairs
		73c				✓				

AAP 39

Ans. No. 47167 104

~~CONFIDENTIAL~~
DECLASSIFIED

Subject: Project Schedule Covering Optimum Spacing of Bombs in Train.

4 AAF AAF 1942 3 A-20A type airplanes have been allocated to Eglin Field, as requested for their anti-tank tests. No B-17E is available. AAF/A-3
A-3 A-4 1/15 OHP-ds

Incls. n/a

KLN

G/A-3

Macrina Wake Jones

HEADQUARTERS		ARMY AIR FORCES				COORDINATION				
Chief of Staff	Sec'y of Staff	A.A.G.	A-1	A-2	A-3	A-4	A-WPD	A-Inspr.	Budget	Statistics

DECLASSIFIED

AAF-39

DECLASSIFIED
 DOD Inv.
 8 Jan. & 20 June 1974
 By: [redacted] G; Date: 3/8/77

DECLASSIFIED
 -copy-

Subject: Project Schedule Covering Optimum Spacing of Bombs in Train.

(15-B1) iss

1 OCAC A.A.F. 1941
 Opera. 12/23
 Div. THRU
 Mat.
 Div.

1. Forwarded for comment as to the advisability of undertaking this proposed project at this time, in view of the shortage of bombs and aircraft.

Incl.
 Ltr. 12/17/41
 Project Schedule

O. S. F.
 Col. A. C.
 Ch. Opera. Div.

2 OCAC A.A.F. 1941
 Mat. 12/27
 (4-E-1)

1. No objection can be seen to the accomplishment of the study proposed, with the possible exception of the use of 500-lb. bomb cases. As far as is known, there is no shortage of the M3A2 practice bombs, and furthermore, these bombs cannot be used for any tactical purposes. However, as indicated in Air Corps Board Study No. 74, there is published at the present time data covering the method of computing the probability of bombing in train and, therefore, the project proposed, at least insofar as this Division can determine, should not bear a high priority rating. It seems as though the whole matter except as indicated above, would depend upon the amount of work which the Air Corps Board and the 23rd Composite Group now have to do.

Incl.-n/c

O. P. E.
 Chief, Materiel Division

3 AAF AAF 1942
 A-4 A-3 1/10

AAF/A-4
 HCB/mhh

1. The Adjutant General has been requested to notify the Air Corps Board that the authority to expend the practice bombs listed below has been granted:

606 Bombs, practice, 100# M3A2.
 12 Bombs, demolition, 500# M43.

2. This is considered a fairly important test project, and, therefore, it is requested that the following airplanes be made available to the Air Corps Board if possible:

1 A-20A
 1 B-17E

Incls.n/c
 Ltr. 10/17/41 frn A.C. Director to
 C/AC abv. subj. (cy); cy. Proj. Sched.
 ACB Study #74.

TJH, Jr.
 C/A-4

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CONFIDENTIAL

DECLASSIFIED
EOD 1789
8 Jan. to 20 June 1974
By: SAC/O: Data 3/2/77

DECLASSIFIED

Project Schedule Covering Optimum Spinning of Bombs in Train.

AAF/A-4
HBM/ash

3. AAF AAF 1942
 A-4 A-5 1/10

1. The Adjutant General has been requested to notify the Air Corps Board that the authority to expend the practice bombs listed below has been granted:

600 Bombs, practice, 1000 MWSB.
12 Bombs, Ammunition, 5000 MWSB.

2. This is considered a fairly important test project, and therefore, it is requested that the following airplanes be made available to the Air Corps Board if possible:

1 A-20
1 B-17E

Incls. n/o
Ltr. 10/17/41 from
A.C. Director to G/AC
adv. sub J. (cy) Proj.
Sched. AOB Study etc.

TJE, Jr.
G/A-4

~~DECLASSIFIED
CONFIDENTIAL~~

CONFIDENTIAL
DECLASSIFIED

Subject: Project Schedule Covering Optimum Spacing of Bombs in Train.

1	AAF A-3	AAF A-4	1942 1/25	3 A-204 type airplanes have been allocated to Eglin Field, as requested for their anti-tank tests, No B-170 is available.	AAF/A-3 CG-4a
---	------------	------------	--------------	---	------------------

Inst. 2/a

RAF
G/A-3

No copies made

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DOD Hist.

8 Jan. & 20 June 1974
By: 346 L.C.; Date: 1/16/77

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-copy-

Subject: Project Schedule Covering Optimum Spacing of Bombs in Train.

(15-B1) ims

1 OCAC A.A.F. 1941
Opera. 12/23
Div. THRU
Mat. Div.

1. Forwarded for comment as to the advisability of undertaking this proposed project at this time, in view of the shortage of bombs and aircraft.

Incl.
Ltr. 12/17/41
Project Schedule

O. S. F.
Col. A. G.
Ch. Opera. Div.

2 OCAC A.A.F. 1941
Mat. 12/27
(4-E-1)

1. No objection can be seen to the accomplishment of the study proposed, with the possible exception of the use of 500-lb. bomb cases. As far as is known, there is no shortage of the M38A2 practice bombs, and furthermore, these bombs cannot be used for any tactical purposes. However, as indicated in Air Corps Board Study No. 74, there is published at the present time data covering the method of computing the probability of bombing in train and, therefore, the project proposed, at least insofar as this Division can determine, should not bear a high priority rating. It seems as though the whole matter except as indicated above, would depend upon the amount of work which the Air Corps Board and the 23rd Composite Group now have to do.

Incl.-n/c

O. P. E.
Chief, Material Division

3 AAF AAF 1942
A-4 A-3 1/10

AAF/A-4
HCB/mhk

1. The Adjutant General has been requested to notify the Air Corps Board that the authority to expend the practice bombs listed below has been granted:

606 Bombs, practice, 100# M38A2.
12 Bombs, demolition, 500# M43.

2. This is considered a fairly important test project, and, therefore, it is requested that the following airplanes be made available to the Air Corps Board if possible:

1 A-20A
1 B-17E

Incl.n/c

Ltr. 10/17/41 from A.C. Director to
C/AC adv. subj. (cy); cy. Proj. Sched.
AGE Study #74.

TJH, Jr.
C/A-4

DECLASSIFIED

DECLASSIFIED

Subject: Project Schedule Covering Optimum Spacing of Bombs in Train.

4	AAF A-3	AAF A-6	1942 1/15	3 A-30A type airplanes have been allocated to Field, as requested for their anti-tank tests. No B-17K is available.	AAF/A-3 OHP-66 Bain
---	------------	------------	--------------	---	---------------------------

Incls. 2/3

RLM
6/6-3

no copies made of inc.

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DOD ltr.
 8 Jan. & 20 June 1974
 By: *SAF/IC*; Date: *3/27/77*

-copy-

Subject: Project Schedule Covering Optimum Spacing of Bombs in Train.

(15-B1) ltr

1 OGAC A.A.F. 1941
 Opera. 12/23
 Div. THRU
 Mat.
 Div.

1. Forwarded for comment as to the advisability of undertaking this proposed project at this time, in view of the shortage of bombs and aircraft.

Incl.
 Ltr. 12/17/41
 Project Schedule

O. S. F.
 Col. A. C.
 Ch. Opera. Div.

2 OGAC A.A.F. 1941
 Mat. 12/27
 (4-E-1)

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Incl.-n/c

O. P. E.
 Chief, Material Division

3 AAF AAF 1942
 A-4 A-3 1/10

AAF/A-
 HCB/mh

1. The Adjutant General has been requested to notify the Air Corps Board that the authority to expend the practice bombs listed below has been granted:

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 12 Bombs, demolition, 500# M43.

2. This is considered a fairly important test project, and, therefore, it is requested that the following airplanes be made available to the Air Corps Board if possible:

1 A-20A
 1 B-17E

Incls.n/c

Ltr. 10/17/41 from A.C. Director to
 C/AC abv. subj. (cy); cy. Proj. Sched.
 ACE Study #74.

TJH, Jr.
 G/A-4

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HEADQUARTERS ARMY AIR FORCES
ROUTING AND RECORD SHEET

~~CONFIDENTIAL~~
DECLASSIFIED

DECLASSIFIED
DOD Instr.
8 Jan. & 20 June 1974
By: ~~SP-1C~~ Date: 3/17/77

Note. -- A line will be drawn across sheet after each comment.

File No.
Tally No. AAF

SUBJECT: Project Schedule Covering Optimum Spacing of Bombs in Train.

NO	FROM	TO	DATE	COMMENTS
5	AAF A-4	AAF AAG ARMY A JAN 19 1942 RAG Received	1942 1/18	<p style="text-align: right;">AAF/A-4 MPS/omd</p> <p>1. Request that the attached correspondence be forwarded to the Chief of the Air Corps for information and necessary action.</p> <p style="text-align: center;">Incls. n/c</p> <p style="text-align: right;"><i>MPS</i> for TJH, Jr. C/A-4</p>

~~CONFIDENTIAL~~

Project Schedule Covering Optimum Spacing of Bombs in Train.

AAF/ord
WFO/ord

5 AAF AAF 1942
A-4 AAB 1/18

1. Request that the attached correspondence be forwarded to the Chief of the Air Corps for information and necessary action.

Incls. n/c

WFO, Jr.
6/8-4

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air 03-4716 (10-7)

DECLASSIFIED
DOD
8 Dec 8 10 June 1996
BY: [unclear] Date: 1/1/97

~~CONFIDENTIAL~~
DECLASSIFIED

(AIR AG)

January 19, 1942

SUBJECT: Project Schedule Covering Optimum Spacing of Bombs in Train.

TO: The Chief of the Air Corps

Transmitted for your information and necessary action is correspondence pertaining to above subject.

By command of Lieutenant General ARBOLD:

JOHN B. COOLEY
Lt. Col., A.G.S.
Assistant Air Adjutant General.

1 Incl:
Copy, HAF CGAG, 12-23-41
w-2 incls.

DECLASSIFIED

DECLASSIFIED
DOD Itrs.
8 Jan. & 20 June 1974
By: SP4/MLC: Dab/3/8/77

~~SECRET~~
DECLASSIFIED

December 28, 1941.

AAF/A-4/471-1

Shipment of Bombs to "X".

L-2-1 L-2-2

L. ////////////////

L. ////////////////

AAF/A-4
MAG/ash

Hand to C/O,
abt. 003-12/24/41

For the Chief of the Air Staff:

Dispatched
JAN 5 1942
AAG

WILLIAM P. CANNON
Colonel, Air Corps,
Assistant Chief of Air Staff, A-4

HEADQUARTERS				ARMY AIR FORCES			COORDINATION				
Chief of Staff	Sec'y of Staff	AAG	A1	A2	A3	A4	A WD	A Insp	Budge.	S-a	r. n. l. s.

DECLASSIFIED

dis 15 471.6 (100)

AAF 39

DECLASSIFIED
 DOD ltr.
 8 Jul. & 20 June 1974
 By: JML/C; Date: 3/17/77

~~SECRET~~
 DECLASSIFIED

AAF/A-1/471-1

AAF/A-6

HCB/mhh
 (Written Dec. 24, 1941)

MEMORANDUM FOR THE CHIEF OF STAFF:

Subject: Shipment of Bombs to "I".

I. Discussion.

1. During the next six weeks, it is planned to send the following airplanes to "I":

50 B-25 bombers	(66 - B-25)
25 P-51's	(16 - P-51)
110 P-40's	

2. The Bombers will be flown and the Pursuit airplanes sent by water.

3. The number of bombs required to be shipped to "I" to provide for the combat life of these airplanes is as follows:

204 each	20000 bombs
5000 each	10000 bombs
4000 each	3000 bombs
2000 each	2000 bombs
14,100 each	1000 bombs
410 Tons	Indefinite

II. Action recommended.

The Secretary of War directs that the Chief of the Army Air Forces is authorized to arrange for the shipment to "I" of the bombs listed in PAR. 5 at as early a date as production and shipping permit.

III. Commentaries.

A. C. of S., WFO { }
 A. C. of S., S-4 { }

HEADQUARTERS				ARMY AIR FORCES				COORDINATION			
Chief of Staff	Secy of Staff	AAG	A1	A2	A3	A4	A WFO	A. J. WFO	B. d. g.	S. a.	S. a.
						Hess					

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DECLASSIFIED
DOD Num
8 Jan & 20 June 1974
By SP-6/C: Dab 5/2/77

SECRET
DECLASSIFIED

RECEIPT FOR SECRET OR ~~CONFIDENTIAL~~ DOCUMENT

SUBJECT: Shipment of Bombs to "I"

Receipt is acknowledged of Memorandum for
the Chief of Staff, subject
as above
dated December 26, 1941 (AAF/A-4/471-1)

Officer

Rank

Office

NOTE: To be accomplished and re-
turned to the Air Adjutant
General.

AAF-4
W-4759, A. C.

DECLASSIFIED

~~SECRET~~

WAR DEPARTMENT
HEADQUARTERS ARMY AIR FORCES
DISPOSITION FORM

DECLASSIFIED
DOD Mem.
2 Jan. & 20 June 1994
By: ~~SECRET~~; Date: 3/18/17

Date December 26, 1941.....

AG

AAFA-4/471-1

SUBJECT: Shipment of Bombs to "X".

	USW	ASW	ASWA	B-LP	BOMB	EPR
	C/S	G-1	G-2	G-3	X. G-4	X. WPD
	Sec.G/S	NGB	JAG	IG	QMG	SG
TO:	OCAC	CSO	Fin.	Ord.	Ex.R.A.	ENGR
	AFCO	Inf	FA	Cav	CAC	CMS
	TAG					

FOR: SW directs
Draft of reply attached
Approved
Disapproved
File

X. ~~XXXXXXXXXX~~ concurrence
Direct reply made
Inviting attention to
See notation of _____

Information for reply
Ind. approved
Primary interest
X. ~~XXXXXXXXXX~~ return to A-4
Noted _____

DEC 29 1941

Incl.
Memo to C/S,
adv. subj. 12/28/41

IN

DEC 27 11 10 AM

G-4 DIVISION
WAR DEPT GEN STAFF

DEC 29 11 AM

IN

OUT

WPD, WGBS

WPD, WGBS

For the Chief of the Air Staff:

Edgar P. Sorensen

EDGAR P. SORENSEN
Colonel, Air Corps,
Assistant Chief of Air Staff, A-4

~~SECRET~~

DECLASSIFIED

anal 4-1689, 1-8
677-6700

DECLASSIFIED
DOD Mrs.
8 Dec 8 10 June 1974
By: [unclear]; Dawa [unclear]

~~SECRET~~
DECLASSIFIED

September 26, 1941

AAF/A-4/471-1

Signature of [unclear] to [unclear] ~~DECLASSIFIED~~

X-4 X- WFD

X. ////////// CONCURRENCE

Y. ////////// [unclear]

AAF/A-4
[unclear]

Info.
Hand to C/S.
adv. sub j. 28/26/41

For the Chief of the Air Staff:

WILLIAM F. SOMMER
Colonel, Air Corps,
Assistant Chief of Air Staff, A-4

~~DECLASSIFIED~~
~~SECRET~~

Am. 26.7. 1941

DECLASSIFIED
DOD ltr.
8 July & 20 June 1974
By: [Signature] L.C. Date: 3/17/77

~~DECLASSIFIED~~

2488

December 24, 1941

MEMORANDUM FOR: Major General E. C. Moore
Deputy Chief of Staff

SUBJECT: Bombs

1. The attached table show the tentative bomb acceptance schedules through March, 1942, which the Ordnance Department expects to accomplish.
2. There is a shortage of TNT at present, which will continue through the calendar year 1942, for present estimated loading capacity. Increase in TNT is dependent on new plants.
3. Bomb body availability for the 2,000 lb. bomb will become a limiting factor in loading before February 1, 1941. Production schedules for these bodies indicate a resumption of loading during the month of May, 1942.

E. J. HAYES
Brigadier General, U. S. A.
Director, Production Branch

1 Incl.
Bomb Acceptance
Schedule

*To Gen. Arnold -
I presume that acceptance
is practically one month
behind actual loading
at loading plants
RCH*

(114 085 471.6 79)

12/27

DECLASSIFIED
 DOD Itra.
 8 Jan. & 26 June 1976
 By: [Signature] Date: 12/77

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O.U.S.A.
 4. Br. - Ord. Div.
 JQR - 12/23/41

TENTATIVE ACCEPTANCE SCHEDULES
 FOR
 BOMBS DEMOLITION

Units	1941		1942		1942		1942	
	December		January		February		March	
	Mo	Cum	Mo	Cum	Mo	Cum	Mo	Cum
100 lb. G.P. AN-M30	6.4	145.0	0	145.0	25.0	170.0	40.0	210.0
300 lb. Demo. M31	8.5	18.0	28.6	46.6	28.6	75.2	28.6	103.8
500 lb. G.P. AN-M43	4.2	52.5	15.0	67.5	15.0	82.5	15.0	97.5
1000 lb. G.P. AN-M44	0	1.8	3.0	4.8	3.0	7.8	3.0	10.8
2000 lb. G.P. AN-M34	0	0	1.4	1.4	1.9	3.3	0	3.3
4000 lb. Demo. M56	0	0	0	0	.4	.4	.5	.9
Total	19.1	217.3	48.0	265.3	73.9	339.2	87.1	426.3

Loading of the Nose Fuze M103 will be 7,000 behind the loading of the above bombs on January 1, 1941.

After January 15, 1941, the availability of Nose Fuze M103 will equal the availability of the bombs.

The above schedules are tentative and represent the expected accomplishment of loading estimated from present information.

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12/77

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 by DOD ltra
 27 Jun 80 Date 1976
 Rv. 10/17/17

HEADQUARTERS ARMY AIR FORCES
 ROUTING AND RECORD SHEET

File No.
 Tally No. AAF

Note: A line will be drawn across sheet
 after each comment.

~~SECRET~~

SUBJECT: Trunnion and Suspension Bands

NO	FROM	TO	DATE	COMMENTS																								
1	AAF A-4	C/AS	1941 12-12	<p>1. The following information has been furnished Col. Olds of the Ferry Command on the above subject:</p> <table border="1"> <thead> <tr> <th>BANDS (T & S)</th> <th>QUANTITY</th> <th>WEIGHT UNCRATED</th> </tr> </thead> <tbody> <tr> <td>100# M-1</td> <td>50</td> <td>125#</td> </tr> <tr> <td>500# M-1</td> <td>96</td> <td>526#</td> </tr> <tr> <td>1000# M-2</td> <td>40</td> <td>372#</td> </tr> <tr> <td colspan="2">Total Weight</td> <td>1,023#</td> </tr> </tbody> </table> <p>2. These bands will be delivered to La Guardia Field, c/o Pan American Airways, Long Island, at noon, December 14th, 1941, marked for Ordnance Officer, Philippine Dept.</p> <p>3. The Navy Department was contacted (Lt. Kelty, Ord.) who stated that a good supply of bombs for A-24 (dive bombers) were stocked in PLUM, quantities at present unknown, as expenditure reports have not been received.</p> <p>4. <u>Drawings and specifications for trunnion and suspension bands were shipped by ordinary mail to PLUM, November 7th. Duplicate drawings and specifications have been furnished the Ferry Command to accompany the above listed bands.</u></p> <p>5. The following trunnion and suspension bands should be with the 52 A-24's on arrival:</p> <table border="1"> <tbody> <tr> <td>100# bands</td> <td>-</td> <td>400</td> </tr> <tr> <td>500# "</td> <td>-</td> <td>73</td> </tr> <tr> <td>1000# "</td> <td>-</td> <td>50</td> </tr> </tbody> </table> <p style="text-align: right;">BOG:es 4716 98</p>	BANDS (T & S)	QUANTITY	WEIGHT UNCRATED	100# M-1	50	125#	500# M-1	96	526#	1000# M-2	40	372#	Total Weight		1,023#	100# bands	-	400	500# "	-	73	1000# "	-	50
BANDS (T & S)	QUANTITY	WEIGHT UNCRATED																										
100# M-1	50	125#																										
500# M-1	96	526#																										
1000# M-2	40	372#																										
Total Weight		1,023#																										
100# bands	-	400																										
500# "	-	73																										
1000# "	-	50																										

SECRET
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EPS
 EPS
 C/A-4

(Do not use reverse side)

W-4071, AC, Rev. 8/10/41

Page No. 1

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DOD Hqs.
8 Jan. & 20 June 1974
By: [unclear] Date: 3/10/77

DECLASSIFIED
CONFIDENTIAL

Army Air Force

A4

December 22, 1941.

MEMORANDUM FOR THE ADJUTANT GENERAL:

It is requested that a letter, substantially as follows, be forwarded to the Commanding General, Field Force, Army War College, Washington, D. C., for transmittal to the Eastern and Western Theater Commanders:

Three hundred and twenty-five (325) pound depth bombs for Army Air Force missions in coastal areas can be secured by calling the proper Navy Headquarters in each locality.

4 A. G. O.
DEC 26 1941
RECEIVED

For the Chief of The Air Staff:

ACTION TAKEN: by ltr 12-29-41,
to CG, FF. LFL/ved-1712.

EDGAR P. SCHMIDT
Colonel, Air Corps,
Assistant Chief of The Air Staff, A-4.

(10-66-61) 91676 (77)

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~~CONFIDENTIAL~~

0442 4716 (77)

WAR DEPARTMENT
Headquarters Army Air Force
Office Chief of the Air Staff
Washington, D.C.

Date _____

TO:


Major Richardson

Bring this

Whole matter

to attention of
Chief of Ordnance

Find out how to do
it right


A-4 DIVISION

X-225-D, A.C.

WAR DEPARTMENT
Headquarters Army Air Forces
Office Chief of the Air Staff
Washington, D.C.

Date 12/29/41

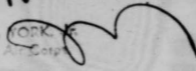
TO: Col York:

I think this is
a matter which
should be taken
up by Air War
Plans - a source of
bombs in Australia
would be excellent -
so would India - in
my opinion -

AIC. This should go
onwards with appropriate
I am sure that matter
be investigated and
that we be informed.
This is the
DIVISION
HEADQUARTERS
A.C.

Business is
Ordinary Person
so we have to be
diplomatic

JOHN Y. FORK
Cal. Air Corp



DECLASSIFIED

DECLASSIFIED
 DOD Ltr.
 8 Feb 80 June 1974
 38/4230 Date 3/8/77

AAF/A-4
 EBB/elm

AAF/A-4/471-12

JAN 19 1942

MEMORANDUM FOR THE ADJUTANT GENERAL:

Subject: Bomb Production in the Far East

The Secretary of War directs:

1. That copies of the attached correspondence from the Assistant Chief of Staff, G-2 and a letter substantially as follows be forwarded to the Chief of Ordnance:

1. It is requested that your office furnish a report to the Chief of the Army Air Forces, at the earliest possible date, as to the feasibility and desirability of expanding bomb production in the Far East to meet the needs of the Army Air Forces in that area. Your attention is invited to the attached correspondence which describes current British Production in India and Australia.

2. Current indications are that the number of planes which may be operated in the Far East is limited by problems of supply, and that supply in turn, is limited largely by the amount of shipping space available. Any action tending to reduce the need for transportation to the Far Eastern theater will be of interest to the Chief of the Army Air Forces.

NOTED. *EPC 1/19/42* For the Chief of the Air Staff:
 Chief of the Air Staff

Incl.

G-2 memo to the AG/O,
 8PD, 12/22/41; Tab A.

T. J. HANLEY, JR.,
 Colonel, Air Corps,
 Assistant Chief of Air Staff, A-4

HEADQUARTERS		ARMY AIR FORCES			COORDINATION					
Chief of Staff	Secy of Air Staff	A.A.G.	A-1	A-2	A-3	A-4	A-WPD	A-Insp.	Budget	Statistics

JAN 20 1942
 AAG

DECLASSIFIED

AAF-39

aw 06 4716 (96)

DECLASSIFIED
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Memorandum for Record: A. C. of S., G-2, recognizing the likelihood of large scale bombing operations in the Far East, reported on the status of production in that area. This report further pointed out the desirability for increased production in the Far Eastern Theater to lessen the burden on lines of supply. Accordingly, the Chief of the Army Air Forces requests that the Chief of Ordnance study the feasibility and desirability of such production with reference to technical considerations.

HEADQUARTERS			ARMY AIR FORCES			COORDINATION				
Chief of Staff	Sec'y of Staff	A.A.G.	A-1	A-2	A-3	A-4	A-WPD	A-Insp.	Budget	Statistics
	WTF					SM				

- 2 -

AAF-39

DECLASSIFIED

See 203 471.6 (96)

DECLASSIFIED

DECLASSIFIED
DOD 117a
8 Jan & 20 June 1974
By: SP4/MLC; Date: 3/17

WAR DEPARTMENT
War Department General Staff
Military Intelligence Division G-2
Washington

December 22, 1941.

MEMORANDUM FOR THE ASSISTANT CHIEF OF STAFF, WPD:

Subject: Bomb Production in the Far East.

1. Your attention is invited to the above subject with reference to the probable operation by our forces of bombardment aviation in the Far East. It is believed that if this should be done in any considerable numbers, necessity would dictate local procurement of bombs, fuel and lubricants to a very great degree.
2. Both India and Australia are now producing aerial bombs. (See Tab A). These bombs are designed for British racks and the quantities of heavy calibre bombs produced are probably small.
3. It is suggested that the British Government might arrange for the production, in India or Australia, of 500 and 1000-pound aerial bombs to U. S. specifications.

RAYMOND E. LEE
Brigadier General, U. S. Army,
Acting Assistant Chief of Staff, G-2.

Incl.:
Tab A

Colonel, G.S.C.
Executive Officer, G-2

COPY

DECLASSIFIED

DECLASSIFIED

DECLASSIFIED
 DOD Inv.
 8 Jan. & 20 June 1974
 BY: SAC/CLC: Dab... 3/6/77

TAR

AERIAL BOMB PRODUCTION - INDIA AND AUSTRALIA.

I. India.

Railway workshops were put on a schedule of 59,000 air bombs per month in the summer of 1941. These schedules have in general, been reached, but there is no specific information as to the single item of aerial bombs.

\$3,000,000 allotted to government ordnance factories to expand plant for the production of steel needed for, among other things, air bombs. June-July, 1941.

\$1,000,000 allotted for increased plant to make air bombs, depth bombs, land mines and shells.

59,000 per month would seem to be a minimum figure.

II. Australia.

Australian Aerial Bomb Production.

	Production for August, 1941	October-December, 1941
250 lb. A.S. (1)	320	2,000 (to be discontinued December 12, 1941)
250 lb. G.P. (2)	1,900	10,000
100 lb. A.S.	720	2,000 (to be discontinued December 12, 1941)
20 lb. F. (3)	Nil	15,000
8 $\frac{1}{2}$ or 11 lb. Practice	36,000	80,000

No figures available for production prior to August, 1941.

-
- (1) Anti-submarine bomb
 - (2) General purpose bomb
 - (3) Fragmentation

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 BOD. Hqs.
 8 May & 20 June 1974
 By: *[Signature]* L.C. Date: *3/4/77*

HEADQUARTERS ARMY AIR FORCES
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 ROUTING AND RECORD SHEET

3179
 JAN 12 42 AM

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SUBJECT: British Bomb Production in the Far East.

RECEIVED
 AIR WAR PLANS DIV.

NO.	FROM	TO	DATE	COMMENTS	AAF/A-4 MPS/mhh
1.	AAF A-4	AAF AWPD	1942 1/10	For comment and recommendation. Incl. D/F 12/23/41, to CAAP Memo, 12/22/41, to AC/S w/Tab "A".	<i>[Handwritten initials]</i> for TJH, Jr. C/A-4
2	AAF AWPD	AAF A-4	1/12	1. It is recommended that our air forces in the Far East be supplied, as far as possible, with bombs manufactured in India or Australia. 2. It is understood that the differences between British and United States bombs lie in the different number and placing of the lugs (1 for British - 2 for U.S.) and in the type of casing (British are cast - U.S. are drawn). It is believed that bombs produced can be made useable by both British and U.S. air units if technical details of lugs and shackles are worked out. 3. Provision for manufacture of bombs of all sizes is essential.	AAF/AMPD KEP-aaa <i>[Handwritten initials]</i> H.L.G. 66P C/AMPD
				Incl. a/c	

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F-4071, AC. Rev. 8/14/41

WAR DEPARTMENT
Headquarters Army Air Forces
Office Chief of the Air Staff
Washington, D.C.

1243

Date 16 Dec 41

TO: Col Schneider

Quite true - but
still we must do
some figuring -
establish (or try to)
some policy & plan
involving:

1. What in bombs and
ammunition we can
set up to accompany
the ground echelon of an
air unit if going to a
place where there is no
supply.

2. An overall allowance
& a theatre commander
for air units under his

WAR DEPARTMENT
Headquarters Army Air Forces
Office Chief of the Air Staff
Washington, D.C.

Date _____

TO:

command to serve
him, prior to his forces
becoming engaged, and
until such time as we
have more distant theaters
supplied and proper
flow established for
those engaged.

3. In other words
establish a system
and basis of meeting
the demands now.
E.P.S.

EDGAR P. SORENSEN,
COL., AIR CORPS.

A-4 DIVISION

X-225-D, A.C.

WAR DEPARTMENT
 Headquarters Army Air Forces
 Office Chief of the Air Staff
 Washington, D.C.

Date _____

TO: Col. Sorenson

Specification of the
 Reserves to be
 maintained in Iceland
 is not a function of
 the Air Staff - Iceland
 is under the control of
 G-4 of U. S. Army.

To be effective, this paper
 must be prepared as a
 memorandum for the
 Chief of Staff, with publication
 by AGO on approval. As
 it is now, it is shadow
 boxing. MS

A-4 DIVISION

X-225-D, A.C.

WAR DEPARTMENT
Headquarters Army Forces
Office Chief of the Air Staff
Washington, D. C.

Date. 4 Dec 4!

TO:

FOR:

- Chief, A-4 Division
- Equipment Section
- Facilities Section

- Information
- Coordination
- Preparation of reply
- Necessary Action
- Note and Return
- Confer with

- Colonel Sorensen
- Lt. Colonel York
- Lt. Colonel Schneider

- Recommendation
- File
- Circulation

- Lt. Colonel Crumrine
- Major Perrin
- Captain Katzman
- Captain Donoghue
- Captain O'Shea
- Lieutenant Burt
- Mr. Gibson
- Miss Hammer

Please check this new requirement against reserves now in Dodge's to see what we need to do to get more over there. Any? E.H.

EDGAR P. SORENSEN
COL. AIR CORPS.

A-4 Division
AIR STAFF

AAF-82-1

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HEADQUARTERS ARMY AIR FORCES
ROUTING AND RECORD SHEET

1532

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DOD Form

File No.

8 Jan. & 20 June 1974
By: *SP-1C*; Date: *3/17/77*

Tally No. AAF

SUBJECT: Defense Reserve Bombs in Iceland.

NO.	FROM	TO	DATE	COMMENTS
1.	AAF A-4	AAF A-3 and A-WP IN TURN	1941 10/31	<p style="text-align: right;">AAF/A-4 EPS/mwb</p> <p>4716 95</p> <p>1. In connection with the expected early augmentation of the forces in Iceland by nine (9) heavy bombardment airplanes, a determination of bomb requirements is being made.</p> <p>2. Defense reserves of bombs are normally calculated on the basis of the approved wastage and admission rates as divided between the different sizes of bombs. This calculation is considered suitable for the average condition and for the long-run calculation. It is, however, not considered necessarily suited to the situation in Iceland since the targets which will probably present themselves will be rather restricted in character. In other words, it is not apparent that there would be any need for incendiary bombs and perhaps no need for fragmentation types.</p> <p>3. Your recommendation is desired with respect to the bomb sizes to be prepared for the shipment in question, same to be divided in the percentage of each which is considered most desirable.</p> <p style="text-align: right;"><i>EPS</i> EPS C/A-4</p>
2.	AAF A-3	AAF A-WPD	11/25	<p style="text-align: right;">AAF/A-3 OSP-epb</p> <p>1. It is understood that one squadron of B-26 type airplanes is being substituted for the proposed heavy bombardment airplanes. Since bomb targets in Iceland will normally be submarines or vessels attempting to make a landing, it is believed there is no need for incendiary bombs, chemical bombs or fragmentation bombs, and no need for 100 pound demolition bombs.</p> <p>2. Mission rates are 15 missions per plane per month.</p>

(Do not use reverse side)

W-4071, AC, Rev. 8/14/41

Page No.

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Amf 126

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HEADQUARTERS ARMY AIR FORCES
ROUTING AND RECORD SHEET

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File No.
 Tally No. AAF

SUBJECT: Defense Reserve Bombs in Iceland.

NO.	FROM	TO	DATE	COMMENTS
2 (Cont'd.)				10 of which are bombing. Assuming 90 days supply on hand, the 30 missions should be divided as follows: 5 missions - 2,000 pound demolition 5 missions - 1,000 pound, of which 70% are general purpose and 30% semi-armor-piercing 10 missions - 500 pound, of which 70% are general purpose and 30% semi-armor-piercing 10 missions - 250 pound demolition.
3.	AAF A-WPD	AAF A-4	1941 12/3	1. Noted. <i>1/14/42 HLG</i> <i>HLG/66P</i> <i>C/A-WPD</i>
<p>Iceland is under the jurisdiction of GTHC U.S. Army. The Ch/AAF is making bombs available to GTHC as rapidly as possible. Determination of what portion of such stocks will be sent to Iceland is a matter for determination by GTHC</p> <p style="text-align: right;"><i>Schneider</i></p>				

ELH
C/A-3

AAF/A-WPD
 KEP/alm
LG

2079

WAR DEPARTMENT
OFFICE CHIEF CHEMICAL WARFARE SERVICE
WASHINGTON, D. C.

In reply refer to C.W.S. 471.6/14 (Incend.)

December 15, 1941

SUBJECT: Directive No. 135
TO: Chemical Officer
Headquarters, Army Air Forces
Washington, D. C.

471.6 (92)

1. There is attached herewith one copy of Directive No. 135 for the filling of the 100-lb. chemical bomb, M47, (incendiary).
2. Additional copies of this Directive may be obtained if desired.

For the Chief of the Chemical Warfare Service:

1. Army Air Forces
DEC 16 1941
AAG RECEIVED

E. Montgomery
E. MONTGOMERY
Colonel, C. W. S.
Chief, Field Service

incl. 1 copy Directive No. 135

*Return for file.
Noted
aw*

an 471.6 (92)

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DOD - Yrs.
8 Jan. & 20 June 1974
By: JMLC; Date: 3/6/77

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TENTATIVE

Edgewood Arsenal,
Maryland.

Directive No. 135

December 10, 1941

DIRECTIVE FOR THE FIELD FILLING OF 100-LB.
CHEMICAL BOMB, M/7, WITH GASOLINE-RUBBER INCENDIARY SOLUTIONS

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Am 284766 (92)

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DIRECTIVE FOR THE FIELD FILLING OF 100-LB.
CHEMICAL BOMB, M47, WITH GASOLINE-RUBBER INCENDIARY SOLUTIONS

I. GENERAL.

A. Purpose. The purpose of this directive is to furnish instructions for filling the 100-lb. chemical bomb, M47, in the field with four (4) types of gasoline-rubber solutions.

B. Authority. This directive is prepared in accordance with letter from Office-Chief, Chemical Warfare Service, December 1, 1941.

C. Basic filling unit. All quantities of the respective ingredients and materials specified throughout this directive are based on filling the bombs in units of one hundred (100) each.

D. Specifications and drawings. The following specifications and drawings are referred to in this directive. The materials and components covered thereby shall be in accordance with the issues of the respective specifications and drawings in effect at the time of procurement.

Motor Fuel (All Purpose), herein-after referred to as gasoline,
U. S. Army Specification No. 2-103.

Soda, Caustic (Lye); (For Cleaning Purposes), Federal Specification No. P-3-631.

Lacquer, Enamel, U. S. Army Specification No. 3-162.

Varnish, Shellac, Federal Specification No. TT-V-91.

Bomb, Chemical, 100-lb., M47, Assembly, Ordnance Department Drawing No. 82-3-277.

Bomb, Chemical, 100-lb., Chemical Marking, Ordnance Department Drawing No. 82-14-27. (Note: Change Mk.VIII and filling now prescribed for this bomb).

E. Ingredients for which government specifications are not at present available.

1. Rubber, smoked sheets - herein-after referred to as SR.
2. Rubber, crepe - herein-after referred to as CR.
3. Latex, dried, 100% solids - herein-after referred to as LA100.
4. Latex, liquid, 60% solids - herein-after referred to as LA60.

The foregoing materials are all commercially procurable from various crude rubber producers and/or importers.

5. Cocunut oil. This material is commercially procurable from various soap manufacturers or producers and/or importers of cocunut oil.

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F. Description of bomb. The bomb to be filled is a cylindrical type with a spherical nose and with tail vanes. The cylindrical portion of the bomb is approximately eight (8) inches in diameter. The overall length of the bomb is approximately forty-eight (48) inches. The body of the bomb is made of sheet steel approximately 1/32 of an inch thick, which is rolled into a cylinder and lap welded. The complete bomb is designated as the M47, 100-lb. chemical bomb and is shown on Ordnance Department Drawing No. 82-3-277.

The closing element of the bomb is a burster wall which has an adapter on its nose end. This burster wall screws into an adapter welded into the nose of the bomb and provides the means for attaching the burster and fuse to the filled bomb. The burster (Ordnance Department Burster MIVII), to be used for igniting and dispersing the incendiary charge in the bomb, is loaded with black powder. The fuse is an impact type (Ordnance Department Fuse M108) and fits into the adapter of the burster wall.

G. Description of ingredients and quantities required.

1. Gasoline. The basic material for all of the respective solutions used in the subsequent filling operations shall be gasoline which complies with the requirements of U. S. Army Specification No. 2-103. It is believed that gasolines with octane ratings as low as 64 may be satisfactory. If, due to procurement difficulties, it is desired to use lower grade gasolines, several bombs shall first be filled with solutions made with the lower grade gasoline and the bombs tested under contemplated service conditions to definitely determine that the solution will ignite and burn satisfactorily.

2. SR. This material is the crude latex, or sap, which has been dried over a smoky fire until it is approximately 100% solid matter. It is a brownish substance procured in the form of thin sheets.

3. CR. This material is the crude latex, or sap, reduced to a solid form by precipitation and kneading of the precipitate. It is a light, tan colored substance procured in sheets of various thicknesses.

4. LA100. The LA100 is the crude latex, or sap, that has been dried until it is approximately 100% solid matter. It is a light, tan colored, sticky substance procured in the form of thin sheets.

5. LA60. The LA60 is crude latex, or sap, as drawn from rubber trees and concentrated for shipment. It is a creamy white liquid of about the same consistency as whipping cream. The material in this state contains approximately 60% solid matter. The following ingredients are used only when the incendiary solution is prepared from LA60:

(a). Caustic soda. The caustic soda shall comply with the requirements prescribed in Federal Specification No. P-8-631.

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(b). Coconut oil. This material is the oil derived from coconuts. It is a yellowish, oily liquid, which, on exposure to air, has a tendency to form a pasty mass having approximately the same consistency as cup grease. When fresh, it has a distinctive coconut odor, which becomes rancid after standing. The rancid odor is not objectionable and does not impair the efficiency of the oil as an ingredient in incendiary solutions.

6. Quantities. The following quantities of ingredients are required to prepare the respective gasoline-rubber solutions, herein-after designated as incendiary oils, to fill one hundred (100) M47 bombs:

Ingredient	Incendiary Oils			
	SR	CR	LA100	LA60
Gasoline, gal.	550	575	600	500
LA60, gal.				75
LA100, lb.			230	
CR, lb.		370		
SR, lb.	460			
Coconut oil, gal.				55
Caustic soda, lb.				180
Water, gal.				25

7. Purpose of including four different types of rubber. As noted above, this directive describes the use of four different types of rubber (SR, CR, LA100, and LA60) in the preparation of incendiary fillings. These four are included so that incendiary fillings can be prepared from almost any type of unvulcanized rubber procurable. If available, the solid forms of rubber (SR, CR, LA100) should be used in preference to the liquid LA60 because they are simpler to prepare and give better results.

H. Equipment and materials. In the preparation of this directive, it has been assumed that the equipment and materials herein-after prescribed will be available. However, it is realized that, in the field, it may be impossible to obtain all such equipment and materials. Under such condition, it will be necessary for those in charge of the filling operations to improvise equipment and substitute available materials for those enumerated herein. The following equipment and materials are prescribed as those desirable for filling, closing, painting, and stenciling one hundred (100) bombs in accordance with this directive:

1. Filling equipment. The following filling equipment, if available, will expedite filling.

(a). Support. A stand for supporting the bombs in vertical position during the filling and closing operations. This unit may be improvised from available lumber and/or metal. The fixture should have sufficient stability to prevent accidental

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have sufficient stability to prevent accidental overturning of the bomb.

(b). Scales. One (1) scale, platform type, 150-lb. capacity.

(c). Cutting devices. Two (2) each of either of the following implements are required for use with SR, GR, and L4100:

- (1). Large shears.
- (2). Large knife, bolo or machete type.
- (3). Paper cutter, guillotine type, at least 18-inch blade.

(d). Measuring and transfer devices.

- (1). One (1) mobile gasoline tank (truck or trailer type) provided with a metering pump.
- (2). Three (3) each of the following sizes of measuring cans:

Five-gallon (5-gal.).

One-gallon (1-gal), graduated in quarts.

- (3). Funnel. Three (3) large metal funnels, maximum spout diameter, 1-1/4 inches.
- (4). Level gauge. Three (3) gauges for checking distances from nose to liquid level in filled bomb. These gauges to be improvised wooden toes with perpendicular are approximately 8 inches long.

(e). Mixing equipment for wrapping incendiary oil L460. The following equipment will be required to prepare primary solutions when the incendiary oil L460 is used as a filling medium:

- (1). Three (3) each of either 55-gallon or 110-gallon open end, steel drums or barrels (steel or wood).
- (2). Three (3) wooden paddles for mixing primary solutions, in drums. The paddle should be approximately five (5) feet long with four (4) inch blade.

(f). Closing equipment and material. The following equipment and materials will be required for closing the filled bombs:

(1). Equipment.

- a. Wrench. Two (2) wrenches for closing the filled bomb should be an open end construction wrench with 1-13/16" opening, a socket and ratchet wrench of the same size, or a large stillson or monkey wrench. The handle of the wrench, in either case to be approximately 24 inches long, to provide sufficient leverage to effect a tight closure.

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- b. Holding device. Two (2) devices by which the bomb can be held from turning during the closing operation. Such a device is procurable under trade name of "strap wrench". The strap should be at least two (2) inches wide and sufficiently long to encircle the bomb (approximately 30 inches). Such a device can be readily improvised by using a piece of woven 2-inch baling about four (4) feet long, attached to a 36-inch lever (wood or metal) so that a loop can be formed around the bomb and produce a snubbing action to prevent the bomb from turning while it is being closed.
- c. Luting brushes. Two (2) brushes of the deauber type for applying the lute to the threads on the burster wall.

(2). Materials.

- a. Luting. One or more of the following materials are required for luting threads on the burster wall:

Shellac varnish. One (1) quart of shellac varnish which complies with the requirement of Federal Specification No. TT-V-91, Type II.

White-lead paste-in-oil. A paste made up by mixing two (2) pounds of white-lead with one (1) quart of boiled linseed oil.

Red-lead paste-in-oil. A paste made up by mixing two (2) pounds of red-lead with one (1) quart of boiled linseed oil.

(g). Painting and marking equipment and materials. The following painting and marking equipment and materials will be required at the filling site:

(1). Equipment.

- a. Stencils. Two (2) cardboard stencils cut for marking filled bombs. Stencils to be cut for applicable type of filling medium (See Figure 1).
- b. Brushes. Two (2) stenciling brushes of the deauber type.

(2). Materials.

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a. Laquer, blue gray. One (1) gallon of blue gray laquer enamel (U. S. Army Specification No. 3-162, blue gray No. 12).

b. Laquer or marking ink, purple. Two (2) quarts of purple laquer or quick drying, waterproof, opaque marking ink (Volgers or equal) for stenciling.

(h). Protective equipment. The following equipment is required for use of the operating personnel:

- (1). Gloves. Eighteen (18) pairs of rubber gloves.
- (2). Goggles. Twelve (12) pairs of safety goggles;

II. FILLING PROCEDURE.

A. Preparation of bomb. The empty bomb shall be prepared for filling as follows:

1. Remove burster well by unscrewing it from the nose of the bomb. Do not remove stopper from burster well.
2. Place the burster wells in a convenient place for closing filled bombs.
3. Place the empty bombs, nose up, in the supporting device, for the filling operations.

B. Procedure when using solid forms of rubber (SR, CR, LAL00).

1. Preparation of ingredients.

(a). Gasoline. Used as procured.

(b). Solid rubbers. All three forms of solid rubber (SR, CR, LAL00) are procured in thin sheets. For use, these sheets are cut into strips of approximately one (1) inch wide and in lengths convenient for use in subsequent filling operations.

2. Filling.

(a). Method. When using any one of the three solid forms of rubber (SR, CR, LAL00), the method of filling is exactly the same and only the amount used varies. Weigh out the proper amount (see table under b below) previously cut rubber strips and feed them into the bomb through the filling hole in the nose. The correct amount of gasoline (also see table under b below) is then measured and introduced into the bomb through the filling hole by means available. No agitation other than that incident to the

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than that incident to handling is necessary.

(b). Quantities of ingredients. The following table gives the weight of rubber and volume of gasoline to be placed in a bomb when using any one of the three solid forms of rubber. All weights and volumes tabulated herein have given satisfactory results under actual tests and these values must be held within the minimum tolerances imposed by the available field equipment. The essential requirement is that the gasoline level of the filled bomb be at least 6 inches from the outside of the filling hole.

Type of Rubber	Weight of Rubber lb.	oz.	Volume of Gasoline gallons	Approximate % Rubber
SR	4	8	5-1/2	10
CR	3	10	5-3/4	8
LA60	2	10	6	6

C. Procedure when using LA60 (liquid rubber).

1. General. The above mentioned forms of solid rubber are preferred but in the event that they are not available, liquid latex of approximately 60% solids can be used, but it has the following disadvantages as compared to solid rubber:

(a). More complicated preliminary mixing and filling procedure which must be critically controlled to obtain a solid mass.

(b). Water present in this filling causes poor functioning at sub-zero temperatures.

2. Ingredients. The filling in this bomb consists of gasoline, coconut oil, caustic soda, and 60% latex, each of which is used in the following form:

(a). Gasoline - as procured.

(b). Coconut oil - as procured.

(c). LA60 - as procured.

(d). Caustic solution - 8 lb. caustic per gal. water.

3. Preparation of primary solution. This solution consists of a mixture of the gasoline, coconut oil, and caustic soda solution, made up as follows:

(a). Pour 45 gallons of gasoline into a 55-gallon drum.

(b). Add 5 gallons of coconut oil and stir vigorously with paddle for three or four minutes.

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(c). Add 2 gallons of the previously prepared caustic solution and again stir vigorously for five minutes.

4. Filling. The final incendiary solution is made up in the bomb as follows:

(a). Pour 5-1/2 gallons of the above described primary solution into the bomb.

(b). Add 3/4 gallon LA60.

(c). Check liquid level to see that it is at least 6 inches below filling hole.

(d). Seal bomb with burster tube and agitate vigorously for 10 minutes to insure thorough mixing of the ingredients.

III. CLOSING FILLED BOMB.

A. The filled bomb shall be closed as follows:

1. Clean threads in the nose of the bomb and on the burster wall.
2. Coat the pipe thread on the outside of the burster wall with a paste of either white-lead-in-oil or red-lead-in-oil, or with varnish shallac.
3. Put burster wall into filled bomb as far as possible without forcing. If the wall does not enter far enough to engage its thread, tip the filled bomb to a slight angle and shake with rotary motion. At the same time press in on the burster wall until the threads engage. Screw the wall into the adapter on the nose of the bomb until a leak-tight joint is effected. This operation will require the use of the 24-inch wrench for the burster wall and the strap wrench to hold the filled bomb from turning.

IV. SOLIDIFICATION OF FILLING.

A. Time required for solidification. The filled and closed bombs shall be laid in a horizontal position, with the welded seams on the bottom, and allowed to remain in that position for the times indicated in the following table in order to give the filling time to solidify:

Type of Filling	Hours
Incendiary oil SR	72
Incendiary oil CR	48
Incendiary oil, LA100	12-36
Incendiary oil LA60	12

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B. Leakage. During the above aging period, the bombs shall be examined for evidences of leaks around the nose threads and along the welded seams. Leaks in bombs through the nose thread may result from not screwing the burster well to a tight fit on the tapered thread or may be due to insufficient luting. Such leaks can very probably be corrected by slightly loosening burster well, applying additional lute, and then draw the burster well down as far as possible on the thread. Bombs in which leaks cannot be stopped shall be emptied and discarded.

V. PAINING AND MARKING.

The bombs shall be painted and marked as follows: All marking on the bombs as received, except "100-lb. M47 BOMB", shall be painted out with lacquer enamel (U. S. Army Specification No. 3-162), color card color blue gray No. 12.

The markings for the applicable type of filling shall be located and stenciled on the bomb as indicated in Figure I. The marking should be done with purple lacquer enamel or with purple waterproof marking ink.

VI. PRECAUTIONS.

Due to the inflammability of the gasoline and the explosive nature of the fumes therefrom, personnel engaged in filling bombs in accordance with this directive are warned that extreme care must be exercised during the operations incident to handling and filling bombs. The following precautions should be taken:

- A. No smoking, open flame or device capable of producing sparks will be allowed within 100 feet of the filling operations.
- B. Filling be done in the open or in a well-ventilated shed and all personnel will wear rubber gloves and safety goggles.
- C. Bombs to be sealed as soon as possible after filling.
- D. Avoid spilling any gasoline, especially on clothing.
- E. As the gasoline contains a lead solution, care must be exercised to prevent its coming in contact with the bare skin and not to breathe the fumes as gasoline is a narcotic and the lead is toxic.
- F. Avoid contact with caustic soda, both solid and solution, as it causes severe skin burns.

VII. PERSONNEL REQUIREMENTS.

A detail of twelve (12) men should be able to prepare and fill two hundred (200) M47 bombs in one eight (8) hour shift. A competent officer or noncommissioned officer must be in charge of the filling detail at all times.

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E.O. 13526

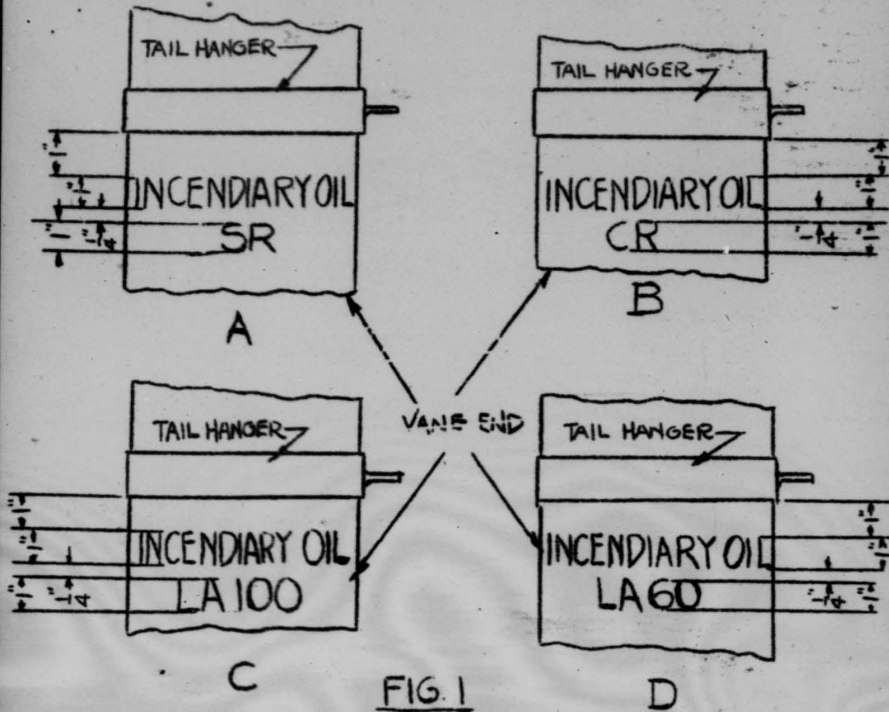


FIG. 1

MARKINGS

100-LB BOMB, M47

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 DOD Item
 8 Jan. & 20 June 1974
 By: SP6/CJ; Date: 3/10/77

HEADQUARTERS ARMY AIR FORCES
 ROUTING AND RECORD SHEET

2385

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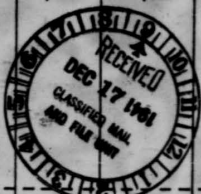
File No.

Note: A line will be drawn across sheet
 after each comment.

Tally No. AAF

SUBJECT: Provisions for Carrying 4,000# bomb on B-17 and B-24 Airplanes.

NO.	FROM	TO	DATE	COMMENTS
1.	AAF O/AS	O/AG	1941 12-12	<p>1. Request information on the status of study requested relative provisions for carrying 4,000# bomb on B-17 and B-24 airplanes in process of manufacture as well as future EB airplanes without interfering with production. The above was discussed in follow-up with O/AG, Materiel (Arm.), December 11.</p> <p>AAF-4-4 JEWES</p>
2.	C/AC	MATL	12/13	<p>For report. TBHm.</p> <p><i>[Signature]</i> C/AS</p>
3.	OGAG (MAT) (4-B-1)	AAF/A-4 THRU C-AC	1941 12-20	<p>1. Information requested in subject study was forwarded to your office by third entry dated December 19, 1941 to your BAR requesting that such a study be made.</p> <p><i>[Signature]</i> Chief, Materiel Division.</p>
4.	C/AC	AAF (A-4.) C/As.	12/22	<p>Forwarded. TBHm</p>



Air AS 471/6
 (47)

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EXECUTIVE
OFFICE

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1941 DEC 18 PM 5 06

MATERIEL DIVISION
AIR CORPS, WAR DEPT.
WASHINGTON, D. C.

SECRET

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DECLASSIFIED
 DOD ltr.
 8 Sep. 8 20 June 1974
 By: [unclear]; Date: 3/2/77


OFFICE OF THE CHIEF OF THE AIR CORPS
ROUTING AND RECORD SHEET

CONFIDENTIAL
 DECLASSIFIED
 2089

(To be filled with correspondence)

Note.—A line will be drawn across sheet after action by each office concerned.

Subject: Cluster Adapters for 30-lb. M5 Fragmentation Bombs.

NO.	FROM	TO	DATE	DATA
1.	OCAC Material Division (4-B-1)	AAF/ C/AS	1941 12/12	<p>1. Reference is made to Routing & Record from your office dated November 13, 1941, subject as above, and Materiel Division's 3rd Entry thereon to your office dated November 28, 1941.</p> <p>2. Attached for your information is a copy of 1st Indorsement from the Chief of Ordnance to Chief of Air Corps indicating that a cluster adapter for a 30-lb. M5 fragmentation bomb has been standardized and procurement initiated.</p> <p style="text-align: right;"><i>TPO</i> O.P.E. Chief, Materiel Division</p>
Incl. Cy of 1st	Ind. fr.	Ord. Dept.	12/10/41	
2.	AAF/ C/AS	OCAC	1941 12/22	<p style="text-align: right;">AAF/A-4 RCC/cas</p> <p>1. Information is desired as to the estimated production schedule of 6128 Cluster Adapters M-2</p>
Incl. Cy of 1st	Ind. fr.	Ord. Dept.	12/10/41	
3.	C/AC	MATL.	12/29	<p style="text-align: center;">  </p>

A-12/27-(37-L)
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F-4091, AC

air 48471.6 (90)

CONFIDENTIAL

OFFICE OF THE CHIEF OF THE AIR CORP

3718

ROUTING AND RECORD SHEET

Note:--A line will be drawn across sheet after each comment.

File No. -----

Tally No. -----

Subject: **Cluster Adapters for 30-lb. M5 Fragmentation Bombs.**

NO.	FROM	TO	DATE	COMMENTS
4.	OCAC (MAT) (4-B-1)	AAF/A-4	1943 1-24	<p>1. Information has been received from the Ordnance Department this date to the effect that an award for cluster adapters suitable for carrying the 30-lb., M5 fragmentation bomb was let as of January 23rd. This order was for a total quantity of 6,943. Complete delivery in accordance with the terms of the contract was promised within fifteen (15) weeks of date of contract. No partial delivery schedule is available at present; however, when this information is obtained it will be forwarded your office.</p> <p>Incl.: n/c Assistant for Procurement Services</p> <p><i>[Handwritten Signature]</i></p> <p style="text-align: right;">61-28 471.8 90</p>

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Form 8, Rev. 8/1/41

DECLASSIFIED
DOD ltr.
2 Jan. & 20 June 1974
By SP-10; Date 3/16/77

~~CONFIDENTIAL~~

O.O. 471.82/6821

Attention: Amm. Div., Ind. Serv.

1st Ind.

Stribling/mfm

War Department, Ordnance Office, Washington, D. C. December 10, 1941.
TO: Office of the Chief of the Air Corps.

1. A cluster adapter for 30-lb., M5 Fragmentation Bombs has been fully developed and was standardized on November 21, 1941, under Ordnance Committee Item 17443. The following recommendations are quoted from this Ordnance Committee Item;

"a. that the Adapter, Cluster, provided with a 3 to 3½ second Delay Element as shown on Drawings 82-3-300 and 82-3-319, for use in clustering six 30 lb. M5 Fragmentation Bombs be standardized and designated as Adapter, Cluster, M2, and Cartridge, M7, 3 second delay.

"b. that the above cluster adapter, provided with the 3 - 3½ second delay cartridge and carrying six 30 lb. M5 Fragmentation Bombs, as shown on Drawing 82-0-54, be standardized and designated as Cluster, Fragmentation Bomb, M2.

"c. that action be taken to cluster all 30 lb. M5 Fragmentation Bombs at Depots.

"d. that this material be placed in the unclassified category."

"Addendum:

"1. Total quantity involved is 6128 Cluster Adapters M2 which is sufficient to assembly 36772 30-lb Fragmentation Bombs, M5 which are on hand, at the rate of six bombs per cluster.

"2. Total cost involved is \$24,512.00, which includes cost of the cluster adapters and assembly of the bombs into clusters in the field.

"3. Availability of funds - none allocated."

2. Funds are being made available to procure the required quantity 6128 Cluster Adapters, M2. Procurement of these adapters will be expedited as much as possible.

For the Chief of Ordnance:

/s/ S. R. Stribling
S. R. Stribling
Lt. Col., Ord. Dept.
Assistant.

COPY

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cl-73

~~CONFIDENTIAL~~

DECLASSIFIED
DOD IIR
8 Jan. & 28 June 1974
By: ~~SP4~~ELC; Date: 3/10/77

WAR DEPARTMENT
OFFICE OF THE CHIEF OF THE AIR CORPS
WASHINGTON

~~CONFIDENTIAL~~
DECLASSIFIED

November 28, 1941

SUBJECT: Cluster Adapters for
30-lb. M5 Fragmentation Bombs.

To: The Chief of Ordnance.

1. It is understood that there are some 50,000 - 30-lb. M5 Fragmentation bombs now in storage and at various Air Corps stations. The only airplanes on which these bombs can be carried and released are those airplanes which have provisions for carrying these bombs in the vertical position. Comparatively few airplanes are at present available with vertical suspension provisions and, therefore, the use of this bomb is limited.

2. In order that these bombs may be released from a greater number of airplanes, and due to the shortage of T. N. T. (making it inadvisable to free issue this bomb), it is requested that cluster adapters be developed and procured in quantities equal to one (1) perevery six (6) 30-lb. fragmentation bombs on hand. Immediately upon the availability of these adapters they should be shipped to the various stations at which the 30-lb. bombs are now on hand in quantities equivalent to the available stock.

3. Every effort should be made to obtain these cluster adapters at the earliest practicable date.

For the Chief of the Air Corps.

/s/ F. I. Ordway, Jr.,
F. I. Ordway, Jr.,
Major, Air Corps
Asst. Exec., Nat. Div.

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AN 471.6 (90)

DECLASSIFIED
 DOD Hqs.
 8 Jan. & 30 June 1974
 Rys. 1000 P.C. Date: 3/1/77

DECLASSIFIED
 8 JAN 1974

Subject: Cluster Adapters for 30-lb. M5 Fragmentation Bombs.

NO.	FROM	TO	DATE	DATA
-----	------	----	------	------

1.	OCAC Material Division (4-E-1)	AAF/ C/AS	1941 12/12	
----	---	--------------	---------------	--

1. Reference is made to Routing & Record from your office dated November 13, 1941, subject as above, and Materiel Division's 3rd Entry thereon to your office dated November 28, 1941.

2. Attached for your information is a copy of 1st indorsement from the Chief of Ordnance to Chief of Air Corps indicating that a cluster adapter for a 30-lb, M5 fragmentation bomb has been standardized and procurement initiated.

S/by
 O.P.E.
 Chief, Materiel Division

Incl.
 Cy of 1st Ind. fr. Ord. Dept. 12/10/41

471697

2.	AAF/ C/AS	OCAC	1941 12/22	
----	--------------	------	---------------	--

AAF/A-4
 BCG/eas

1. Information is desired as to the estimated production schedule of 6128 Cluster Adapters M-2

Dispatched
 DEC 27 1941
 AAG

CS
 C/AS

Incl.
 Cy of 1st Ind. fr. Ord. Dept. 12/10/41

HEADQUARTERS				ARMY AIR FORCES				COORDINATION			
Chief of Staff	Sec y	AAG	A 1	A 2	A 3	A 4	A WFD	A Insp	Budge	Su	...

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DISTRIBUTION STATE 2227

O.O. 471.82/6821
Attention: Am. Div., Ind. Serv. 1st Ind. Stibling/sfm

War Department; Ordnance Office, Washington, D. C. December 10, 1941.
To: Office of the Chief of the Air Corps:

1. A cluster adapter for 30-lb., M5 Fragmentation Bombs has been fully developed and was standardized on November 21, 1941, under Ordnance Committee Item 17443. The following recommendations are quoted from this Ordnance Committee Item:

"a. that the Adapter, Cluster, provided with a 3 to 3 1/2 second Delay Element as shown on Drawings 82-3-300 and 82-3-319, for use in clustering six 30 lb. M5 Fragmentation Bombs be standardized and designated as Adapter, Cluster, M2, and Cartridge, M7, 3 second delay.

"b. that the above cluster adapter, provided with the 3 and 3 1/2 second delay cartridge and carrying six 30 lb. M5 Fragmentation Bombs, as shown on Drawing 82-0-54, be standardized and designated as Cluster, Fragmentation Bomb, M2.

"c. that action be taken to cluster all 30 lb. M5 Fragmentation Bombs at Depots.

"d. that this material be placed in the unclassified category."

"Addendum:

"1. Total quantity involved is 6128 Cluster adapters M2 which is sufficient to assembly 36772 30-lb Fragmentation Bombs, M5 which are on hand, at the rate of six bombs per cluster.

"2. Total cost involved is \$24, 512.00, which includes cost of the cluster adapters and assembly of the bombs into clusters in the field.

"3. Availability of funds - none allocated."

2. Funds are being made available to procure the required quantity 6128 Cluster Adapters, M2. Procurement of these adapters will be expedited as much as possible.

For the Chief of Ordnance:

/s/ S. R. Stibling
S. R. Stibling
Lt. Col., Ord.Dept.
Assistant.

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DECLASSIFIED
DOD, 1974

8 Jan. & 20 June 1974
By: [Signature] Date: 5/14/77

DECLASSIFIED
WAR DEPARTMENT

OFFICE OF THE CHIEF OF THE AIR CORPS
WASHINGTON

November 28, 1941

SUBJECT: Cluster Adapters for
30-lb. M5 Fragmentation Bombs.

To: The Chief of Ordnance.

1. It is understood that there are some 50,000 - 30-lb. M5 Fragmentation bombs now in storage and at various Air Corps stations. The only airplanes on which these bombs can be carried and released are those airplanes which have provisions for carrying these bombs in the vertical position. Comparatively few airplanes are at present available with vertical suspension provisions and, therefore, the use of this bomb is limited.

2. In order that these bombs may be released from a greater number of airplanes, and due to the shortage of T. N. T. (making it inadvisable to free issue this bomb), it is requested that cluster adapters be developed and procured in quantities equal to one (1) per every six (6) 30-lb. fragmentation bombs on hand. Immediately upon the availability of these adapters they should be shipped to the various stations at which the 30-lb. bombs are now on hand in quantities equivalent to the available stock.

3. Every effort should be made to obtain these cluster adapters at the earliest practicable date.

For the Chief of the Air Corps.

/s/ F. I. Ordway, Jr.,
F. I. Ordway, Jr.,
Major, Air Corps
Asst. Exec., Mat. Div.

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DOD ICS
8 Jan. 29 June 1974
By: SP4/AG Date: 3/27/77

WAR DEPARTMENT

THE ADJUTANT GENERAL'S OFFICE LFL/ved-1712.

WASHINGTON

December 17, 1941.

IN REPLY AG 400
REFER TO (12-15-41)MSC-G

~~SECRET~~
DECLASSIFIED

SUBJECT: Bombs for the Philippines.

Auth: T.A.G.

Initials: Dev

TO: Chief of the Army Air Forces.

Date: DEC 17 1941

You are authorized to direct shipment of bombs to the Philippines as listed in Paragraph 3, of amended memorandum, December 15, 1941, AAF/A-4/471, subject as above, comeback copy inclosed.

By order of the Secretary of War:

[Signature]
Adjutant General.

1 Incl.
Comeback cy of Memo
to C of S, 12-15-41,
AAF/A-4/471.

Hq. Army Air Forces
DEC 18 1941
AAG Received

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AAF/A-4
MFS/mwb

DECLASSIFIED
DOD ltr.
8 Jan 8 23 June 1974
BY *AL* DATE *3/12/77*

AAF/A-4/471

December 15, 1941.

MEMORANDUM FOR THE CHIEF OF STAFF:

Subject: bombs for the Philippines.

I. Discussion.

1. At the outbreak of hostilities there were on hand in the Philippines approximately twenty six hundred tons of demolition bombs in addition to some odds and ends of fragmentation and other types of bombs. Since no reports have been received of any large scale destruction of bombs due to enemy action, the quantities still available in all likelihood are in excess of two thousand tons.

2. It is estimated that unless additional airplanes are gotten to the Philippines, the bombs on hand ~~is~~ ^{are} sufficient to last the combat life of the remaining airplanes.

3. If additional airplanes are sent to the Philippines additional bombs will be required. It is recommended that the following bombs be shipped either to the Philippines or Australia if any effort is made to provide additional airplanes there. The quantities specified are dictated by the quantities available and that can be gotten to the West Coast in the next ten days, rather than by computations based on approved mission rates and type distribution for the airplanes involved.

~~462~~ 462 2000# bombs (38 now loaded on freight cars)
 1000# bombs (126 now loaded on freight cars)
 500# bombs (at Savannah, Ill.)
 2,360 300# bombs (Now being loaded on freight cars at Ogden)
 14,000# 100# bombs incendiary (at Ogden, Utah).
 50,000# 4# bombs incendiary (Now at Salt Lake)

Note - If space is a limiting factor, these bombs should be given last priority.

HEADQUARTERS		ARMY AIR FORCES			COORDINATION					
Chief of Staff	Sec'y of Staff	A.A.G.	A-1	A-2	A-3	A-4	A-WPD	A-Insp.	Budget	Statistics

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II. Action Recommended.

The Secretary of War directs that the Chief of the Army Air Forces is authorized to direct the shipment of the bombs listed in paragraph 3 hereof to the Philippines.

III. Commentaries.

A. G. of S., G-3 { }
A. G. of S., WPD { }

For the Chief of the Air Staff:

JOHN Y. YORK JR.
Major Gen. Quynson,
Colonel, Air Corps,
Assistant Chief of the Air Staff, A-4.

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DEC 10 1941
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HEADQUARTERS ARMY AIR FORCES - COORDINATION										
Chief of Staff	Secy of Staff	A.A.G.	A-1	A-2	A-3	A-4	A. WPD	A. Insp.	Budget	Statistics
	JTC					WMS				

- 2 -
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DOD ltra.
8 Jan. & 20 June 1974
By: *SMH/CLC*; Date: *3/10/77*

AAF/A-4
RCC:sz

Written 13-13-41

CONFIDENTIAL

MEMORANDUM FOR THE ASSISTANT CHIEF OF STAFF, G-4, W. D.

SUBJECT: Truncation and Suspension Bands

1. It is requested that the Chief of Ordnance be directed to procure as soon as practicable truncation and suspension bands in the following quantities. These are in addition to the previous quantities requested, and are to meet further needs of the Air Force and the Navy for this material.

471.6
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- a. Truncation bands for the 1000¢ general purpose, demolition and semi-armor piercing bombs, 2½ per cent of the total bomb requirements.
- b. Truncation bands for the 800¢ general purpose, demolition and semi-armor piercing bombs, 2½ per cent of the total bomb requirements.
- a. Suspension bands M-30 for the 100¢ demolition and chemical bombs, 2½ per cent of the total bomb requirements.

NOTE: All bombs under procurement will not need bands.

2. Shipping instructions for this material will be furnished at a later date.

3. The Chief of Ordnance (Col. Kutz) has been requested informally to contract immediately for 8000 - 1000¢ M2; 10,000 - 800¢ M1; and 20,000 - 100¢ M1 bands in anticipation of this requirement.

4. Estimate cost of this material is \$800,000.

For the Chief of the Air Staff:

HEADQUARTERS				ARMY AIR FORCES				COORDINATION			
Chief of Staff	Secy Air Staff	AAG	A1	A2	A3	A4	A WPD	A Insp	Budget	Sc	Statistics

Edgar P. Sorensen
Colonel, Air Corps,
Assistant Chief of the Air Staff, A-4

AAF 39

CONFIDENTIAL

WAR DEPARTMENT
 Headquarters Army Air Forces
 Office Chief of the Air Staff
 Washington, D. C.

Date. . . *11 Dec 41*

TO:	FOR:
Chief, A-4 Division	Information
Equipment Section	Coordination
Facilities Section	Preparation of reply
Colonel Sorensen	Necessary Action
Lt. Colonel York	Note and Return
Lt. Colonel Schneider	Confer with
Lt. Colonel Crumrine	Recommendation
Major Perrin	File
Captain Katzman	Circulation
Captain Donoghue	
Captain O'Shea	
Lieutenant Burt	
Mr. Gibson	
Miss Hammer	

Attached papers for file
Please find out (A-3
can probably tell you) what
aircraft units are due to go
to Iceland and what munitions
should go with them. gpp

EDGAR P. SORENSEN
 COL, AIR CORPS.
 A-4 Division
 AIR STAFF

file
rb

AAF-82-1

12/10/41

Col. Sorensen

a No bombs
are in Iceland.

*6 35-2000**
are located at
Muroc Lake and
Hamilton

12/11/41

A-3 advised the
undersigned this date
that no bombs were
scheduled for Iceland
Robb

I-20-71A

WAR DEPARTMENT
Headquarters Army Air Forces
Office Chief of the Air Staff
Washington, D. C.

Date. 6 Dec 41

TO:

FOR:

___ Chief, A-4 Division
___ Equipment Section
___ Facilities Section

___ Information
___ Coordination
___ Preparation of
 reply

___ Colonel Sorensen
___ Lt. Colonel York
___ Lt. Colonel Schneider

___ Necessary Action
___ Note and Return
___ Confer with

___ Lt. Colonel *Crumrine*

___ Recommendation
___ File
___ Circulation

___ Major Perrin
___ Captain Katzman
___ Captain Donoghue
___ Captain O'Shea
___ Lieutenant Burt
___ Mr. Gibson
___ Miss Hammer

EDGAR P. SORENSEN,
COL, AIR CORPS.

A-4 Division
AIR STAFF

AAF-82-1

DECLASSIFIED
DOD Mem.
8 Jun. & 20 June 1974
By: ~~TS/TC~~; Date: 3/29/77

~~CONFIDENTIAL~~

WAR DEPARTMENT
OFFICE OF THE CHIEF OF THE ARMY AIR FORCES
WASHINGTON

December 5, 1941.

MEMORANDUM FOR COLONEL SORENSEN:

Subject: 2000# Old Mark Series Type Bombs.

1. Suggest that the 35 old Mark Series type bombs now in the Air Force Combat Command be left as is; as it is very probable that the B-18 and B-17's capable of carrying these bombs will be gradually withdrawn from outlying stations and replaced with later types of airplanes not capable of using this bomb.

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note

1 Incl.
R&R abv. subj.
12/1/41 frm. A-3
to A-4.

Richard C. Coupland,
Lt. Col., Ordnance Dept.(A.C.)

Col. Coupland
Are the 35 in one place or scattered around?
How many 2000# bombs are now in Iceland?

Est

~~CONFIDENTIAL~~

HEADQUARTERS ARMY AIR FORCE

ROUTING AND SHEET

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~~CONFIDENTIAL~~
DECLASSIFIED

8 Jan. & 29 June 1974
Sys. 1000 C; Data. 3/8/77

Note. -- A line will be drawn across sheet after each comment.

File No.
Tally No. AAF

SUBJECT: 2000# Old Mark Series Type Bombs.

AAF/A-4
RCC/AMH

NO.	FROM	TO	DATE	COMMENTS														
1.	AAF A-4	AAF A-3	1941 11/26	<p>1. The following is a list of current type airplanes capable of carrying the Old Mark series type 2000# bomb and the present location of these bombs.</p> <p style="text-align: center;"><u>Airplanes (information furnished by Mat.Div.)</u></p> <p>B-10 seriesone external. B-12 " " " " XB-14 " " " B-18 seriestwo internal. B-17, B-17A, B-17Btwo external. XB-19.eight internal plus ten external.</p> <p style="text-align: center;"><u>Bomb Distribution (information furnished by Ch.of Ord.)</u></p> <table style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Location</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Hawaii</td> <td>136</td> </tr> <tr> <td>Panama</td> <td>11</td> </tr> <tr> <td>P.I.</td> <td>116</td> </tr> <tr> <td>P.R.</td> <td>16</td> </tr> <tr> <td>A.F.C.C.</td> <td>35</td> </tr> <tr> <td>TOTAL ON HAND</td> <td>319</td> </tr> </tbody> </table> <p>2. Reallocation of these bombs may be desired due to changes in allocation of airplanes. Your recommendations are requested.</p> <p style="text-align: right;"><i>KPS C/A-4 am</i></p>	Location	Number	Hawaii	136	Panama	11	P.I.	116	P.R.	16	A.F.C.C.	35	TOTAL ON HAND	319
Location	Number																	
Hawaii	136																	
Panama	11																	
P.I.	116																	
P.R.	16																	
A.F.C.C.	35																	
TOTAL ON HAND	319																	
2	AAF A-3	AAF A-4	12/1	<p style="text-align: right;">AAF/A-3 HSV-ds</p> <p>It is recommended that the 35 now in the hands of the AFCC be re-allocated to Newfoundland. The distribution of the remainder is believed to be correct.</p> <p style="text-align: right;"><i>14-111-3</i></p>														

(Do not use reverse side)
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F-0071, AC. Rev. 8/10/41

DECLASSIFIED
DOD ltr.
8 Jan. & 20 June 1974
By: [signature]; Date: 3/14/77

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DECLASSIFIED

AAF/A-4
JYY/mwb
wrtn 12/11/41

DEC 11 1941

MEMORANDUM FOR THE CHIEF OF STAFF:

Subject: Availability of Bombs in the Far East Outside the Philippine Islands.

1. There are now available in the Far East outside the Philippine Islands the following bombs with necessary accessories:

<u>Location</u>	<u>Number</u>	<u>Type</u>
Darwin	560	500-lb. bombs
Morotai	280	500-lb. bombs

2. In addition it was planned to ship on December 11th for Singapore from Manila 560 500-lb. bombs to arrive December 16th and 280 500-lb. bombs likewise from Manila to Morotai arrived December 24th. In view of the situation it is doubtful that these shipments were made.

3. There is no record of any bombs being shipped to any parts in Borneo or Dutch East Indies. The Commanding General, U.S. Army Forces in the Far East was not requested to make any shipments to Borneo or Dutch East Indies. There is no record of the Commanding General, U. S. Army Forces in the Far East having made such shipments upon his own initiative.

H. H. ARNOLD,
Major General, U.S.A.
Chief of the Army Air Forces

1711 out from Gen Arnolds office

HEADQUARTERS		ARMY AIR FORCES			COORDINATION					
Chief of Staff	Sec'y Air Staff	A.A.G.	A-1	A-2	A-3	A-4	A-WPD	A-Insp.	Budget	Statistics

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DOD Itr.
8 Jan & 20 June 1974
By: [unclear] Date: 3/10/77

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DECLASSIFIED

WAR DEPARTMENT
OFFICE OF THE CHIEF OF THE ARMY AIR FORCES
WASHINGTON

100 WAR DEPT
471.623/1848
DEC 15 1941

DEC 13 1941

MEMORANDUM FOR THE CHIEF OF ORDNANCE:

Subject: Disposition of 84 Marked Series, 2,000-Pound Bombs.

1. Confirming telephone conversation with Lt. Col. Rice this date, it is requested that 84 marked series (old style) 2000-pound bombs now at Benicia Arsenal after having been intercepted en route to a foreign possession be reshipped from Benicia as follows:

- 1/3 to Newfoundland
- 1/3 to Panama
- 1/3 to Delaware Arsenal

See II

For the Chief of the Army Air Forces:

[Signature]
EDWARD P. CURTIS,
Major, Air Corps,
Secretary of The Air Staff

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air 471.6 28

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1st Ind.

Tiner/is

OO 471.623/1848
Attn: Amm. Sup. Div., F.S.
Air AS 471.6 (84)

War Department, Ordnance Office, Washington, D.C., December 31, 1941.
To: Chief of the Army Air Forces, Washington, D.C.

1. On subsequent instructions from his office, it is advised that the following disposition was made of the 84 Marked series (old style) 2,000-lb. Bombs, mentioned in basic letter:

- 40 to Geiger Field, Spokane, Washington, East Calena.
- 44 to Muroc Lake Bombing Range, March Field, California.

For the Chief of Ordnance:

P. M. Selken
 P. M. SELKEN,
 Major, Ordnance Dept.,
 Executive Assistant.

*File
 [Signature]*

Am 08 471.6 (84)

SECRET

Am 08 471.6 (84)

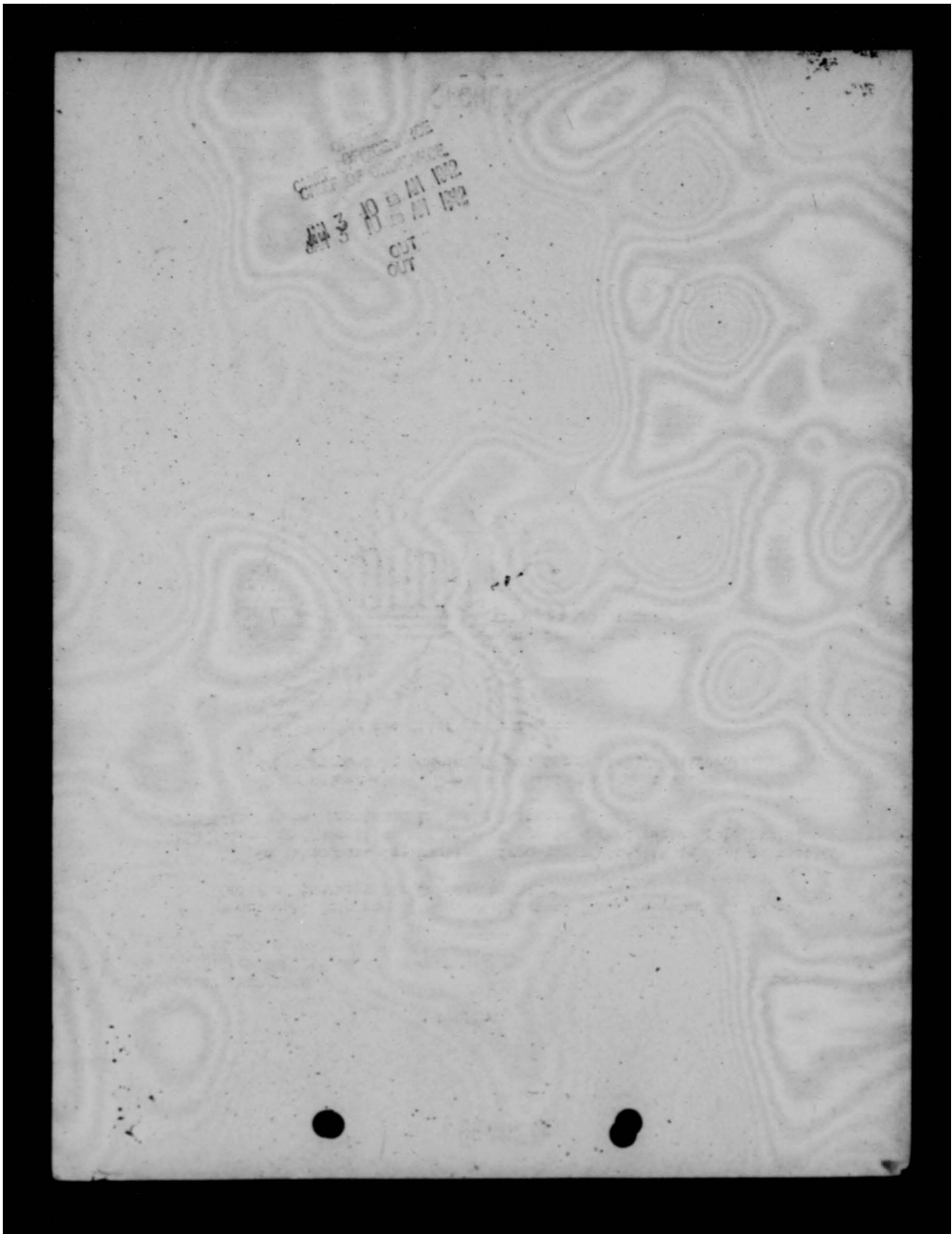
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OFFICE
CHIEF OF ORDNANCE
DEC 15 11 35 AM 1941

IN

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DOD ITR
9 Feb. & 20 June 1974
BY SP-1 CJC Data 3/2/77

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AAF/A-4
MFS

DEC 11 1941

MEMORANDUM FOR THE ASSISTANT CHIEF OF STAFF, G-4

SUBJECT: Disposition of Bombs at Benicia

1. Lt. Col. A. S. Rice, Office, Chief of Ordnance, notified the A-4 Division, Air Staff (Lt. Col. Schneider) about 8:00 P.M., December 11, 1941, that the following bombs were on hand at Benicia unlighted, and requested disposition as Benicia was overloaded.

- 28 - 6000 bombs, Next series
- 247 - 1000 bombs (A-28)

2. To provide immediate action, Lt. Col. Schneider released the bombs to the Commanding General, Air Force Combat Command (Colonel Ison).

3. It is requested that the above bombs be released to the Chief of the Army Air Forces in order to formalize the transaction.

For the Chief of the Air Staff:

DEC 11 1941
AAG

Edgar P. Sorensen,
Colonel, Air Corps,
Assistant Chief of the Air Staff, A-4.

EE

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COPY FOR S/AS

41-24716 (8)

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DOD Hqs.
8 Feb. & 20 June 1974
By SP5/ELG, Date 3/16/77

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2766

SUBJECT: Disposition of Bombs at Benicia.

AG 471.6 (12-11-41)MSC-D 1st Ind. LFL/kls - 1705.

War Department, A.G.O., December 27, 1941. To: Chief of the Army Air Force.

1. Returned without action at the informal request of your office (Lt. Col. Schneider).

By order of the Secretary of War:

[Signature]
Adjutant General.

File AG 471.6 (81)

RECEIVED
DEC 31 1941

Zypher
Transfer of responsibility for control of bombs from US + A-4 bombers this letter unnecessary. Lt was therefore recalled
[Signature]

818

DECLASSIFIED

SECRET

AG 471.6 (81)

DECLASSIFIED
DOD Item
8 Feb. & 20 June 1974
By: SP-1 J.C. Date: 3/10/77

WAR DEPARTMENT
OFFICE OF THE CHIEF OF THE ARMY AIR FORCES
WASHINGTON

DEC 11 1941

~~SECRET~~

MEMORANDUM FOR THE ASSISTANT CHIEF OF STAFF, G-4

SUBJECT: Disposition of Bombs at Benicia

1. Lt. Col. A. S. Rice, Office, Chief of Ordnance, notified the A-4 Division, Air Staff (Lt. Col. Schneider) about 8:00 P.M., December 11, 1941, that the following bombs were on hand at Benicia unobligated, and requested disposition as Benicia was overloaded.

- 38 - 600# bombs, Mark series
- 5147 - 100# bombs (M-30)

2. To provide immediate action, Lt. Col. Schneider released the bombs to The Commanding General, Air Force Combat Command (Colonel Lynn).

3. It is requested that the above bombs be released to the Chief of the Army Air Forces in order to formalize the transaction.

For the Chief of the Air Staff:

Edgar P. Sorensen

Edger P. Sorensen,
Colonel, Air Corps,
Assistant Chief of the Air Staff, A-4.

DEC 12 1941

22396-95



IN IN

G-4 DIVISION
WAR DEPT GEN. STAFF

DECLASSIFIED
~~SECRET~~

(47)
28
471.6 (12-11-41)

air 471.6 (30)

~~SECRET~~

2519

SUBJECT: Bombs for Hawaii.

AG 471.6 (12-11-41)MSC-D

1st Ind.

EPM/gb-1705

War Department, A.G.O., December 26, 1941. - To: Chief of the Army Air Forces.

Returned without action at the informal request of your office (Lt. Col. Schneider).

By order of the Secretary of War:

[Signature]
Adjutant General.

*A-F. - File
in view recent
War Department action
transferring responsibility
for bombs to AAF, this
letter is dropped*

*471.6
(28)*

DECLASSIFIED
~~SECRET~~ AG 471.6 (28)

DECLASSIFIED
E. POD Inc.
6 Jan. & 23 June 1974
By: SP-10; Date: 3/27/77

WAR DEPARTMENT
OFFICE OF THE CHIEF OF THE ARMY AIR FORCES
WASHINGTON

DECLASSIFIED
SECRET

December 11, 1941.

MEMORANDUM FOR THE ASSISTANT CHIEF OF STAFF, G-4:

SUBJECT: Bombs for Hawaii

1. The secret radio No. 1073 from the Commanding General, Hawaiian Department, requested immediate shipment of 3360 300# bombs. Shipment of 10,000 300# bombs was approved by the Chief of Staff, December 9, 1941, with 1300 to go at once. A subsequent paper modified this approval to provide that not less than 1300 go at once.
2. There are 5,000 300# bombs complete with fuses at the Savannah Ordnance Depot. It is requested that The Chief of Ordnance be instructed to ship 2060 of these bombs to Benicia as quickly as possible in an effort to get them there in time to be loaded with the 1300 bombs that are there now. The remainder of the lot of 5,000 (2940) should be shipped to Benicia for the inclusion in the next shipment of bombs to Hawaii.

470284471.6 (12-11-41)

For the Chief of the Air Staff:

Edgar P. Sorensen

Edgar P. Sorensen,
Colonel, Air Corps,
Assistant Chief of the Air Staff, A-4.

DEC 11 1941

33822



IN IN

G-4 DIVISION
WAR DEPT. GEN. STAFF

DECLASSIFIED

470284471.6 (88)

DECLASSIFIED
DDO ltr.
* Jan. & 20 June 1974
By: [unclear] Date: 7/19/77

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DECLASSIFIED

1852

WAR DEPARTMENT
OFFICE OF THE CHIEF OF THE ARMY AIR FORCES
WASHINGTON

DEC 10 1941

MEMORANDUM FOR THE CHIEF OF STAFF:

Subject: Bombs for Hawaii.

1. Memorandum for the Chief of Staff dated December 9, 1941, subject: "Proposed Reinforcements for Hawaii", (approved by Chief of Staff, December 9, 1941) provides for the following bombs:

Item	Requested	To be Released
2000#	750	445
1000#	3000	474
500#	6000	6000
300#	1000	1000

471.6.29

Of the above bombs, the memorandum states the following are immediately available on the Gibson.

- 115 - 2000#
- 387 - 1000#
- 163 - 1100#
- 5481 - 500#
- 1300 - 300#

Since the memorandum, 99 additional 2000# bombs have arrived at Benicia and are available for loading. Further Ordnance figures show 557 600# bombs (M-32) and 172 600# bombs ("Mark" series) are at Benicia on a boat.)

2. The quantities authorized for release should be changed as follows:

Item	Previously Authorized	Now Authorized
2000#	445 (M-34 only)	445 (215 to be shipped at once)
1100#	0	163
1000#	474	387
600#	0	729
500#	6000	5481 (Not less than)
300#	10,000(1300 at once)	10000 (1300 at once)

WBS-36, 12/12

~~SECRET~~
DECLASSIFIED

Am AB 471-6(29)

SECRET
DECLASSIFIED

3. Concurrences.
A. C. of S., WPD

(RUE)

For the Chief of the Air Staff

C. E. Duncan

C. E. DUNCAN
Lt. Col., Air Corps,
Secretary of the Air Staff

DEC 11 1941

APPROVED

By Order of the Secretary of WPD

R. C. MOORE

Deputy Chief of Staff

Walter B. Smith

By WALTER B. SMITH
Col. U.S.C., Sec. W.D.C.

HQ. AIRC. AIR FORCE

DEC 15 1941

AAG Received

back
from A4. Col. Schneider
states action has been taken.

NOTED-DEPUTY CHIEF OF STAFF

Mason

DECLASSIFIED

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003/17894-49

DECLASSIFIED
DOD Item
8 Jan. & 20 June 1974
By SP-10/AC; Data 2/10/77

~~CONFIDENTIAL~~

DECLASSIFIED

AAF/A-4
WES/mhh

(Written Dec. 9, 1941)

DEC 10 1941

MEMORANDUM FOR THE CHIEF OF STAFF:
(Attention Lt. Col. J. G. Holmes).

Subject: Priority in bomb loading for December.

1. Confirming telephonic instructions to your office, (Mr. Schneider), it is the desire of the Army Air Forces that priority be given the loading of general purpose demolition bombs set up for the month of December as follows:

- 1st 20000
- 2nd 10000
- 3rd 5000
- 4th 5000
- 5th 1000

2. It is not desired that any adjustment to be made in conformity with the priority above be of such a nature as to materially reduce the total tonnage of bombs currently scheduled to be made available to the Army Air Forces.

For the Chief of the Army Air Forces:

DEC 11 1941
AAS

ERNEST F. COOPER,
Major, Air Corps,
Special Agent in Charge, Air Staff

4716
84

HEADQUARTERS		ARMY AIR FORCES				COORDINATION				
Chief of Staff	Sec'y of Staff	A.A.G.	A-1	A-2	A-3	A-4	A-WPD	A-Inspr.	Budget	Statistics
	<i>[Signature]</i>				<i>[Signature]</i>	<i>[Signature]</i>				

DECLASSIFIED

AAF-39

DECLASSIFIED
 DOD ltr.
 4 Jan. & 20 June 1974
 By: *[Signature]* Date: *3/19/77*

AAF/A-4
 AW/lml

DECLASSIFIED

Written January 6, 1942.

~~RESTRICTED~~

Subject: Incendiary Investigation by National Defense Research Committee.

1st Ind.

War Department, Headquarters, Army Air Forces, Washington, D. C.
 January 10, 1942 To: The Chief of Chemical Warfare Service.

1. In view of the changed conditions since the submission of the original request it is not considered advisable to try to carry out the tests at Westover Field.

2. It is suggested that these tests be made at Edgewood Arsenal.

For the Chief of the Army Air Forces:

Incl. *n/c*

HEADQUARTERS		ARMY AIR FORCES				COORDINATION	
Chief of Staff	Sec'y Air Staff	A.A.G.	A-1	A-2	A-3	A-4	A-5
						<i>[Signature]</i>	<i>[Signature]</i>
						<i>[Signature]</i>	<i>[Signature]</i>

~~RESTRICTED~~
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Am 204716 (77)

AAF-39

DECLASSIFIED
DOD Hqs.
8 Aug. & 20 June 1974
By: ~~SP-1~~ DLO; Date: 3/14/77

~~RESTRICTED~~

6

November 29, 1941

CWS 334.8/192
(11-26-41)

Subject: Incendiary Investigation by National Defense Research Committee.

To: The Chief of the Air Corps.

1. This office has been requested to arrange for assistance to the personnel of the Monsanto Chemical Company, Springfield, Mass. in connection with the work that company is doing under contract to the National Defense Research Committee on a problem relating to incendiary bomb design. The Monsanto Chemical Company is endeavoring to develop a cellulose nitrate which will be strong enough to serve as a casing for a 2-lb. incendiary bomb.

2. It is understood that informal contact has been made with the Commanding Officer of Westover Field, Chicopee Falls, Mass. and with Lt. Col. M. F. Schneider of the Office of the Chief of the Air Corps by Mr. Stevenson of the N.D.R.C., and that he has been informed that a limited number of field tests can be carried out at Westover Field by the Air Corps to assist the N.D.R.C. in determining whether or not plastic cases will be satisfactory for the purpose intended.

3. It is therefore requested that such assistance as can be rendered by the Air Corps to the Monsanto Chemical Company on this problem at Westover Field be given. It is to be understood that no loaded incendiary bombs are to be dropped and that the field tests desired are of a preliminary nature to determine whether or not the inert bomb cases will withstand dropping from an airplane in flight.

4. The work covered by this request is being carried out by the N.D.R.C. under the title, N.D.R.C. Project CWS-21, Study of Incendiary Materials.

~~RESTRICTED~~

~~DECLASSIFIED~~
~~RESTRICTED~~

6

CMS 334.8/192 (11-29-41).
To: The Chf. A C.

5. For your information as to the work being carried out under this project, there are attached hereto two (2) copies of Chemical Warfare Service Progress Report No. 62 covering the work under way by the National Defense Research Committee in connection with the above mentioned project.

For the Chief of the Chemical Warfare Service:

M. E. BARKER
Lt. Col., C.W.S.
Chief, Technical Service:

1 Incl. (in dup.)
Copies No. 5 and 6
of Progress Report
No. 62.

-2-

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~~RESTRICTED~~

AM 234716 (77)

DECLASSIFIED
 DOD Ltr.
 8 Jan. & 20 June 1974
 Rev. 10/10/77

OFFICE OF THE CHIEF OF THE AIR IPS

ROUTING AND RECORD SHEET

1817

Note.--A line will be drawn across sheet after each comment.

DECLASSIFIED
 RESTRICTED

File No. -----

Tally No. -----

Subject: Misdirected Correspondence.

NO.	FROM	TO	DATE	COMMENTS
1	Insp. Div.	Exec.	1941 12/1	The attached letter is returned as a matter not pertaining to the Inspection Division. It is believed this letter should have been addressed to the Chief of the Army Air Forces (A-4 Division). M.M.G. B.M.G., Chief, Inspection Div. X-BHM:br
2.	C/AC	Int. Div.	1941 12/2	1. For appropriate action. Incl. Ltr Warfare
3.	OCAC Mat. Div. (4-E-1)	AAF/ A-4	1941 12/9	1. Forwarded as a matter for your Division. F.P.D. O.P.B. Chief, Materiel Division Incl. n/c

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Page No. -----

W 4071, AC, Rev 8/1/60

an a 2471.6 (77)

DECLASSIFIED

DOD Form 8 Jan. 6-30 June 1974
By: ~~SP-1~~ Date: 3/21/77

SECRET

WAR DEPARTMENT GENERAL STAFF
DISPOSITION FORM

2091

AG
G- 4/27573-16

SUBJECT: Incendiary Bombs for Plum.

Date DEC 15 1941

TO:	C/S	G-1	G-2	G-3	G-4	Air Staff	
	TAG	WPD	USW	ASW	ASWA	CG	Army
	AC	BLP	BOWD	ExRA	NGE	CG	Army Corps
	INF	FA	CAV	CA	ENGR	CG	CA
	ORD	QMG	CSO	SG	FIN	CG	Dept.
	GHQ	JAG	CWS	IG	B/PR	I. Ch/AAF	

FOR:	<input checked="" type="checkbox"/> S/W directs	Comment or concurrence	Necessary action
	Draft of reply	Remark and recommendation	Information for reply
	Direct reply	Inviting attention to	Ind. approved
	Approved	See notation of	Primary interest
	Disapproved	Information	Notation and return
	File	Consult	Noted

By: Spcl Msg Radio Air Mail Immed Action Ltr Letter

I. 1. Returned without action at the informal request of the Chief of Army Air Forces (Lt. Col. Schneider).

BREHON SOMERVELL,
Brigadier General,
Assistant Chief of Staff.

Brehon Somervell

R. A. CASE
Lt. Colonel, General Staff,
Chief, Requirements Section

Incl:
Memo fm OCh/AAF
(12-10-41)

FOR RECORD ONLY:

- In a memo for G-4, Dec. 10, 1941, Ch/AAF requests that orders be issued to ship the first available 50,000 bombs, incendiary, 4-lb., to Plum as soon as practicable.
- Because of the present emergency and the condition of shipping Ch/AAF requests that the memo be returned without action.

RECEIVED
DEC 16 1941
WAR DEPARTMENT
GENERAL STAFF

Copy for the Chief of Army Air Forces

~~COPY FOR~~

~~THE ASSISTANT GENERAL~~

SECRET

OUT-G-4 DEC 16 1941.

208471-6 (76)

DECLASSIFIED
DOD Hqs.
4 Jan. & 20 June 1994
By: [unclear], Data: 3/10/77

WAR DEPARTMENT
OFFICE OF THE CHIEF OF THE ARMY AIR FORCES
WASHINGTON

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DEC 10 1941

MEMORANDUM FOR: Assistant Chief of Staff, G-4

SUBJECT: Incendiary Bombs

1. Request that orders be issued to ship the first available 50,000 rounds of ~~1/2~~ Incendiary Bombs (substitute for ~~1/2~~ Magnesium Bomb) to Plum as soon as practicable.

*Letter withdrawn
Current situation
involves plan
Admiral*

For the Chief of the Army Air Forces:

E. P. Curtis

EDWARD P. CURTIS,
Major, Air Corps,
Secretary of The Air Staff

DEC 10 1941

27573-16



IN IN

G-4 DIVISION
WAR DEPT GEN STAFF

air 28471-6 (76)

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DECLASSIFIED
DOD Mem.
8 Jan. & 20 June 1974
By: [redacted]; Date: 3/12/77

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AAF/A-4
RCG/MS

(written 12-8-41)

DEC 1 0 1941

MEMORANDUM FOR: Assistant Chief of Staff, G-4

SUBJECT: Incendiary Bombs

1. Request that orders be issued to ship the first available 50,000 rounds of ~~A-4~~ Incendiary Bombs (substitute for ~~A-4~~ Magnesium Bomb) to FIRM as soon as practicable.

For the Chief of the Army Air Forces

EDWARD P. CURTIS,
Major, Air Corps,
Secretary of The Air Staff

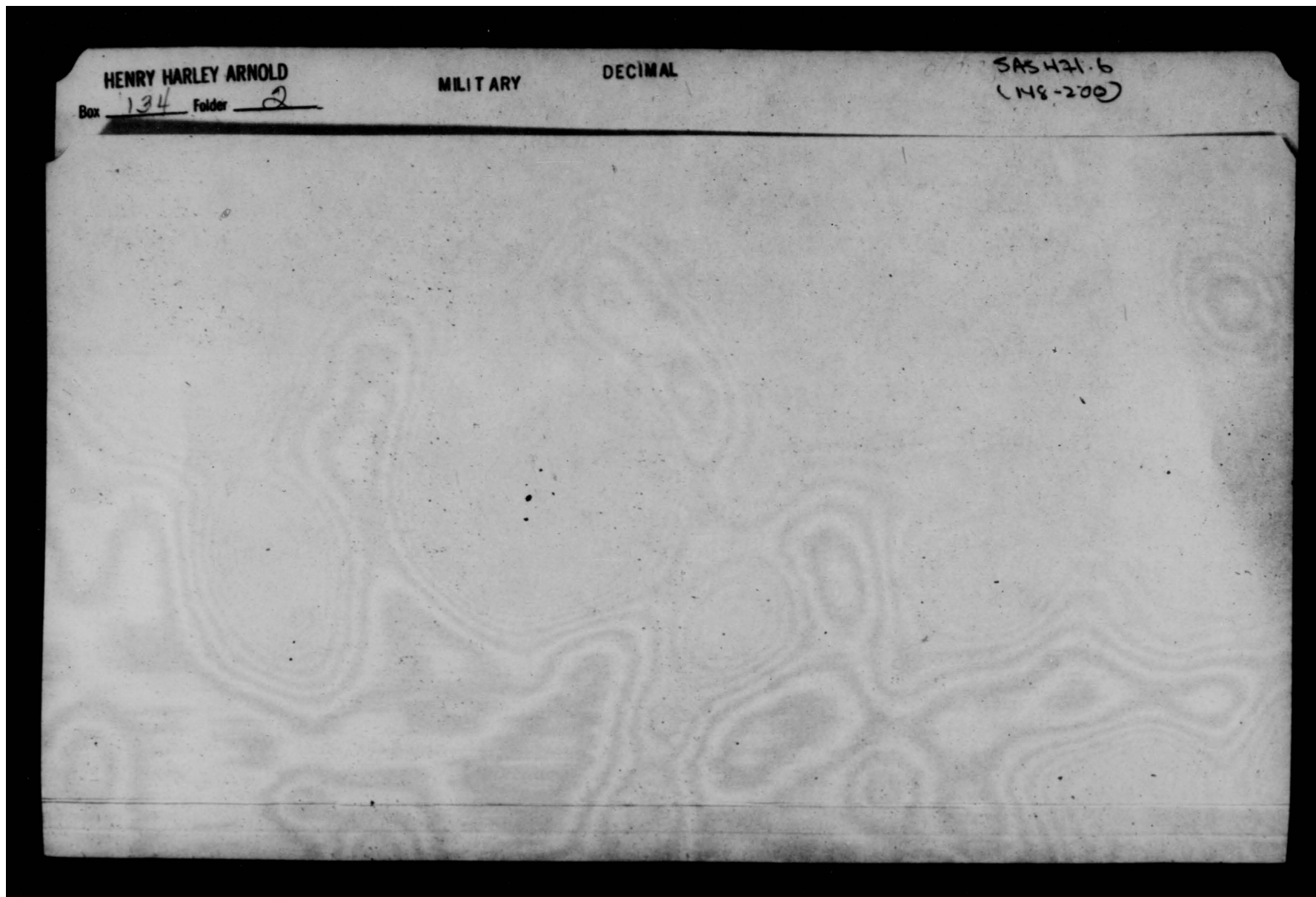
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HEADQUARTERS ARMY AIR FORCES - COORDINATION											
Chief of Staff	Secy of Air Staff	A.A.G.	A-1	A-2	A-3	A-4	A-WP	A-Inspr.	Budget	Sc-	Statistics
	SPC					EM					

AAF-39

Carls 307.66



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SAS 471.6- Section 2
Case ~~76~~ to 200
146

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13 Dec 1977
146

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8 FEB 25 1974
3/1/77

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~~SECRET~~

AAF/A-4-239
MPS/mhh

February 22, 1942.

MEMORANDUM FOR THE CHIEF OF CHEMICAL WARFARE SERVICE:

Subject: Special Shipment of Bombs.

1. It is desired that the fifty 500-lb. clusters of incendiary bombs produced by your service as the result of previous requests be shipped to Benicia Arsenal, San Francisco, California, to arrive not later than March 12, 1942, if the necessary arrangements can be made with the Chief of Ordnance.
2. Each package in the shipment should be clearly marked "For Project Duclol". The shipment should be kept intact at Benicia, subject to the order of Lieutenant Colonel James H. Deolittle, Air Corps, who will provide disposition instructions.
3. It is requested that the Assistant Chief of Air Staff, A-4 (Colonel Schneider, Extension 4848) be notified by telephone when the shipment is made.
4. The foregoing generally confirms instructions issued by the Assistant Chief of the Air Staff, A-4 to your office (Colonel Schneider to Col. Gillet).

471.6
200

For the Chief of the Air Staff:

T. J. HANLEY, JR.,
Colonel, Air Corps,
Assistant Chief of the Air Staff, A-4.

HEADQUARTERS		ARMY AIR FORCES					COORDINATION				
Chief of Staff	Sec'y Air Staff	A.A.G.	A-1	A-2	A-3	A-4	A-WPD	A-Inspr.	Budget	Sec-Fistica	

~~SECRET~~

AAF-39

471.6 200

DECLASSIFIED
DOD Use
8 Jan. & 20 June 1974
By: [unclear] Date: 7/27

DECLASSIFIED

AAF/A-4
EBB/mlrb

(Written February 15, 1942)

FEB 23 1942

471.6 (199)

MEMORANDUM FOR THE CHIEF OF ORDNANCE:

Subject; Suspension of Procurement of 23 lb.
Parachute Fragmentation Bombs.

1. Authority is granted the Ordnance Department to suspend procurement of the 420,000 bombs, fragmentation, 23 lb. parachute, M 40 as approved for expenditure on line 10, page 5, Expenditure Program Pertaining to the Fourth Supplemental National Defense Appropriation, FY, 1942.

2. This action is taken pending the development of cluster adapters for this bomb, since cellular racks are no longer installed in airplanes now in production.

FOR THE CHIEF OF THE ARMY AIR FORCES:

WM. W. DICK
Col., A.C.D.F.
Air Materiel Department

FEB 23 1942
ASG

HEADQUARTERS		ARMY AIR FORCES				COORDINATION				
Chief of Staff	Sec'y of Staff	A.A.G.	A-1	A-2	A-3	A-4	A-WPD	A-Insp.	Budget	Statistics
	WJF					WJF				

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AAF-39

See AS 471.6 (199)

HEADQUARTERS UNITED STATES AIR FORCES
~~CONFIDENTIAL~~
 ROUTING AND RECORD SHEET

DECLASSIFIED
 DOD Hqs.

8 Jan. & 20 June 1974
 By: ~~SP-1~~ C; Date: 3/14/77

Note. -- A line will be drawn across sheet
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File No.

Tally No. AAF/A-4/2/5

SUBJECT: Suspension of Procurement of 23 lb. Parachute Fragmentation Bombs.

NO.	FROM	TO	DATE	COMMENTS	AAF/A-4 ERE/alm
1.	AAF A-4	AAF AAG	1942 2/16	<p>1. Pending development of cluster adapters for the 23 lb. fragmentation bomb, it is desired to suspend in part procurement of the subject bomb.</p> <p>2. This suspension of production does not affect the procurement of 568,499 of the subject bomb shown as being on order in the Equipment Expenditure Program pertaining to the Third Supplemental National Defense Appropriation, F.Y. 1942. It is felt that this amount is more than enough to provide for interim production pending development of cluster adapters.</p> <p>3. Accordingly, it is requested that the attached memorandum be sent to the Chief of Ordnance..</p> <p>Incl. Memo for C/Ord, abv subj.</p>	<p><i>MHS</i> <i>TJH, Jr.</i> <i>C/A-4</i> <i>ERM</i> <i>SWK</i></p>

~~CONFIDENTIAL~~ (three sides)

V-4071, AC. Rev. 6/14/41

acc ab 471.6 (79)

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2

AG 472.6
(2-16-62)MSO-G

DECLASSIFIED
DOD Ref.
8 Jan. 20 June 1974
By: *[Signature]* Date: *3/14/77*

LFL/vod-1795.

February 20, 1942.

~~SECRET~~

SUBJECT: Bombs and Ammunition Storage in Islands
of the South Pacific Ferry Command.

Auth: T.A.G.

TO: Commanding General,
Hawaiian Department.

Initials: R.G.H.

Date: FEB 20 1942

1. In connection with the five island bases of the South Pacific Ferry Route, namely Palmyra, Canton, Christmas, Fiji and New Caledonia, it would appear desirable to stock these islands with bombs, ammunition and pyrotechnics for the use of heavy bombardment aircraft being ferried through and temporarily located at one of the five island staging fields, or so that reinforcements flown to one of the fields from Australia or Hawaii may be employed offensively against exceptional targets of opportunity.

2. For this purpose, The Chief of Army Air Forces has approved the following allocation of bombs to these bases:

a. For Palmyra, Canton and Christmas Islands

- 13 ea. 2000# Demolition Bombs
- 26 ea. 1000# Demolition Bombs
- 52 ea. 500# Demolition Bombs
- 91 ea. 300# Demolition Bombs
- 130 ea. 100# Demolition Bombs

b. For New Caledonia and Fiji

- 52 ea. 2000# Demolition Bombs
- 104 ea. 1000# Demolition Bombs
- 208 ea. 500# Demolition Bombs
- 364 ea. 300# Demolition Bombs
- 520 ea. 100# Demolition Bombs.

3. The basis for the above computation was one-half mission for a heavy bombardment squadron (12 airplanes) for Palmyra, Canton and Christmas Islands and one mission for two heavy bombardment squadrons at New Caledonia and Fiji.

4. The Chief of the Army Air Forces and the War Department have approved one mission of aircraft machine gun ammunition based upon the number of airplanes in paragraph 3 for each island.

*File
Hors*

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*AA C/789
471.6 (197)*

*Rec. 205 471.6
197*

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DECLASSIFIED

AG 471.6 (2-14-42)KSO-G

February 20, 1942.

(Cont'd).

A. Amounts for Palmyra, Canton and Christmas Islands:

2875 rounds Cal. 30 APMT Ammunition
13450 rounds Cal. 50 APMT Ammunition

B. Amounts for Fiji and New Caledonia:

4350 rounds Cal. 30 APMT Ammunition
27300 rounds Cal. 50 APMT Ammunition

5. A small stockage of pyrotechnics is desirable also, based upon the number of airplanes in paragraph 3 above.

6. All stockages herein mentioned, are over and above stocks provided initially and to maintain Pursuit Squadrons stationed at these bases.

7. In order to accomplish the above - bombs, pyrotechnics and ammunition will be shipped to depots in the vicinity of San Francisco for release to the Commanding General, San Francisco Port of Embarkation with a view to their shipment from San Francisco Port of Embarkation direct to the islands indicated or to Hawaii, as may be desired by you.

8. The following munitions have been ordered shipped to Fiji on next available transportation from San Francisco Port of Embarkation:

- 32 ea. 3000# Demolition Bombs
- 44 ea. 1000# Demolition Bombs
- 400 ea. 500# Demolition Bombs
- 400 ea. 250# Demolition Bombs
- 463 ea. 100# Demolition Bombs
- 10,000 rounds 37 M Aircraft
- 4 Millions machine gun ammunition
(for one squadron B-17E Airplanes)
- 30 Grenades M2M
- 300 Flares M2A1
- 300 Flares M9
- 4000 Signals M11
- 300 Flares M13
- 4000 Signals M14
- 4000 Signals M15
- 4000 Signals M16
- 100 Photoflash Bombs M23
- 1000 Signals M25

DECLASSIFIED
SECRET

DECLASSIFIED
SECRET

AG 471.6 (2-16-42)MEO-G

February 28, 1942.

(Cont'd).

7. In the case of Fiji, credit for the shipment in paragraph 6, should be applied against the allocation in paragraph 5₂ in order to avoid duplication.

10. Due to the uncertain status of New Caledonia at this time, no shipments to that place should be made until sufficient security measures have been provided by ground forces.

By order of the Secretary of War:

E. G. Heroy

Adjutant General.

INFORMATION COPIES TO:

1. A. C. of S., WPD.
2. A. C. of S., G-4, re letter 2-11-42 G-4/33779 to C/AAF.
3. Chief of the Army Air Forces
re memo AAF/A-4/471-42 2-16-42.
4. Commanding General, SF P of E.

DECLASSIFIED
SECRET

AAC/197
4716 (137)

DECLASSIFIED
DOD Item
1 Jan & 20 June 1974
By: SP-101 Date: 3/27/77

~~SECRET~~
DECLASSIFIED

FEB 1 3 1942

AAF/A-4/205

AAF/A-4/471-53

Storage of Bombs and Pyrotechnics for "Five Islands".

II G-4

I G-4

I TAG

II AAF

471.6
197

I SH directs

AAF/A-4
RCA/and

I. Confirming telephone instructions issued to your office (Lt. Col. Rice) February 16, 1942 (Serial 1464) from Lt. Col. Burgess, A-4, Air Staff it is desired that the following munitions be stored in depots in the vicinity of San Francisco for release to the Commanding General SFTOL with a view to further shipment to the "Five Islands" as directed by the Commanding General, Hawaiian Department:

For Brush, Holly, and Birch Islands

- 39 ea. 2000# Demolition Bombs (13 to each island)
- 78 ea. 1000# Demolition Bombs (26 to each island)
- 156 ea. 500# Demolition Bombs (52 to each island)
- 273 ea. 300# Demolition Bombs (91 to each island)
- 390 ea. 100# Demolition Bombs (130 to each island)
- 45 Signals BS (15 to each island)
- 225 Flares M (75 to each island)

HEADQUARTERS		COORDINATION					
Chief of Staff	Sec'y Air Staff	450-2	450-3	450-4	A-Insp.	Budget	Sta-Factory
							(See over)

~~SECRET~~

air 471.6 (197)

AAF-39

**RECORDED
SECRET**

450 Signals M15 (150 to each island)
 450 Signals M16 (150 to each island)
 30 Photoflash Bombs M23 (10 to each island)
 45 Flares M24 (15 to each island)
 450 Signals M25 (150 to each island)

For Poppy

52 ea. 2000# Demolition Bombs
 104 ea. 1000# Demolition Bombs
 208 ea. 500# Demolition Bombs
 264 ea. 300# Demolition Bombs
 520 ea. 100# Demolition Bombs
 30 Photoflash Bombs M23
 30 Flares M24
 300 Signals M25

For Fantan

20 ea. 2000# Demolition Bombs
 40 ea. 1000# Demolition Bombs
 37 ea. 100# Demolition Bombs

II. To be advised of action taken above.

For the Chief of the Air Staff:

T. J. HANLEY, JR.,
 Colonel, Air Corps,
 Assistant Chief of the Air Staff, A-4.

Memorandum for Record: Above action was taken to provide bombs and pyrotechnics for "five islands" in accordance with directive from the Chief of the Army Air Forces dated 2/4/42. Provision made for one-half mission for 1 Squadron B-17's at Brush, Holly, and Birch and one mission for 2 Squadrons B-17's at Poppy and Fantan.

HEADQUARTERS		ARMY AIR FORCES			COORDINATION					
Chief of Staff	Sec'y of Air Staff	A.A.G.	A-1	A-2	A-3	A-4	A-WPD	A-Insp.	Budget	Statistics
						HC3				
						IMB				

AAF-39

SECRET

201 1116 177

DECLASSIFIED
DOD Form
Jan. & 20 June 1974
By: J3/MFC; Date: 2/14/77

~~SECRET~~

AAF/AS
NF7/hd

MEMORANDUM FOR THE CHIEF OF THE ARMY AIR FORCES:

1. The following information is submitted in reference to Mr. Lovett's memorandum, attached.

a. The bomb adaptation gear for DB-7 type under the First Air Force are installed and reported to be satisfactory.

b. The First Air Force, Eastern Theatre report the following:

F-39D Airplanes	Equipped to carry 300, 500, & 600 pound bomb
F-40E Airplanes	500, & 600 pound bomb
F-40E-1 Airplanes	600 pound bomb

4716

196

Sufficient bombs are located within the theatre and it is reported they are readily available for installation on aircraft. Although pilots have not been trained to drop bombs from the types of airplanes listed above, this training will be given as rapidly as possible. Pilots can now drop bombs with some degree of effectiveness without training. It is definitely contemplated to use these airplanes as a striking force against appropriate targets.

g. The personnel of all squadrons on off-shore patrol duty wear the life vest as a matter of routine, and in addition the pneumatic boats are carried in all bombers.

M. F. BARNOR,
Major General, U. S. A.,
Chief of the Air Staff.

HEADQUARTERS- ARMY AIR FORCES - COORDINATION

A-1	A-2	A-3	A-4	A-WFD	A-Insp.	Budget	Statistics

~~DECLASSIFIED~~

~~SECRET~~

AAF 37

~~SECRET~~

DECLASSIFIED
DOD ltr
8 Jan. & 20 June 1974
By: ~~SP-6~~ G.C.1 Date: ~~2/18/77~~

WAR DEPARTMENT
OFFICE OF THE ASSISTANT SECRETARY FOR AIR
WASHINGTON

February 16, 1942

MEMORANDUM FOR THE CHIEF OF THE ARMY AIR FORCES:

The recent movement of the German battleships from Brest indicates the possibility of raiding or some offensive measures against East Coast objectives.

In view of the inadequacy of existing Naval equipment, it may be necessary for us to supplement their off-shore activities, and I suggest that we check up on three things:

a. Has the bomb adaption gear for the DB-7 types under the First Air Force been completely installed and inspected?

b. Since January 8, production models of the P-40E's and the Kittyhawks have been coming out equipped to carry a 500 lb. bomb or several smaller bombs. Where squadrons in this area are equipped with such planes or those stressed to carry bombs, I suggest that we make sure that adequate supplies of the bombs are on hand at the required stations and that consideration be given to using some portion of these planes as a striking force if necessary.

c. Are all our squadrons on off-shore patrol equipped, as a matter of routine, with life belts or pneumatic boats, etc.?

/s/ ROBERT A. LOVETT
Assistant Secretary of War for Air

~~SECRET~~

DECLASSIFIED
DDI lra.
8 Feb. & 20 June 1974
By: DFLC; Date: 3/2/77

~~SECRET~~

Equipment

MEMORANDUM FOR THE CHIEF OF THE ARMY AIR FORCES:

1. The following information is submitted in reference to Mr. Lovett's memorandum, attached.

a. The bomb adaption gear for B2-7 type under the First Air Force are installed and reported to be satisfactory.

b. The First Air Force, Eastern Theatre report the following:

	<u>Assigned to GWCX</u>
F-39B Airplanes	300, 500, & 600 pound bomb
F-40E Airplanes	500, & 600 pound bomb
F-40B-1 Airplanes	600 pound bomb

Sufficient bombs are located within the theatre and it is reported they are readily available for installation on aircraft. Although pilots have not been trained to drop bombs from the types of airplanes listed above, this training will be given as rapidly as possible. Pilots can now drop bombs with some degree of effectiveness without training. It is definitely contemplated to use these airplanes as a striking force against appropriate targets.

2. The personnel of all squadrons on off-shore patrol duty wear the life vest as a matter of routine, and in addition the pneumatic boats are carried in all bombers.

M. F. HARMON,
Major General, U. S. A.,
Chief of the Air Staff.

471.6 (196)

(Handwritten initials)

~~SECRET~~

*File
8-11-44
P.T.*

471.6 (196)

DECLASSIFIED
DOD ltr.
8 Jan. & 20 June 1974
By: SP5/CJ; Date: 3/24/77

~~SECRET~~

WAR DEPARTMENT
OFFICE OF THE ASSISTANT SECRETARY FOR AIR
WASHINGTON, D. C.

February 16, 1942

MEMORANDUM FOR THE CHIEF OF THE ARMY AIR FORCES

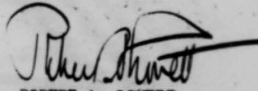
The recent movement of the German battleships from Brest indicates the possibility of raiding or some offensive measures against East Coast objectives.

In view of the inadequacy of existing Naval equipment, it may be necessary for us to supplement their off-shore activities, and I suggest that we check up on three things:

a. Has the bomb adaption gear for the DB-7 types under the First Air Force been completely installed and inspected?

b. Since January 8, production models of the P-40E's and the Kittyhawks has been coming out equipped to carry a 500 lb. bomb or several smaller bombs. Where squadrons in this area are equipped with such planes or those stressed to carry bombs, I suggest that we make sure that adequate supplies of the bombs are on hand at the required stations and that consideration be given to using some portion of these planes as a striking force if necessary.

c. Are all our squadrons on off-shore patrol equipped, as a matter of routine, with life belts or pneumatic boats, etc.?



ROBERT A. LOVETT
Assistant Secretary of War for Air

*Gen. Harmon
get report on
above
H.W.*

~~SECRET~~

SECRET

204710 (196)

DECLASSIFIED
DOD ltra.

4 Jan. & 20 June 1974
By: *[Signature]* Date: *3/16/77*

~~SECRET~~

94/57

February 15, 1942

AAF/A-4/471-39

Shipment of Bombs to Uruguay.

II G-4

I. Ord.

II. AAF

X. TAG

X. SW directs.

471.6
191

AAF/A-4

AAF/A-4
ECM/mhh

I. Confirming telephone instructions issued to your office, (Lt. Col. Rice) Feb. 13, 1942 (Serial 1410) from Lt. Col. Burgess, A-4, Air Staff, it is desired that the following bombs be shipped as indicated:

To Port QM New Orleans, Port of Embarkation for shipment on SS "Delbragill" scheduled to sail about Feb. 20, 1942.

144 ea. 100# Demolition Bombs

Consignee: U. S. Military Attache, Montevideo, Uruguay

Dispersed
FEB 17 1942
AAG

II. To be advised of action taken above.

NOTED *S.P.C. 2/17/42*

Office Chief of the Air Staff

For the Chief of the Air Staff:

HEADQUARTERS		ARMY AIR FORCES - COORDINATION									
Chief of Staff	Sec'y of Staff	A.A.G.	A-1	A-2	A-3	A-4	A-4FD	A-4Inv.	Budget	Sta-tistics	
						<i>HES</i>					
Colonel, Air Corps, Acting Assistant Chief of the Air Staff, A-4.											

MEMORANDUM FOR RECORD: Above action taken to provide for use, supply of bombs for A-4B airplanes furnished Uruguay.

AAF-39

~~SECRET~~

Air 48 471.6 191

UNCLASSIFIED
 EXEMPT FROM
 DECLASSIFICATION

AAF/A-4/139

FEB 12 1942

AAF/A-4
 HCB
 (Wrtn. 2/10/42)

DECLASSIFIED
 DOD ltr.
 6 Jan. & 20 June 1974
 BY: *[Signature]* Date: 3/10/77

MEMORANDUM FOR THE ASSISTANT CHIEF OF STAFF: C-6

Subject: Shipment of Bombs, Ammunition and Pyrotechnics to "X" and "Copper".

1. Request the following munitions which have been released and ordered shipped to Port Quartermaster, San Francisco Port of Embarkation be sent to "X" when transportation is available:

- Bombs
- 500 ea. 5000# Demolition Bombs
 - 1000 ea. 2000# Demolition Bombs
 - 500 ea. 500# Demolition Bombs
 - 500 ea. 200# Demolition Bombs
 - 5000 ea. 100# Demolition Bombs
 - 100000 ea. 4# Secondary Bombs

- Ammunition
- 50000 rounds of 30 Aircraft Ammunition
 - 50000 rounds of 30 HE Aircraft Ammunition

- Pyrotechnics
- 5000 Flares M3
 - 10000 Signals M31
 - 1125 Flares M3
 - 10000 Signals M34
 - 10000 Signals M35
 - 10000 Signals M36
 - 10000 Signals M38
 - 10000 Signals M39
 - 2100 Photoflash Bombs - M3 & M341
 - 500 Flares M34
 - 5000 Signals M35

2. Request the following munitions which have been released and ordered shipped to Port Quartermaster, San Francisco Port of Embarkation be sent to "Copper" when transportation is available:

- Bombs
- 175 ea. 5000# Demolition Bombs

HEADQUARTERS AIR FORCE COORDINATION										
Chief of Staff	Sec'y Air Staff	A.A.G.	A-1	A-2	A-3	A-4	A-WD	A-Insp.	Budget	Scenic
	500									

471.6
 (189)

~~SECRET~~

Air (10) 471.6 (189)

AAF-39

~~SECRET~~

5000 ea. 5000 Demolition Bombs
 5000 ea. 5000 Demolition Bombs
 5000 ea. 5000 Demolition Bombs

Ammunition

10000 pounds of H Aircraft Ammunition

Parachutes

5000 Parachutes
 10000 Signals M1
 10000 Signals M2
 10000 Signals M3
 10000 Signals M4
 5000 Signals M5.

For the Chief of the Air Staff:

F. S. BORNE
 Colonel, Air Corps
 Acting Assistant Chief of Air Staff, A-4

Hq. Army Air Forces
 FEB 13 1942
 AAG RECEIVED

Dispersal
 FEB 14 1942
 AAG

HEADQUARTERS ARMY AIR FORCES - COORDINATION										
Chief of Staff	Sec'y Air Staff	A.A.G.	A-1	A-2	A-3	A-4	A-WPD	A-Inspr.	Budget	Scenaristica
						A-4 A-3				

~~SECRET~~

AAF-39

~~SECRET~~

DECLASSIFIED
DOD Item
8 Jan. & 20 June 1974
By ~~XXXXXX~~ C; Date 3/10/77

RECEIPT

Date _____

Subject: Shipment of Bombs, Ammunition and Pyrotechnics
to "X" and "Copper".

1. Received of Headquarters, Army Air Forces, one
Memorandum for the Assistant Chief of Staff, G-4; above
subject.

Officer

Rank

Office

~~SECRET~~

air 471.6 (89)

AAP/A-4/133

DECLASSIFIED
A DOD ltr.
9 Feb. & 20 June 1974
By NY/MLC; Date 3/10/77

~~SECRET~~

FEB 12 1942

AAP/A-4/471-35

SEP 18 1942

Shipment of Bombs, Pyrotechnics and Ammunition to "X" and "Copper".

II G-4

I Ord.

I TAG

II AAP

I SW directs

471.6
888
A-4
18-42
18-42

AAP/A-4
HCR/soc

I. 1. Confirming telephone instructions issued to your office (Lt. Col. Rice) February 10, 1942 (Serial 1374) from Lt. Col. Burgess, A-4, Air Staff, it is desired that the following bombs, pyrotechnics and ammunition be released and shipped as indicated:

To "X" (Part Q. M. SPTOR)

- 500 ea. 2000# Demolition Bombs
- 1000 ea. 1000# Demolition Bombs
- 5000 ea. 500# Demolition Bombs
- 5000 ea. 300# Demolition Bombs
- 5000 ea. 100# Demolition Bombs
- 50000 rounds 37 MM Aircraft Ammunition
- 50000 rounds 20 MM Aircraft Ammunition
- 5000 Flares M9
- 10000 Signals M11
- 1112 Flares M13
- 10000 Signals M14
- 10000 Signals M15
- 10000 Signals M16
- 2195 Photoflash Bombs M25 and M25A1
- 624 Flares M24
- 5000 Signals M25

ACTION TAKEN: 2-20-42.
I-Ltr. To Ch/Ord.;
II-Complied with.
JHR/mef-1705

(See original)
~~SECRET~~

AAP/365
air 05 471.6 888

~~SECRET~~

To "Copper" (Part Q.M. STP&E)

- 176 ea. 2000# Demolition Bombs
- 972 ea. 1000# Demolition Bombs
- 5000 ea. 500# Demolition Bombs
- 5000 ea. 300# Demolition Bombs
- 5000 ea. 100# Demolition Bombs
- 10000 rounds 57 MM Ammunition Aircraft
- 5000 Flares M9
- 10000 Signals M11
- 10000 Signals M14
- 10000 Signals M15
- 10000 Signals M16
- 5000 Signals M28

II. To be advised of action taken above.

For the Chief of the Air Staff:

FEB 20 1942

NOTED-OFFICE CHIEF OF STAFF
L.S.

F. S. BORUM
Colonel, Air Corps
Acting Assistant Chief of Air Staff, A-4.

47 AGO

FEB 20 1942

Received

17-11

MEMORANDUM FOR RECORD: Above action taken to provide bomb, ammunition and pyrotechnic stockages at "X" and "Copper."

FEB 21 1942

FEB 20 42 PM

FEB 14 1942

17874-82

OUT

OUT



OFFICE OF CHIEF OF STAFF

RECEIVED MISC. DIV., AGO.
S. & C. Section

~~SECRET~~

AGC/SGS
Air 28471.6/188

DECLASSIFIED
A DOD ltra.
9 Jan. & 20 June 1974
E.O. 11652; Date 3/14/77

~~SECRET~~

AAF/10-4037

FEB 12 1942

AAF/A-4/471-37

DECLASSIFIED

Shipment of 4^{1/2} incendiary bombs to "X".

FEB 18 1942

II G-4

47

I CMS
AA 471.6

I TAG

II AAF

FEB 20 1942

I SW directs

OUT

OUT



OFFICE OF CHIEF OF STAFF

AAF/A-4
EWS/acc

(7-18-42)

I. 1. Confirming telephone instructions issued to your office (Col. Gillet) February 18, 1942, from Lt. Col. Burgess, A-4, Air Staff, it is desired that the following bombs be shipped as indicated:

To "X" (Fort G. M. SYPOL)
100,000 4^{1/2} incendiary bombs

47 AGO
FEB 20 1942

II. To be advised of action taken above.

Received
m-11

FEB 19 1942

For the Chief of the Air Staff:

NOTED-OFFICE CHIEF OF STAFF as amended WTS

NOTED.....
Office Chief of the Air Staff

F. S. BORUM
Colonel, Air Corps
Acting Assistant Chief of Air Staff, A-4

MEMORANDUM FOR RECORD: Above action taken to provide 4^{1/2} incendiary bomb stockage at "X".

ACTION TAKEN: B-20-48 I- by
1-17-42 to G. C. S. II-Cys Furnished
and 1-17-42 as indicated.

DECLASSIFIED
SECRET

Air 471.6 (186)

SECRET

AAF/A-4/129

(Written 2/10/42)

DECLASSIFIED
A. DOD ltr.
8 Feb. & 20 June 1974
AFSS/TC; Date: 4/17

FEB 12 1942

AAF/A-4/471-36

Shipment of Practice Bombs to Eglin Field and release of
37 MM Ammunition to G.H.Q.

II G-4

I. Ord.

I TAG

II AAF

I SW directs

Dispatched
FEB 14 1942
AAG

AAF/A-4
HCB/ccc

I. 1. Confirming telephone instructions issued to your office (Lt. Col. Hise) February 9, 1942 (Serial 1578) from Lt. Col. Burgess, A-4, Air Staff, it is desired that the following bombs and ammunition be released and shipped as indicated:

To Ordnance Property Officer
Eglin Field

Valparaiso, Florida.

Marked for project "Malgre."

600 each 100# Practice Bombs MS42.

2. Released to G.H.Q. for Indigo (Shipping instructions to be furnished by G.H.Q.) 30,000 rounds 37 MM Aircraft Ammunition.

II. To be advised of action taken above.

NOTED *SFC 2/14/42*
Office Chief of the Air Staff

For the Chief of the Air Staff:

HEADQUARTERS				ARMY AIR FORCES				COORDINATION			
Chief of Staff	Secy of Staff	AAG	A 1	A 2	A 3	A 4	A WPD	A Insp	B. dgc.	S a	S a
							F. S. BROWN Colonel, Air Corps Acting Assistant Chief of Air Staff, A-4				
							(See over)				

SECRET

air 471.6 (187)

471.6
187

~~SECRET~~

MEMORANDUM FOR RECORD: Above action taken to provide "Halpro" bombs for test purposes and 87 MM Ammunition for combat life of 25 F-30D airplanes of which ten (10) have been shipped and fifteen (15) are to be shipped.

~~SECRET~~
FOI 1042
~~SECRET~~

Hq. Army Air Forces
FOI 1042
AQG RECEIVED

HEADQUARTERS ARMY AIR FORCES - COORDINATION										
Chief of Staff	Sec'y of Staff	A.G.	A-1	A-2	A-3	A-4	A-5	A-6	Budget	Statistics
	<i>TC</i>					<i>MS</i>				

AW-39

~~SECRET~~

AW-39 471.6 (187)

DECLASSIFIED
DOD ltra.
8 Jan 4 30 June 1974
By SP4/CLC Date 3/14/77

~~SECRET~~

AAF/A-4/131
Written 2/10/42

FEB 12 1942

AAF/A-4/471-37

Shipment of 4⁺ Incendiary Bombs to "X".

II A-4

471-6

I TAG

II AAF

I CH
186

I SW directs

AAF/A-4
HEB/osc

I. 1. Confirming telephone instructions issued to your office (Col. Gillet) February 10, 1942, from Lt. Col. Burgess, A-4, Air Staff, it is desired that the following bombs be shipped as indicated:

To "X" (Fort Q. M. SPPM)
100,000 4⁺ Incendiary Bombs

FEB 14 1942
AAG

II. To be advised of action taken above.

For the Chief of the Air Staff:

FEB 12 1942
AAG RECEIVED

NOTED... ELC 2/14/42
Chief of the Air Staff

HEADQUARTERS				ARMY AIR FORCES				AIR STAFF			
Chief of Staff	Sec'y of Staff	A.A.G.	A-1	A-2	A-3	A-4	A-5	A-6	A-7	A-8	A-9
MEMORANDUM FOR RECORD: Above action taken to provide 4 ⁺ incendiary bomb storage at "X".											

~~SECRET~~

Air 8471.6 (186)

DECLASSIFIED
DOD Itra.
8 Jan. & 20 June 1984
By: T.M.C.; Date: 3/19/77

~~SECRET~~

AO 471.6
(2-4-42) 10-0

L.F./ved-1705.

February 10, 1942.

~~SECRET~~

SUBJECT: Shipment of Bombs to Alaska.

Auth: TAG

To: Chief of Ordnance.

Initials: T.M.C.

Date: FEB 10 1942

Confirming telephone instructions issued to your office (Captain Stone) February 4, 1942 (Serial 1298) from Lt. Col. Burgess, A-4, Air Staff, it is desired that the following bombs be released to the Commanding General, Field Forces, for shipment to Alaska:

Bombs

- 1000 ea. 1000# Demolition Bombs
- 5000 ea. 500# Demolition Bombs.

By order of the Secretary of War

R.G. Hersey

Adjutant General.

COPIES TO: A. C. of S., G-4.
✓ Chief of the Army Air Forces re his
Dis Form AAF/A-4/471-29, February 4, 1942.
Commanding General, Field Forces.

*File
HERS*

DECLASSIFIED

~~SECRET~~

MAC/490
on M 471.6 (155)

*471.6
1-31*

DECLASSIFIED
 DOD ltr.
 8 Feb. & 20 June 1974
 By: [unclear] Date: 3/2/77

~~SECRET~~

AAF/A-4
 ROC
 Written 2-17-42

Subject: Bomb Production in the Far East.

2nd Ind.

For Department, Headquarters, Army Air Forces, Washington, D. C.
 For: Chief of Ordnance.

1. Inviting attention to the proceeding. The Chief of Ordnance should take such steps as he deems necessary to determine the feasibility of expanding bomb production in the Far East principally in India and Australia to relieve critical shipping space.

2. A further report to this office should be made after the completion of your investigation.

FOR THE CHIEF OF THE ARMY AIR FORCES

2 Incls. n/c

hnh

Egd. H. C. [unclear]

Major, USAF
 Assistant Air Adjutant General

471.6
 (184)

Dispatched
 FEB 25 1942
 AAG
 FEB 27 1942
 AAG

HEADQUARTERS		ARMY AIR FORCES - COORDINATION								
Chief of Staff	Sec'y Air Staff	A.A.G.	A-1	A-2	A-3	A-4	A-WPD	A-Insp.	Budget	Statistics
		OCR				CRB				

~~SECRET~~

AAF-39

471.6 (184)

DECLASSIFIED
DATE 10/1/84
BY SP-10/10/84
DATE 1/1/77

~~SECRET~~
COPI

AG 471.6
(12-22-41) MSC-G

January 22, 1942

SUBJECT: Bomb Production in the Far East

TO: Chief of Ordnance

1. It is desired that your office furnish a report to the Chief of the Army Air Forces, at the earliest possible date, as to the feasibility and desirability of expanding bomb production in the Far East to meet the needs of the Army Air Forces in that area. Attention is invited to the inclosed correspondence which describes current British Production in India and Australia.

2. Current indications are that the number of planes which may be operated in the Far East is limited by problems of supply, and that supply in turn, is limited largely by the amount of shipping space available. Any action tending to reduce the need for transportation to the Far Eastern theater will be of interest to the Chief of the Army Air Forces.

By order of the Secretary of War

/s/
Adjutant General

1 Incl.
Copy of G-2 Memo to E/S, WPD
12-22-41; Tab A

~~SECRET~~
~~SECRET~~

COPY

RECEIVED

1st Ind.

Attn: Am. Div., Ind. Serv.
O.O. 471.6/2304
AG 471.6 (12-22-41) HSC-S

War Department, Ordnance Office, Washington, D. C., February 2, 1942
To: The Adjutant General

1. Inclosed herewith is a copy of a letter of this date to the Chief of the Army Air Forces which summarizes the situation as to the possibility as to the production of standard AM bombs in Australia. The same stipulations apply for India, except that the distances for the shipment of loaded bomb fuses and of probable required equipment is considerably greater. The plan is feasible only within the stipulations of the letter and definite arrangements are needed for making available steel and high explosives. Our G.P. bombs carry approximately 50% explosive and our S.A.P. bomb approximately 30% explosive. The ratio of TNT to ammonia nitrate may be 65-35.

2. It is requested that direct information be obtained as to quantities of steel and of TNT and ammonium nitrate that could be made definitely available, with schedule of availability by months.

For the Chief of Ordnance:

s/s M. K. Barrell, Jr.
M. K. BARRELL, Jr.
Col., Ordnance Department
Executive Assistant

3 Incls.

1. n/c
2. Copy letter to Chief of the Army Air Forces.

RECEIVED

RECEIVED

DECLASSIFIED

DOD Itra.

8 Jan. & 20 June 1974

By ~~SP-1~~ Date 3/16/77

~~SECRET~~

December 22, 1942

MEMORANDUM FOR THE ASSISTANT CHIEF OF STAFF, WFD:

Subject: Bomb production in the Far East.

1. Your attention is invited to the above subject with reference to the probable operation by our forces of bombardment aviation in the Far West. It is believed that if this should be done in any considerable numbers, necessity would dictate local procurement of bombs, fuel and lubricants to a very great degree.
2. Both India and Australia are now producing aerial bombs. (See Tab A). These bombs are designed for British racks and the quantities of heavy calibre bombs produced are probably small.
3. It is suggested that the British Government might arrange for the production, in India or Australia, of 500 and 1000 pound aerial bombs to U. S. specifications.

RAYMOND E LEE

Brigadier General, U. S. Army,
Acting Assistant Chief of Staff, G-2

Incl:
Tab A

s/ Ralph E. Smith
Colonel, G. S. C.,
Executive Officer, G-2

COPY

~~SECRET~~

COPY

~~SECRET~~

TAB
A

AERIAL BOMB PRODUCTION - INDIA AND AUSTRALIA.

I. India.

Railway workshops were put on a schedule of 59,000 air bombs per month in the summer of 1941. These schedules have in general, been reached, but there is no specific information as to the single item of aerial bombs.

\$3,000,000 allotted to government ordnance factories to expand plant for the production of steel needed for, among other things, air bombs. June-July, 1941.

\$1,000,000 allotted for increased plant to make air bombs, depth bombs, land mines and shells.

59,000 per month would seem to be a minimum figure.

II. Australia.

Australia Aerial Bomb Production.

	Production for August, 1941	October- December, 1941
250 lb. A.S. (1)	320	2,000 (To be discontinued December 12, 1941)
250 lb. G.P.(2)	1,900	10,000
100 lb. A.S.	720	2,000 (to be discontinued December 12, 1941)
20 lb. F. (3)	Nil	15,000
8½ or 11 lb. practice	364,000	80,000

No figures available for production prior to August, 1941.

Y

- (1) Antisubmarine bomb
- (2) General purpose bomb
- (3) Fragmentation

~~SECRET~~

UNCLASSIFIED
DOD ltr.

8 Jan. & 30 June 1974
NSA/CSS Date 3/27

CONFIDENTIAL
COPY

February 2, 1942

Subject: Bomb Production in the Far East

To: Chief of the Army Air Forces

1. In a letter from the Adjutant General dated January 22, 1942 (Secret, AG 471.6 (12-22-41) MSC-G, O.O. 471.6/2204) it was requested that this office furnish a report to you as to the feasibility and desirability of expanding bomb production in the Far East to meet in any degree the needs of the Army Air Force in that area. Production in India or Australia were specifically mentioned, and the entire proposition was based on the limitations of shipping space available for supply of the Army Air Force in the Far East.

2. This office made immediate contact with the Australian Division of the British Purchasing Commission, in an attempt to get the most up to date information on the availability of steel and high explosives in Australia.

3. This office approached the problem with the basic idea that the only way to set up production of standard AN bombs in Australia (or in India), would be to utilize steel and high explosives of local production, together with fins, crates, etc., which occupy valuable space in shipping. All of the current bomb production in Australia is in the older British type of cast steel bombs and to date the limiting factor has been the supply of TNT and ammonia nitrate. It would be best to supply loaded fuzes from this country, as these items require many machine tools for fabrication, and they are not bulky items for shipment. The possibility also was considered, if steel and explosives were available, of improvising methods of fabrication such as metallic arc weld construction. Such methods are being resorted to for manufacture in this country already where methods that produce better bombs can not produce in quantities to meet urgent immediate requirements. All of this plan is based on the availability of both steel and high explosives in Australia.

4. We found that the Australian Division, B.P. C. did not have the most up to date information as to the possible surplus of either class of commodity over current Australian needs. The TNT

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E.O. 13526
* Jan. 20 June 1974
* 3/27/77

COPY

To: Chief of the Army Air Forces

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production was negligible in the latter part of 1941. Planned expansion is directed to 8000 tons per year, to match a planned production of 6000 tons per year of ammonia nitrate. In normal times Australia exports steel from its annual production of about 1,750,000 tons. The one important steel facility in Australia is the Broken Hill Steel Company having plants at Keabla and New Castle. It is an up to date and progressive company.

5. It is the understanding of this office that a military mission is now in Australia and that direct contacts can be made to ascertain what quantity by month, of steel and high explosives could be made available for American production of standard AN bombs in that country. In our indorsement of this ate to the Adjutant General, we are asking that this authoritative and up-to-date data be obtained. The new series of AN bombs has been standardized also by the British for future use and all current procurement of Defense Aid ^Dombs in this country is being made henceforth in these types. However, unless both steel and high explosives are available it is the opinion of this office that the venture would not be practicable.

For the Chief of the Ordnance:

M. K. BARROLL, Jr.
Col., Ordnance Department
Executive Assistant

DECLASSIFIED

DECLASSIFIED
DOD ltr.
8 Jan. & 20 June 1974
13/100101 Date 3/11/77

~~SECRET~~
UNCLASSIFIED

RECEIPT

DATE _____

Subject: Bomb Production in the Far East.

Received from Headquarters, Army Air Forces 2nd Indorsement with the following enclosures:

Cy of G-2 Memo to AC/S, WFD,
12-22-41; Tab A
Ltr to C/AAF fm Ord. Dept.

Officer Rank

Office

HEADQUARTERS ARMY AIR FORCES - COORDINATION										
Chief of Staff	Sec'y of Staff	A.A.G.	A-1	A-2	A-3	A-4	A-WPD	A-Insp.	Budget	Statistics

~~SECRET~~
UNCLASSIFIED

AAF-39

DECLASSIFIED
DOD ltra.

3 Jan & 20 June 1974
BY: [redacted] LC: Date: 3/2/77

SECRET

FEB 10 1942

AAF/A-4/111

AAF/A-4/471-34

Shipment of 100# Bombs to South America and Depth Bombs to "Copper."

II and

I and

II AAF

X TAR

X SW Aircraft

FEB 14 1942

NOTED OFFICE CHIEF OF STAFF WTB

(27-01-8) 91671.6 (2-10-42)

AAF/A-4
ECB/ECG

I. 1. Confirming telephone instructions issued to your office (Lt. Col. Rice) February 9, 1942 (Serial 1370) from Lt. Col. Burgess, A-4, Air Staff it is desired that the following bombs be released and shipped as indicated:

To Port Q. M. SPAN
To be loaded on vessel for Movement 8088

FEB 14 1942 PM

American Mission, Santiago, Chile.

340 ea. 100# Demolition Bombs

U. S. Military Attaché, Lima, Peru

334 ea. 100# Demolition Bombs

American Mission, Salinas, Ecuador

144 ea. 100# Demolition Bombs

A. G. O.
FEB 14 1942

RECEIVED

177

2. For shipment to "Copper"
200 Depth Bombs, Navy Mk IV.

(see OVER)

ACTION TAKEN: 2-14-42, by
I. Ltr to Ch/Ord.
II. Cx to Ch/AAF; AG of S, G-4.
LFL/emb-3705

SECRET

AG/10
61 22 471.6 (183)

SECRET

II. To be advised of action taken above.

For the Chief of the Air Staff:

NOTED.....
Chief of the Air Staff

F. S. BUSH
Colonel, Air Corps
Acting Assistant Chief of Air Staff, AA
MEMORANDUM FOR RECORD: Above action taken to provide bombs for South American countries in accordance with Memo. for the President of the U. S. from G/AAF and copy bombs for "Copper" per instructions A-4 (Col. Schneider).

FEB 14 1942

UT



OUT

OFFICE OF CHIEF OF STAFF

FEB 14 1942

NOTED OFFICE CHIEF OF STAFF WBS

FEB 12 1942
17874-81



R
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W
IN
OFFICE OF CHIEF OF STAFF

~~SECRET~~

~~SECRET~~

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SUBJECT: Shipment of Aircraft Bombs.

AG 471.6 (1-22-42)M25-6

1st Ind.

WHD/2-1708

War Department, A.G.O., February 12, 1942. - To: Commanding General, Field Forces (Attention: Ordnance Section).

Bombs and pyrotechnics were ordered released to you, and the Chief of Ordnance directed to make shipments as indicated in basic communication.

By order of the Secretary of War:

R.G. Hersey
Adjutant General.

INFORMATION COPIES TO:

1. Chief of the Army Air Forces, ref. his memo. AAF/A-4/471-33, 2/9/42.
2. A. G. of S., G-4.

Eq. Army Air Forces

FEB 14 1942
AAG RECEIVED

AG 471.6 (182)

*File
HCB*

~~SECRET~~

~~SECRET~~

*AAG/6
AG 471.6 (182)*

DECLASSIFIED
DDP ltr.
8 Jan. & 20 June 1974
By: [unclear] Date: 3/14/77

SECRET

DECLASSIFIED

AG 471.6 (2-9-42)WFO-G

WFO/oc - 1705

February 13, 1942.

SUBJECT: Release of Bombs and Ammunition to GNA and Fuses to Ordnance Department in connection with AP Bombs.

~~SECRET~~

TO: Chief of Ordnance.

Auth: T.A.G.

Initials: R.G.H.

Date: FEB 13 1942

1. Confirming telephone instructions issued to your office (Lt. Col. Hilde) February 6, 1942 (Serial 1303) from Lt. Col. Burgess, A-4, Air Staff, it is desired that the following fuses be released for use in connection with the production of 5000 AP Bombs:

Fuses
550 M102

2. Confirming telephone instructions issued to your office (Capt. Stone) February 6, 1942 (Serial 1335) from Lt. Col. Burgess, A-4 Air Staff it is desired that the following bombs and ammunition be released to Commanding General, Field Force for reallocation to the Alaska Defense Command;

Bombs
5000 ea. 300# Demolition
5000 ea. 100# Demolition

Ammunition
50,000 Rounds 37 mm. aircraft
60,000 rounds 20 mm. aircraft

By order of the Secretary of War:

R.G. Hersey

Adjutant General.

- INFORMATION COPIES TO: ✓
1. Chief of the Army Air Forces Ref. his memo AAP/A-4/471-31 2-9-42.
 2. A. C. of S., G-4

File Hersey

~~SECRET~~

471.6
182
AG/C12
471.6

DECLASSIFIED
 DOD Item
 8 Jun 8 20 June 1974
 By: SP4/C. Date: 3/19/77

~~SECRET~~

MEMORANDUM FOR RECORD: Above action taken to provide fuses for A.P. Bombs, and to provide a stockage of bombs and ammunition in Alaska. G.L.G. (Major Harrison) was informed of the purpose of this release.

HEADQUARTERS		ARMY AIR FORCES					COORDINATION				
Chief of Staff	Sec'y Air Staff	AAG	A1	A2	A3	A4	AWPD	Asst. Dir.	Budget	Sec'y	
						MS					

~~SECRET~~

471.6 (182)

AAF/A-41107

DECLASSIFIED
- DOD ltr.
4 Jan. & 20 June 1974
By: DMLC: Date: 3/14/77

~~SECRET~~

FEB 9 1942

AAF/A-4/471-32

Written Feb. 8, 1942.

Release of Bombs & Pyrotechnics to G.H.C. and Ammunition to Bell Aircraft Company.

II. 2-1

I. Ord.

I. TAG

II. AAF

471.6
181

X. SH directs

AAF/p-6
MCH/nhh

I. 1. Confirming telephone instructions issued to your office (Lt. Col. Rice) February 7, 1942 (Serial 1588) from Lt. Col. Burgess, A-4, Air Staff, it is desired that the following bombs, pyrotechnics and ammunition be released to G.H.C. and Bell Aircraft Company and shipped as hereinafter indicated:

- To Jamaica
- 25 ea. 2000# Demolition Bombs
- 24 ea. 1000# " "
- 110 ea. 500# " "
- 520 ea. 300# " "
- 520 ea. 100# " "
- 100 Flares M1
- 72 Signals M11
- 72 Signals M14
- 72 Signals M15
- 72 Signals M16
- 26 Bombs, photoflash M25A1

HEADQUARTERS				ARMY AIR FORCES				COORDINATION			
Chief of Staff	Sec. y Air Staff	AAG	A1	A2	A3	A4	A WD	A : : sp	B. dge	S. w	

~~SECRET~~

SEE OVER
471.6
AAF
181

SECRET

- 4000 lbs. 100# Demolition Bombs
- 100 Flares M9
- 100 Signals M11
- 100 Signals M14
- 100 Signals M15
- 100 Signals M16
- 20 Bombs, photoflash M2A1
- 200 Flares M24
- 20 Signals M25

To Bell Aircraft Company, Buffalo, New York.
30 rounds 37 mm. M241

2. The 200# and 100# bombs are not an additional release, but will be taken from a previous release to G.E.C. which has been held by them in depot stocks.
 3. The 37 mm. ammunition will be shipped by the fastest available means.
- II. To be advised of action taken.

For the Chief of the Air Staff:

NOTED *3/10/42*
 Office Chief of the Air Staff

E. S. Borum, Jr.,
 Colonel, Air Corps,
 Acting Assistant Chief of the Air Staff, A-4.

MEMORANDUM FOR THE RECORD: Above action taken to provide bombs and pyrotechnics for Antigua and Antigua per request of G.E.C. dated January 29, 1942 and 37 mm. ammunition for Bell per request of ~~the~~ Service Command dated February 3, 1942. Ammunition for Bell to be applied against Wright Field Requisition No. 42-9.

Dispatched
 170 11 1942
 AAG

HEADQUARTERS			ARMY AIR FORCES				COORDINATION				
Chief of Staff	Sec. y Air Staff	AAG	A 1	A 2	A 3	A 4	A WFD	A. Insp.	Budge.	S. & I.	S. & S.
	<i>7/11</i>					<i>WES</i>					
						<i>4/11</i>					

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44-477.6 (181)

CONFIDENTIAL

DECLASSIFIED
DOD ltrs.
8 Jan. & 20 June 1974
By: *[Signature]* Date: *3/19/77*

SUBJECT: Bombing Flares.

3. AAF AAF 2/2/ Conclusions and recommendation of item #1
Bomb A/3 fully concurred in.
Sec

/s/ EPF
Div. Bombs

4. AAF AAF 2/4
A-3 A-4

Recommendation of item #1 concurred in.

AAF/A-3
DWH/jg

Incl. n/e

HSV
C/A-3

HEADQUARTERS				ARMY AIR FORCES				COORDINATION			
Chief of Staff	Sec'y Air Staff	AAG	A1	A2	A3	A4	A WFO	A insp	Budget	Sec'y	

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AAF 39

~~CONFIDENTIAL~~

HEADQUARTERS AIR FORCES

ROUTING AND RECORD SHEET

DECLASSIFIED
DOD ltr.
4 Jan. 20 June 1974
By: [redacted] Date: 3/11/77

File No.

Note: - Lines will be drawn across sheet
after each comment.

Tally No. AAF

SUBJECT: Bombing Flares.

NO	FROM	TO	DATE	COMMENTS	AAF/A-4 BCC/mah
1.	AAF A-4	1. AAF A-3 2. AAF Bomber Section (Col. Sorensen)	1942 1-26	<p>1. Reference the enclosed correspondence particularly letter from C.A.C. dated January 20, 1942. It appears inadvisable to start a development program as outlined at this time until the tactical use and need of such equipment is well defined.</p> <p>2. Discussion: The factors controlling the development of the M-26 flare were as follows.</p> <p>a. Capable of being carried on a 100# bomb station; This was desired in order that searching releases may be carried out with a number of flares to verify the location of the target, and to allow of minimum interference with the bomb load in each ship.</p> <p>b. Desirability of having flares capable of being carried by all types of bombing airplanes.</p> <p>c. Desirability of having each bomber carry flares of sufficient quantity to assist his own mission or that of a following airplane.</p> <p>d. Preliminary tests at Langley Field indicate that 2 or 3 M-26 flares effectively illuminate the target.</p> <p>e. M-26 flares have been made available to Eglin Field for further tests.</p> <p>3. Conclusions: a. Development of a large flare of 8,000,000 candle power, with burning time of 6 minutes</p>	

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W-4071, AC. Rev. 8/10/41

Page No.

~~CONFIDENTIAL~~
 HEADQUARTERS, ARMY AIR FORCES
 DECLASSIFIED
 ROUTING AND RECORD SHEET

File No.

Note:—A line will be drawn across sheet after each comment.

Tally No. AAF

SUBJECT: Bombing Flares.

NO	FROM	TO	DATE	COMMENTS	AAF/A-4 RCC/hmh
1.	AAF A-4	1. AAF A-3	1942 1-26	<p>and time fuze capable of being dropped from any altitude will require a long period of development.</p> <p>b. Increased effectiveness should be obtained over the 8,000,000 C.P. flare by simultaneous release of a multiple number of M-26 flares. From the results obtained at Langley Field, it is quite reasonable to expect that eight M-26 flares released simultaneously would be more effective than the 8,000,000 C.P. flare proposed and the eight M-26 flares would weigh approximately $\frac{1}{2}$ the weight of the 8,000,000 C.P. flare.</p> <p>c. The large single flare would be restricted to a limited number of airplanes due to its bulk and would jeopardize the entire bombardment mission of all airplanes if such flare airplanes failed to reach the objective or release the flare at the proper location.</p> <p>d. That it is desirable each airplane be able to supply its own illumination as well as carry a reasonable bomb load for the accomplishment of its specific mission.</p> <p>4. Recommendation.</p> <p>That the proposed initiation of a development program for a 8,000,000 C.P. flare with 6 minute burning time be delayed until such time as the M-26 flare has been further tested and a clearer definition of military requirements presented.</p> <p style="text-align: right;">For the Assistant Chief of Air Staff, A-4</p>	
		2. AAF Bomber Section (Col. Sorenson)			
				<p>Incl: Ltr frm OCAC, 1/20/42 w/ R&R Items 1 to 4</p>	<p><i>Rwb</i> RCC/A-4</p>

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 Page No. 2

W-4071, AC. Rev. 8/14/41

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 HEADQUARTERS ARMY AIR FORCES

ROUTING AND RECORD SHEET

Note. -- A line will be drawn across sheet after each comment.

File No.

Tally No. AAF

SUBJECT: Bombing Flares.

NO.	FROM	TO	DATE	COMMENTS	AAF/A-3 DWH-da
2	AAF A-3	AAF Bomber Section (Col. Sorensen)	1/30	For comment and return to this Division.	100 HSV C/A-3
3	<i>AAF DWH Secy</i>	AAF A-3	<i>2/2</i>	<i>Conclusions and recommendations of item #1 fully concurred in.</i>	<i>DWH</i> <i>DWH</i>
4.	AAF A-3	AAF A-4	2/4	Recommendation of item #1 concurred in.	AAF/A-3 DWH/jc HSV C/A-3

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F-4071, AC, Rev. 8/14/41

DECLASSIFIED

Bombing Flares.

AAF/A-3
DWH-4a

2 AAF AAF 1/30 For comment and return to this Division.
A-3 Bomber

Section
(Col.
Sorensen)

HSV
G/A-3

Incls. n/c

HEADQUARTERS ARMY AIR FORCES - COORDINATION										
Chief of Staff	Sec'y of Air Staff	A.A.G.	A-1	A-2	A-3	A-4	A-WPD	A-Insp.	Budget	Statistics
					<i>[Handwritten mark]</i>					
					<i>[Handwritten mark]</i>					

DECLASSIFIED

AM-39

AAF/A-4
RCC

~~CONFIDENTIAL~~
~~SECURITY~~

Subject: Bombing Flares.

1st Ind.

War Department, Headquarters, Army Air Forces, Washington, D. C.
FEB 11 1942 To: Chief of the Air Corps

1. Recommendations contained in the preceding are not favorably considered for the following reasons:

a. Development of a large flare of 8,000,000 candle power, with burning time of 6 minutes and time fuse capable of being dropped from any altitude will require a long period of development.

b. Increased effectiveness should be obtained over the 8,000,000 C.P. flare by simultaneous release of a multiple number of M-26 flares. From the results obtained at Langley Field, it is quite reasonable to expect that eight M-26 flares released simultaneously would be more effective than the 8,000,000 C.P. flare proposed and the eight M-26 flares would weigh approximately $\frac{1}{4}$ the weight of the 8,000,000 C.P. flare.

c. The large single flare would be restricted to a limited number of airplanes due to its bulk and would jeopardize the entire bombardment mission of all airplanes if such flare airplanes failed to reach the objective or release the flare at the proper location.

d. That it is desirable each airplane be able to supply its own illumination as well as carry a reasonable bomb load for the accomplishment of its specific mission.

2. Initiation of a new development program on bombardment flares will be delayed until such time as the M-26 flare has been thoroughly tested and a clearer definition of military requirements presented.

By Command of Lieutenant General Arnold

Incls: n/c
hnh

Dispersive
FEB 11 1942
AAG

471
6
180

HEADQUARTERS		ARMY AIR FORCES			COORDINATION					BY B. COOLEY	
Chief of Staff	Sec'y of Air Staff	A.A.G.	A-1	A-2	A-3	A-4	A-WFD	A-Insps.	Budger.	Sta-D	Statistics
						OH/PA 2/10	Assistant	Chief	Adjutant		
WJT											

AAF-39

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471-6-180

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DOD. Hqs.

3 Jan & 20 June 1974

Hy 3/17/77
PLC: Date 3/17/77

January 20, 1942

Subject: Bombing Flares

To: Chief of the Army Air Forces

1. Reference is made to attached correspondence which was referred to the Commanding General, Air Force Combat Command for comment. It is necessary that experiments to produce a satisfactory bombing flare along the lines requested in basic communication be made regardless of the seeming impossibility of its construction.
2. The AFCC did not comment on the tactical requirements for a flare similar to that requested in basic communication. The R. A. F. has found British flares to be of insufficient intensity for locating or bombing the objective. It is doubtful whether the M26 flare will greatly improve bombing results. It is felt that a flare which will provide a beacon for bombing aircraft, illumination sufficient for bombing, and of such intensity as may blind ground defenders can be developed and produced in this country. Such a flare installed in one-third the attacking aircraft would possibly permit twice the number of bombs to arrive on the target as now get there.
3. According to the figures furnished by the AFCC each pound of illuminant provides roughly 10,000,000 candle power seconds of illumination. With 288 lbs. of illuminant it would be possible to construct a flare of 8,000,000 candle power which would burn for 6 minutes. Presuming that the weight ratio of shade, parachute and case could be held the same as in the M26 flare the total weight of the proposed flare is 1800 lbs.
4. It is worthwhile to equip one or two airplanes in each squadron with one or more of these flares to locate and illuminate the target so that the rest of the squadron aircraft might also locate and bomb the target.
5. It is requested that the experimental development of a flare to accomplish the tactical requirement outlined above be initiated and that continual effort be made to overcome the technical difficulties that are apparent in such development.

For the Chief of the Air Corps:

/s/ Lucas V. Beau, Jr.

Lucas V. Beau, Jr.

Lt. Col., Army of the United States
Executive, Pers. & Train. Services

Incls.
R&R items
1 to 4

C O P Y

ROUTING AND RECORD SHEET

SUBJECT: Bombing Flares.

1 CCAS AAF 1941
 C/AS 12-13
(Tr.Div.
3B-51/as)

1. As a result of recent reports from the European theater, it is recommended that immediate steps be taken to develop a bombing flare which will accomplish the following:

a. This flare to enable the air crew to see the same detail on the ground as is now shown by the photo-flash bomb.

That this flare be a reflector type so that the air crew will not be blinded.

That this flare burn for 5-7 minutes.

That this flare be time-fused.

That fuses can be adjusted in the airplane after takeoff.

W.R.W.
Major General, USA
Acting Chief, Air Corps T

2 AAF CG, 1941
 C/A-4 AFCC 12/22

1. For comment.

EFS
C/A-4

C O P Y

#164

ROUTING AND RECORD SHEET

2398

Subject: Bombing Flares.

S-6500

3 CG AAF 1942
AFCC C/a-4 1/3

1. Reference paragraph 1, comment 1 above, memorandum from OCAC, to AAF C/AS, the development of a bombardment flare to meet such requirements is not considered feasible due to the following reasons:

a. The controlling factor of a flare as to candle power is the length of burning time desired when the weight of light producing material remains constant. Hence the total energy may be expended in a fraction of a second as is accomplished in the present standard M23 photoflash bomb (approximately 8 lbs. of illuminant) which yields an estimate candle power of 150,000,000 in burning time of from $2/5$ to $1/4$ second, in contrast to the light obtained from the standard M24 (or M26) bombardment flare (approximately 14 lbs. of illuminant) which yields an estimated candle power of 800,000 in a burning time of approximately 3 minutes.

b. The short burning time of the illuminant material of a photoflash bomb to obtain the above great candle power allows a burning time that is on the order of a detonation, and it may be noted that the photoflash bomb, although containing but slightly more than half the illuminant of the bombardment flare, yields approximately 188 times as much light. This, of course, in approximately $1/360$ th of the time required in the burning of the bombardment flare.

c. Considering the above facts, it is not believed to be physically possible at this time to fabricate from chemical ingredients now known to be available a bombardment flare having the characteristics noted in comment 1.

C/S
AFCC

C O P Y

*** -2-

ROUTING AND RECORD SHEET

SUBJECT: Bombing Flares.

AAF/A-4
RCC/cmy

4 AAF CCAC 1942
A -4 (TR.Div.)1/5

1. This office concurs in the comments contained in item #3 preceding.

TJH, Jr.
C/A-4

5 CCAC AAF 1942
A-4 1/9

1. The AFCC did not comment on the tactical requirements for a flare similar to that requested in basic communication. The R.A.F. has found British flares to be of insufficient intensity for locating or bombing the objective. It is doubtful whether the M26 flare will greatly improve bombing results. It is felt that a flare which will provide a beacon for bombing aircraft, illumination sufficient for bombing, and of such intensity as may blind ground defenders can be developed and produced in this country. Such a flare installed in one-third the attacking aircraft would possible permit twice the number of bombs to arrive on the target as now get there.

Rewritten as a letter to AAF

2. According to the figures furnished by the AFCC each pound of illuminant provides roughly 10,000,000 candle power seconds of illumination. With 288 lbs. of illuminant it would be possible to construct a flare of 8,000,000 candle power which would burn for 6 minutes. Presuming that the weight ratio of shade, parachute and case could be held the same as in the m26 flare the total weight of the proposed flare is 1800 lbs.

~~CONFIDENTIAL~~
DECLASSIFIED

DECLASSIFIED
DOD IAW
E.O. 13526
By: [Signature] Date: 3/10/77

SUBJECT: Bombing Flares.

3. AAF AAF 2/2/
Bomb A/3
Sec

Conclusions and recommendation of item #1
fully concurred in.

/s/ EPP
Div. Bombs

4. AAF AAF 2/4
A-3 A-4

AAF/A-3
DWB/2g

Recommendation of item #1 concurred in.

Incl. B/s

JSV
G/A-3

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by DOD Itra.

5 Feb 28 June 1974

By *SP-1 C*; Date *3/4/77*

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DECLASSIFIED

94

ALL COMMUNICATIONS SHOULD BE ADDRESSED TO THE PERSON COPY ADDRESSED TO

TO INSURE PROMPT ATTENTION
IN REPLYING REFER TO

WAR DEPARTMENT
OFFICE OF THE CHIEF OF ORDNANCE
WASHINGTON

DECLASSIFIED
O. G. of O.
MMO
Rank & Name
Date *2/3/42*

NO. *47*

ATTENTION OF

February 3, 1942

Subject: Bomb Production in the Far East

To: Chief of the Army Air Forces

1. In a letter from the Adjutant General dated January 23, 1942 (Secret, AG 471.6 (13-22-31) HHS-S, O.G. 471.6/2304) it was requested that this office furnish a report to you as to the feasibility and desirability of expanding bomb production in the Far East to meet in any degree the needs of the Army Air Force in that area. Production in India or Australia was specifically mentioned, and the entire proposition was based on the limitations of shipping space available for supply of the Army Air Force in the Far East.

2. This office made immediate contact with the Australian Division of the British Purchasing Commission, in an attempt to get the most up-to-date information on the availability of steel and high explosives in Australia.

3. This office approached the problem with the basic idea that the only way to set up production of standard AN bombs in Australia (or in India), would be to utilize steel and high explosives of local production, together with fins, crates, etc., which occupy valuable space in shipping. All of the current bomb production in Australia is in the older British type of cast steel bombs and to date the limiting factor has been the supply of TNT and ammonia nitrate. It would be best to supply loaded fuses from this country, as these items require many machine tools for fabrication, and they are not bulky items for shipment. The possibility also was considered, if steel and explosives were available, of improvising methods of fabrication such as metallic arc weld construction. Such methods are being resorted to for manufacture in this country already where methods that produce better bombs can not produce in quantities to meet urgent immediate requirements. All of this plan is based on the availability of both steel and high explosives in Australia.

4. We found that the Australian Division, B.P.C. did not have the most up-to-date information as to the possible surplus of either class of commodity over current Australian needs. The TNT

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136 111 8642

CENTRAL MAIL SECTION A.A.F.

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AG 471.6 (179)

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DECLASSIFIED

To: Chief of the Army Air Forces

2-3-43

production was negligible in the latter part of 1941. Planned expansion is directed to 8000 tons per year, to match a planned production of 6000 tons per year of ammonia nitrate. In normal times Australia exports steel from its annual production of about 1,750,000 tons. The one important steel facility in Australia is the Broken Hill Steel Company having plants at Kembla and New Castle. It is an up-to-date and progressive company.

5. It is the understanding of this office that a military mission is now in Australia and that direct contacts can be made to ascertain what quantity by month, of steel and high explosives could be made available for American production of standard AN bombs in that country. In our indorsement of this date to the Adjutant General, we are asking that this authoritative and up-to-date data be obtained. The new series of AN bombs has been standardized also by the British for future use and all current procurement of Defense Aid bombs in this country is being made henceforth in these types. However, unless both steel and high explosives are available it is the opinion of this office that the venture would not be practicable.

C. M. Vesson
C. M. VESSON

Major General, Chief of Ordnance

DECLASSIFIED
~~SECRET~~

DECLASSIFIED

DOD ltr.

8 Feb. & 20 June 1974

By: *[Signature]* Date: *3/10/77*

MCP

~~DECLASSIFIED~~

94

ALL COMMUNICATIONS SHOULD BE ACCOMPANIED BY CARBON COPY AND ADDRESSED TO

TO INSURE PROMPT ATTENTION
IN REPLYING REFER TO

WAR DEPARTMENT
OFFICE OF THE CHIEF OF ORDNANCE
WASHINGTON

Davis/sbg

No. _____
ATTENTION OF _____

February 3, 1942

ORDNANCE WAR
471.6/2

Subject: Bomb Production in the Far East

To: Chief of the Army Air Forces

1. In a letter from the Adjutant General dated January 22, 1942 (Secret, AG 471.6 (12-22-31) MBS-G, O.O. 471.6/2304) it was requested that this office furnish a report to you as to the feasibility and desirability of expanding bomb production in the Far East to meet in any degree the needs of the Army Air Force in that area. Production in India or Australia was specifically mentioned, and the entire proposition was based on the limitations of shipping space available for supply of the Army Air Force in the Far East.

2. This office made immediate contact with the Australian Division of the British Purchasing Commission, in an attempt to get the most up-to-date information on the availability of steel and high explosives in Australia.

3. This office approached the problem with the basic idea that the only way to set up production of standard AH bombs in Australia (or in India), would be to utilize steel and high explosives of local production, together with fins, crates, etc., which occupy valuable space in shipping. All of the current bomb production in Australia is in the older British type of cast steel bombs and to date the limiting factor has been the supply of TNT and ammonia nitrate. It would be best to supply loaded fuses from this country, as these items require many machine tools for fabrication, and they are not bulky items for shipment. The possibility also was considered, if steel and explosives were available, of improving methods of fabrication such as metallic arc weld construction. Such methods are being resorted to for manufacture in this country already where methods that produce better bombs can not produce in quantities to meet urgent immediate requirements. All of this plan is based on the availability of both steel and high explosives in Australia.

4. We found that the Australian Division, B.P.C. did not have the most up-to-date information as to the possible surplus of either class of commodity over current Australian needs. The TNT

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AG 471.6 (179)

SECRET



SECRET

SECRET

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DECLASSIFIED

To: Chief of the Army Air Forces

2-3-48

production was negligible in the latter part of 1941. Planned expansion is directed to 8000 tons per year, to match a planned production of 8000 tons per year of ammonia nitrate. In normal times Australia exports steel from its annual production of about 1,750,000 tons. The one important steel facility in Australia is the Broken Hill Steel Company having plants at Kembla and New Castle. It is an up-to-date and progressive company.

5. It is the understanding of this office that a military mission is now in Australia and that direct contacts can be made to ascertain what quantity by month, of steel and high explosives could be made available for American production of standard AN bombs in that country. In our indorsement of this date to the Adjutant General, we are asking that this authoritative and up-to-date data be obtained. The new series of AN bombs has been standardised also by the British for future use and all current procurement of Defense Aid bombs in this country is being made henceforth in these types. However, unless both steel and high explosives are available it is the opinion of this office that the venture would not be practicable.

C. H. WESSON
Major General, Chief of Ordnance

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DECLASSIFIED

AAF/A-4
JFW/mwb
Wrt 2/6/42

SUBJECT: Airburst Chemical Bombs.

1st Ind.

War Department, Headquarters, Army Air Forces, Washington, D.C.
FEB 10 1942 To The Chief of Chemical Warfare Service.

1. The foregoing on the subject of airburst chemical bombs is concurred in and it is requested that the Chemical Warfare Service initiate action contemplated as recommended in paragraph 4 as early as practicable.
2. If any further action is required by the Chief of the Army Air Forces, request advice in this connection.

FOR THE CHIEF OF THE ARMY AIR FORCES

JOHN B. COOLEY
Lt. Colonel, A. G. C.
Assistant Air Adjutant General

471.6
177

RECORDED
FEB 10 1942
AAG

HEADQUARTERS		ARMY AIR FORCES					COORDINATION				
Chief of Staff	Sec'y of Staff	A.A.G.	A-1	A-2	A-3	A-4	A-WFD	A-Insp.	Budget	Sta-Finica	
	<i>mf</i>					<i>TCM/BU</i>					

AAF-39

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471.6 (177)

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DECLASSIFIED

DECLASSIFIED
A. DOD 117
9 Feb. & 20 June 1974
E.O. 13526: Date 3/2/77

WAR DEPARTMENT
Office Chief Chemical Warfare Service
Washington D. C.

January 20, 1942.

SUBJECT: Airburst Chemical Bombs.

1. The British, Germans and Italians have studied the possibilities involved in the use of chemical bombs of large capacity for the purpose of using high altitude bombers to place chemical agents on specific localities with more accuracy than can be obtained by high altitude spray. Specifically, the Germans have a 550-lb. mustard gas bomb with a time fuze intended to function at about 300 feet above the ground to contaminate an area of about 6,000 square yards. The British are pressing the development of this type of bomb with great effort. British reports also state that an airburst bomb was used very effectively in Ethiopia by the Italians.

2. In June, 1941, the Adjutant General authorized a project under the Chief of Ordnance to develop an airburst bomb after the proposed military characteristics have been concurred in by all concerned. The characteristics approved were as follows:

- a. Item: Airburst Chemical Bomb
- b. Purpose: To permit the coverage of ground areas by chemical agents released at high altitudes.
- c. Characteristics:
 - (1) To be equal in size to any one of the standard demolition bombs. The actual size should be determined by the Chemical Warfare Service and should be that what will permit the maximum coverage of ground by one bombardment airplane.
 - (2) To have stabilized flight to permit accurate sighting from high altitudes.
 - (3) To be equipped with a fuze which may be adjusted in flight to give bursts from 100 to 2,500 feet above the ground and which will permit release from altitudes from 2,000 to 35,000 feet.

3. Present status of development on this project is that the M7 thin chemical bomb has been selected as a satisfactory sample of bomb case. Further progress on the development is awaiting the evolution of a satisfactory fuze which will give accurate airburst.

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4. In view of the current development situation, it will be some time before this bomb can be standardized. However, under the present conditions of war, it is inadvisable to wait for complete standardization of an important item before taking the necessary steps to procure funds and enter into procurement. However, the Chemical Warfare Service is not authorized to include funds for the filling of unstandardized items unless authority is received therefor. It is suggested that a request from the Commanding General, Army Air Force, for the procurement of the necessary filling for the Air Force requirement for these bombs would constitute such an authority.

/s/ E. MONTGOMERY,
Colonel, C.W.S.,
Chief, Field Service.

DECLASSIFIED
ST-100

DECLASSIFIED
DOD ltra.
8 Jan. & 20 June 1974
By: SAC/CLC; Date: 3/10/77

DECLASSIFIED
SECRET

MAF/A-4/W

February 4, 1942.

AAF/A-4/471-29

Shipment of Bombs to Alaska.

II. _____
6-4

I. _____
Ord.

I. _____
TAG

II. AAF

471-6
175

X SW directs

AAF/A-4
HOB/mbh

I. Confirming telephone instructions issued to your office (Captain Stone) February 4, 1942 (Serial 1236) from Lt. Col. Burgess, A-4, Air Staff, it is desired that the following bombs be released to G.H.Q. for shipment to Alaska:

Dispatched Feb 7 1942
AAG

Bombs
1000 ea. 1000# Demolition Bombs
8000 ea. 800# Demolition Bombs

II. To be advised of above action.

For the Chief of the Air Staff:

Office
NOTED: SAC 7/4/42
forwarded to base staff

T. J. HENRY, JR.

HEADQUARTERS						ARMY AIR FORCES						COMBATTING AGENCIES					
Chief of Staff	Sec. 3	AAG	A1	A2	A3	Assignment	Training	Operations	Logistics	Medical	Legal	Public Affairs	Records	Communications	Transportation		
Memorandum for the Record: Above action taken to provide bomb storage for Alaska for airplanes present and proposed.																	
WJH 200																	

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Air 05471-6(175)

FEB 4 1947

AAF/A-4/61

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DOD Hra

9 Feb, & 20 June 1974

By: T/M/L/C; Date: 3/14/77

AAF/A-4
HCB/emd

MEMORANDUM FOR THE ASSISTANT CHIEF OF STAFF, G-4:

Subject: Shipment of Bombs, Ammunition, and Pyrotechnics to "Tanker" and "Cager".

1. Request the following munitions which have been released and ordered shipped to Port Quartermaster, San Francisco Port of Embarkation be sent to "Tanker" on first available transportation

471.6
174

Bombs

- 32 ea. 2000# Demolition Bombs
- 64 ea. 1000# Demolition Bombs
- 400 ea. 500# Demolition Bombs
- 400 ea. 300# Demolition Bombs
- 483 ea. 100# Demolition Bombs

Ammunition

10,000 rounds 37mm Aircraft

Pyrotechnics

- 50 Grenades H25
- 500 Flares H2A1
- 500 Flares H2
- 4,000 Signals H21
- 500 Flares H23
- 4,000 Signals H24
- 4,000 Signals H25
- 4,000 Signals H26
- 100 Photo Flash Bombs H23
- 1,000 Signals H25

2. Request the following pyrotechnics which have been released and ordered shipped to Port Quartermaster, San Francisco Port of Embarkation

HEADQUARTERS		ARMY AIR FORCES					COORDINATION				
Chief of Staff	Secy of Staff	A.A.G.	A-1	A-2	A-3	A-4	A-WPD	A-Insp.	Budget	Statistics	

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AAF-39

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SECRET
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Letter to sent to "Langer" on the first available transportation

Expenditures

- 200 Flares M21
- 1,000 Flares M2
- 1,000 Signals M11
- 1,000 Signals M14
- 1,000 Signals M15
- 1,000 Signals M16

For the Chief of the Air Staff:

T. J. HANLEY, JR.,
Colonel, A. U. S.
Assistant Chief of the Air Staff, A-4.

HEADQUARTERS		ARMY AIR FORCES				COORDINATION				
Chief of Staff	Sec'y of Air Staff	A.A.G.	A-1	A-2	A-3	A-4	A-WPD	A-Insp.	Budget	Statistics
						1413				

AAF-39

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DECLASSIFIED

Ans AB 471-6174

DECLASSIFIED
DOD ltr.
20 June 1994
By SP-1 LC: Date 3/14/77

DECLASSIFIED
WAR DEPARTMENT
HEADQUARTERS OF THE ARMY AIR FORCES
WASHINGTON

DRAFT

DECLASSIFIED

February 5, 1942

*Col. Drake
Att: J. E. Zanetti
A-4*

SUBJECT: Bomb Clusters

TO: Chief of the Chemical Warfare Service

Att: Colonel J. E. Zanetti

1. It is requested, in connection with our letter of February 4, 1942, for the above subject, that sufficient incendiary bombs be immediately put aside from current production to enable you to prepare forty-eight of those clusters which the study requested in the previous letter indicates will be the most desirable.

2. It is requested that these forty-eight bomb clusters be ready for shipment from Edgewood Arsenal or other convenient point by March 1, 1942.

J.E.Z.

Copy to A-4

SECRET

DECLASSIFIED
DOD Item
8 Jan. & 20 June 1974
By: *3/1/77*

AG 471.6
(2-2-42) MCG-G

LFI/als - 17.5.

February 9, 1942.

SUBJECT: Shipment of Pyrotechnics & Bombs to
"Copper & Fantan."

TO : Chief of Ordnance.

DECLASSIFIED

Auth: T.A.G.

R.G.H.

Initials: _____

Date: FEB 9 1942

Confirming telephone instructions issued to your office
(Lt. Colonel Rice) February 2nd, 1942 (Serial 1233) from
Lt. Colonel Burgess, A-4, Air Staff, it is desired that the follow-
ing bombs and pyrotechnics be shipped as follows:

For Copper

1200 ea. Flares	N 9
1000 ea. Signals	N 11
1000 ea. "	N 14
1000 " "	N 15
1000 " "	N 16
250 " Flares	M&A

For Fantan (Formerly Orca)

400 ea. 500# Demolition Bombs

By order of the Secretary of War:

11 1942

R.G. Hersey

Adjutant General.

COPIES TO: Chief of the Army Air Forces, re his Disposition Form AAF/A-4/412-2,
Assistant Chief of Staff, G-4. Feb. 2, 1942.

*File
Hers*

AG 471.6 (172)

DECLASSIFIED

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AG 471.6 (172)

DECLASSIFIED
 DOD Itra.
 8 Jan & 20 June 1974
 By: JSP/C: Data: 3/4/77

DECLASSIFIED

For the Chief of the Air Staff:

NOTED *ERC 7/6/42*
 Chief of the Air Staff

office

S. J. HANLEY, Jr.,
 Colonel, Air Corps,
 Assistant Chief of Air Staff, A-4.

Memorandum For Records: Above action taken to provide 500/ bombs of Pantan for B-17 Airplanes & pyrotechnics for Copper for 114 B-26 Airplanes.

HEADQUARTERS		ARMY AIR FORCES -				COORDINATION				
Chief of Staff	Sec'y of Staff	A.A.G.	A-1	A-2	A-3	A-4	A-WP	A-Inspr.	Budget	Scenarics
	<i>WJT</i>					<i>WJT</i>				

DECLASSIFIED

AG 1373
air 471.6 **(172)** AAF-39

AAF/A-450

DECLASSIFIED
DOD ltr.
8 Jan 28 June 1984
By: [redacted] Date: 3/12/77

~~SECRET~~

February 8, 1942

AAF/A-4/471-26

Shipment of Bombs, Ammunition, and Pyrotechnics to Funtan.

II G-4

I Ord.

II AAF

X TAG

X SW directs

471.6 (171)
471.6 (171)
471.6 (171)

AAF/A-4
HCB/esg

I. 1. Confirming telephone instructions issued to your office (Capt. Stone) February 8, 1942 (Serial 1235) from Lt. Col. Burgess, A-4 Air Staff, it is desired that the following bombs, ammunition and pyrotechnics be shipped as follows:

To Funtan

- 32 ea. 2000 # Demolition Bombs
- 64 ea. 1000 # " "
- 400 ea. 500 # " "
- 455 ea. 100 # " "
- 10,000 rounds 37 mm aircraft ammunition
- 50 Grenades M800
- 500 Flares M8A1
- 500 " M9
- 4000 Signals M11
- 500 Flares M13
- 4000 Signals M14
- 4000 " M15
- 4000 " M16
- 100 Photo Flash-bombs M25
- 1000 Signals M26

Dispatched
FEB 7 1942
AAG

(SEE OVER)

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can [redacted]

~~SECRET~~

DECLASSIFIED

2. Authority is granted to cancel the reserve of the Eastern Defense Command of 400 M2 Series 100 & Demolition Bombs at Dunsin Arsenal, and to reestablish the same credit at that depot or another depot.

To be advised of above action.

ACTION TAKEN
1cc to Ch/Ord. w/copy to
A.C. of S., G-4; Ch/A.A.F.
LFL/amb-1705.

For the Chief of the Air Staff.

4 A. G. O.
FEB 5 1942
RECEIVED

T. J. HANLEY, JR.,
COLONEL, AIR CORPS
Assistant Chief of Air Staff, A-4

Memorandum for Record: Above action taken to provide storage of munitions at "Penton" for possible use of heavy bombers, and to provide for combat life of M 2-100's at that station.

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DECLASSIFIED
DOD Ltr.
6 Jan & 20 June 1974
By *[Signature]* Date *3/19/77*

DECLASSIFIED

[Handwritten signature]

February 4, 1942

SUBJECT: Bomb Clusters

TO : Chief of the Chemical Warfare Service

Att: Colonel J. E. Zanetti

1. In order that the maximum possible destructive load of incendiary bombs may be carried in the specially modified bomb bay of a B-25-B airplane, it is requested that a study be made of the most efficient cluster arrangement that can be carried in this airplane. Two possible loads should be considered. In one, the maximum possible number of incendiaries up to 2000# that can be carried, and in the other, the maximum load of incendiaries up to 1000# that can be carried over two 500# demolition bombs.

2. Information regarding the new dimensions of the bomb bay, bomb rack arrangement, etc., can be obtained at Wright Field, Dayton, Ohio, from Major Frank Cook, who is project engineer on this modified airplane.

3. It is requested that this matter be brought to the attention of Colonel J. E. Zanetti.

For the Chief of the Army Air Forces:

WILLIAM F. DICK
Colonel, A.G.D.
Air Adjutant General.

4716

691

Col. Vanaman.

DECLASSIFIED
CONFIDENTIAL

[Handwritten initials]

air 4716 (69)

ANSWER REPLY TO
CHIEF OF THE AIR CORPS
WAR DEPARTMENT
WASHINGTON, D. C.

DECLASSIFIED

DOD Hqs.

8 Jan & 20 June 1974

Re: ~~TOP SECRET~~ L.C.; Date: 3/19/77

WAR DEPARTMENT
OFFICE OF THE CHIEF OF THE AIR CORPS
WASHINGTON

SUBJECT: Bomb Clusters

FEB 4 1944

TO: Chief of the Chemical Warfare Service

Att: Colonel J. E. Zanetti

Deck in write this for proper form by Sec A. also!

1. In order that the maximum possible destructive load of incendiary bombs may be carried in the specially modified bomb bay of a B-25-B airplane, it is requested that a study be made of the most efficient cluster arrangement that can be carried in this airplane. Two possible loads should be considered. In one, the maximum possible number of incendiaries up to 2000# that can be carried, and in the other, the maximum load of incendiaries up to 1000# that can be carried over two 500# demolition bombs.

2. Information regarding the new dimensions of the bomb bay, bomb rack arrangement, etc., can be obtained at Wright Field, Dayton, Ohio, from Major Frank Cook, who is project engineer on this modified airplane.

For the Chief of the Air Corps:

L. C. Smith

L. C. SMITH
Lieut. Colonel, Air Corps,
Executive Assistant

DECLASSIFIED
DOD Itrs.
8 Jan. & 20 June 1974
By: [unclear] Date: 3/14/77

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DECLASSIFIED
WAR DEPARTMENT

A AF/R-4/166

HEADQUARTERS OF THE ARMY AIR FORCES
WASHINGTON

MEMORANDUM FOR THE ADJUTANT GENERAL :

SUBJECT: Bombs and Ammunition Storage in Islands
of the South Pacific Ferry Command.

The Secretary of War directs:

I. That a secret letter be sent substantially as follows to the
Commanding General, Hawaiian Department.

1. In connection with the five island bases of the
South Pacific Ferry Route, namely Palmyra, Canton, Christmas
Fiji and New Caledonia, it would appear desirable to stock
these islands with bombs, ammunition and pyrotechnics for
the use of heavy bombardment aircraft being ferried through
and temporarily located at one of the five island staging
fields, or so that reinforcements flown to one of the fields
from Australia or Hawaii may be employed offensively against
exceptional targets of opportunity.

2. For this purpose, The Chief of Army Air Forces
has approved the following allocation of bombs to these
bases:

a. For Palmyra, Canton and Christmas Islands

- 13 ea. 2000# Demolition Bombs
- 26 ea. 1000# Demolition Bombs
- 52 ea. 500# Demolition Bombs
- 91 ea. 300# Demolition Bombs
- 130 ea. 100# Demolition Bombs

b. For New Caledonia and Fiji

- 52 ea. 2000# Demolition Bombs
- 104 ea. 1000# Demolition Bombs
- 208 ea. 500# Demolition Bombs
- 364 ea. 300# Demolition Bombs
- 520 ea. 100# Demolition Bombs

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3. The basis for the above computation was one-half mission for a heavy bombardment squadron (13 airplanes) for Palmyra, Canton and Christmas Islands and one mission for two heavy bombardment squadrons at New Caledonia and Fiji.

4. The Chief of Army Air Forces and the War Department have approved one mission of aircraft machine gun ammunition based upon the number of airplanes in paragraph I (3) for each island.

a. Amounts for Palmyra, Canton and Christmas Islands:
2275 rounds Cal. 30 AP&T Ammunition
13650 rounds Cal. 50 AP&T Ammunition

b. Amounts for Fiji and New Caledonia:
4550 rounds Cal. 30 AP&T Ammunition
27300 rounds Cal. 50 AP&T Ammunition

5. A small stockage of pyrotechnics is desirable also, based upon the number of airplanes in paragraph I (3) above.

6. All stockages herein mentioned, are over and above stocks provided initially and to maintain Pursuit Squadrons stationed at these bases.

7. In order to accomplish the above - bombs, pyrotechnics and ammunition will be shipped to Hawaii in sufficient quantities to provide replacement for munitions transhipped by your headquarters to these five islands. *(This para. rewritten see para. 11 below) etc*

8. The following munitions have been ordered shipped to Fiji on next available transportation from SFPoE:

32 ea. 2000# Demolition Bombs
64 ea. 1000# Demolition Bombs
400 ea. 500# Demolition Bombs
400 ea. 300# Demolition Bombs
483 ea. 100# Demolition Bombs
10,000 rounds 37 MM Aircraft
4 Missions machine gun ammunition
(for one squadron B-17E Airplanes)
50 Grenades HCMS

-2-
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DECLASSIFIED

500 Flares M8A1
500 Flares M9
4000 Signals M11
500 Flares M13
4000 Signals M14
4000 Signals M15
4000 Signals M16
100 Photoflash Bombs M23
1000 Signals M25

9. In the case of Fiji, credit for the shipment in para. (8), should be applied against the allocation in para. (2b) in order to avoid duplication.

10. Due to the uncertain status of New Caledonia at this time, no shipments to that place should be made until sufficient security measures have been provided by ground forces..

II. That the Chief of the Army Air Forces and A.C. of S., WPD and A.C. of S., G-4 be advised of the above action.

III. Concurrences:

A. C. of S., WPD ()
A. C. of S., G-4 ()

For the Chief of the Air Staff:

/s/ F. S. Borum

F. S. BORUM
Colonel, Air Corps
Acting Assistant, Chief of the Air Staff, A-4

MEMORANDUM FOR RECORD: Above action taken to provide bomb, Pyro-technic and ammunition stockage at Palmyra, Canton, Christmas Islands for one-half mission for bombs and one mission for ammunition for a heavy bombardment aquadron and at New Caledonia and Fiji for one mission for two heavy bombardment squadrons. Recommendation was made by A.C. of S., A-WPD and approved by Chief of Army Air Forces.

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IV. There is no objection by this division to the modification desired (Tab. A).

V. Paragraph 7 basic communication is changed to read as follows:

"In order to accomplish the above -- bombs, pyrotechnics and ammunition will be shipped to depots in the vicinity of San Francisco for release to the Commanding General, San Francisco Port of Embarkation with a view to their shipment from San Francisco Port of Embarkation direct to the islands indicated or to Hawaii, as may be desired by the Commanding General, Hawaiian Department."

VI. Final Concurrences:

A. C. of S., WPD ()
A. C. of S., G-4 ()

For the Chief of the Air Staff;

NOTED.....
Office Chief of the Air Staff

F. S. BORUM
Colonel, Air Corps
Acting Assistant, Chief of Air Staff, A-4

Incl:
Ltr frm
Gen. Somervell
2/11/42; above
sbj.

DECLAS ~~SECRET~~

DECLASSIFIED
DOD 'Info
8 Jan. & 20 June 1974
BY: [redacted] C. Date: 3/14/77

DECLASSIFIED

WAR DEPARTMENT
WAR DEPARTMENT GENERAL STAFF
Supply Division, G-4
WASHINGTON, D. C.

G-4/33779

February 11, 1942

SUBJECT: Bombs and Ammunition Storage in Islands of
South Pacific.

TO: CHIEF OF THE ARMY AIR FORCES:

1. Reference is made to paragraph 7, basic memorandum. Vessels are being scheduled for direct transportation from San Francisco Port of Embarkation to islands indicated in paragraphs 4a and 4b thereof.
2. It is accordingly desired that the ammunition indicated be shipped to depots in the vicinity of San Francisco for release by the Commanding General, San Francisco Port of Embarkation, with a view to their shipment from San Francisco Port of Embarkation direct to the islands indicated or to Hawaii, as may be desired by the Commanding General, Hawaiian Department.
3. Subject to the foregoing modification, G-4 concurs in the basic memorandum.

BREHON SOMERVELL,
Major General,
Assistant Chief of Staff.

Incl:
Memo for Adj. Gen.
from A-4.

/s/ LeR. Lutes,
Brigadier General,
Executive.

DECLASSIFIED

DECLASSIFIED
DOB 100
8 Jan. & 29 June 1974
Ry: DAFIC; Date 7/19/77

~~SECRET~~
DECLASSIFIED

RECEIPT

Date _____

Subject: Bombs and Ammunition Storage in Islands of the
South Pacific Ferry Command.

1. Received from the Headquarters, Army Air Forces,
Memorandum - above subject with inclosure: letter to C/AAF
from General Somervell (2/11/42) above subject.

Officer

Rank

Office

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 DOD Itra.
 * 21 June 1974
 BY: [unclear] Date: 3/14/77

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FEB 3 1942

MEMORANDUM FOR THE CHIEF OF THE ARMY AIR FORCES;

Subject: Bombs and Ammunition Storage in Islands of the South Pacific Ferry Command.

471.6 (167)

I. Discussion.

1. In order that heavy bombardment aircraft being ferried through the five island bases of the South Pacific Ferry Route and which may be temporarily located at one of the five island staging fields, or that re-enforcements flown to one of the fields from Australia or Hawaii, may be employed offensively against exceptional targets of opportunity it is necessary that bombs and ammunition be placed at each of these fields. The following bombs are now available or allocated to island bases indicated below. These bombs are suitable for use on the P-39 D airplanes.

	There are	Allocated and to go
Palmyra	none	none
Carlton	none	none
Christmas	none	190
Fiji	200	400
New Caledonia	none	200

2. Due to the present vulnerability of the route it is considered that not more than one mission of each type bomb should be placed at each of the locations mentioned. However, as the situation improves this amount should be increased.

II. Action Recommended.

It is recommended:

1. That one mission of demolition bombs (all sizes) for a heavy bombardment squadron (13 aircraft) consisting of:

HEADQUARTERS ARMY AIR FORCES - COORDINATION						
Chief of Staff	Secy Air Staff	A. A. G.	A-1	A-2/D	A. Insp. (adect.)	Statistic
			50-3000 bombs			
			100-3000 bombs			
			100-300 bombs			
			200-100 / bombs			

be placed at Palmyra, Carlton and Christmas Islands.

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2. That bombs for one mission by two heavy bombardment squadrons be placed at New Caledonia and Fiji.

3. That one mission of aircraft machine gun ammunition adequate for the forces mentioned above be placed at each island.

4. That the above recommendations be approved and that this paper be returned to the Air War Plans Division for immediate issuance of the necessary directive.

For the Chief of the Air Staff.

H. L. GEORGE
Col., Air Corps
Assistant Chief of the Air Staff, A-WPD.

12:10 2/3 Orig taken to
Gen Arnold by Mrs Hughes.

a1

HEADQUARTERS ARMY AIR FORCES - COORDINATION										
Chief of Staff	Secy of Staff	A.A.G.	A-1	A-2	A-3	A-4	A-WPD	A. Insp.	Adj. Gen.	Secy. of Staff

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DOD ltr.
8 Jan 4 20 June 1974
By: SP-1/C: Data: 3/4/77

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FEB 9 1942

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WRITTEN 2/8/42

AAF/A-4/L71-33

Shipment of Bombs and Pyrotechnics to Jamaica and Antigua.

II. 2-4

I. 2AS

II. AAF

I. Commanding General, Field Forces, G.H.Q.
(Ammunition Ordnance Section)

X. SW directs

471.6
166

Dispatched

on 11.1.42

AAG

AAF/A-4
ECR/mbh

I. That an indorsement to secret letter G.H.Q. dated January 29, 1942 be prepared substantially as follows:

Bombs and pyrotechnics as requested were ordered released to G.H.Q. and the Chief of Ordnance directed to make shipments as indicated in basic communication.

II. To be advised of action taken above.

For the Chief of the Air Staff:

Incl.
Memo for AG/3, G-4
"Shipment of Aircraft
Bombs" 1/20/42.

NOTED *erc 2/10/42*
Chief of the Air Staff

F. S. BURN,
Colonel, Air Corps,
Acting Assistant Chief of the Air Staff, A-6.

MEMORANDUM FOR RECORD: Above action taken in compliance with request from G.H.Q. dated January 29, 1942, re: SHIPMENTS OF BOMBS AND PYROTECHNICS TO JAMAICA AND ANTIGUA.

Chief of Staff	Secy	Sec 3	Sec 4	Sec 5	Sec 6	Sec 7	Sec 8	Sec 9	Sec 10	Sec 11	Sec 12

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& Jan & 20 June 1974
REF ID: A67777

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MBB
Jan 29 42

471 (ARO-JBC) Ord.

January 29, 1942.

MEMORANDUM FOR ASSISTANT CHIEF OF STAFF, G-4, WAR DEPT.
Attn: Major L. E. Cobulla.

Subject: Shipment of Aircraft Bombs.

1. It is requested that the following items of aircraft bombs and pyrotechnics be released to this headquarters and the Chief of Ordnance directed to make shipment as indicated:

<u>Item.</u>	<u>To Verman Field, Jamaica</u>	<u>To Coolidge Field, Antigua.</u>
Bomb, demolition, 2000 lb.	40	32
Bomb, demolition, 1000 lb.	54	44
Bomb, demolition, 500 lb.	110	80
Bomb, demolition, 300 lb.	320	248
Bomb, demolition, 100 lb.	320	416
Bomb, photoflash, M23A1	36	30
Flare, M9	100	130
Signal, drift, M25	48	60
Signal, aircraft, assorted	288	624
Flar, bomb, M24	160	200

2. Informal advise from the Chief of Army Air Forces (Colonel Schneider) indicates the above quantities are available for issue.

For the COMMANDING GENERAL:

J. W. RAMSEY
Lt. Col., A.G.D.,
Assistant Adjutant General

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DOD ltra.
8 Jan. 6, 20 June 1974
BY *SP/MLC* C: Date *3/14/77*

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(Air AG)

January 29, 1948

SUBJECT: Basis of Computation of Requirements for Items of Ordnance Equipment Recently Standardized.

TO: Colonel David H. Stinson (O-11286) Air Corps, Headquarters, Air Force Combat Command.

1. A board to consist of the following-named officers is hereby appointed as a standing Air Corps committee to meet at the call of the President, thereof, for the purpose of revising the Air Corps basis for computation of requirements of items of Air Corps - Ordnance and Chemical Warfare equipment:

- Colonel David H. Stinson (O-11286) Air Corps
- Lieutenant Colonel Richard C. Coupland (O-9792) Ord. Dept.
- Lieutenant Colonel John S. Moore (O-12678) Air Corps
- Lieutenant Colonel Ford L. Fair (O-17285) Air Corps
- Lieutenant Colonel Oliver S. Fisher (O-12609) Air Corps
- First Lieutenant Ray H. Rayle (O-371041) Ord. Dept.

2. Lieutenant Colonel Fisher is designated as recorder of the board.

3. The board may call informally on the Chief of Ordnance, the Chief of the Chemical Warfare Service, and the Commanding General, CGO, for representatives to act as advisers when the necessity arises.

4. The results of each committee meeting will be at once included in a staff study which, upon approval, will constitute authority for the Chief of Ordnance and the Chief of the Chemical Warfare Service to initiate procurement.

By command of Lieutenant General ARBOLD:

DISTRIBUTION:

- Col. Coupland, A-4
- Lt. Col. Moore, CGAS
- Lt. Col. Fair, A-WPD
- Maj. Fisher, A-3
- 1st Lt. Rayle, CGAS
- Sec. AS
- A-1
- A-3
- A-4
- A-WPD
- Air AG (Para)
- C/AS
- CG/AFGC
- C/Ord.
- C/GWS
- CG/CHQ, U.S.A.

WILLIAM V. DECK,
Colonel, E. C. D.,
Air Adjutant General.

471.6 165

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air AG 471.6 165

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DOD ltr.
8 Jan. & 20 June 1964
By: [unclear] Date: 3/26/67

Jan. 27, 1942

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Shipment of Bombs and Ammunition to Copper and "X".

1944

Ord.

X TAG

II AAG

X SW directs

471.6
164

JAN 27 1942
AAG

AAF/A-4
HED/sec

I. 1. Confirming telephone instructions issued to your office (Lt. Col. Rice) January 26, 1942 (Serial 1188) from Lt. Col. Burgess, Air Staff, A-4, it is desired that the following bombs and ammunition be shipped as follows:

For "X"

For Copper

8000 ea. 500# Demolition Bombs
2107 ea. 100# Demolition Bombs MK series
75000 rounds 37 mm Aircraft
75000 rounds 20 mm Aircraft

4000 ea. 500# Demolition Bombs
18000 ea. 20# Fragmentation Bombs
30000 rounds 37 mm Aircraft

II. To be advised of above action.

For the Chief of the Air Staff:

Office
NOTED EPC 1/30/42
Chief of the Air Staff

F. J. Hanley, Jr.
Colonel, Air Corps

HEADQUARTERS ARMY AIR FORCES		COORDINATION	
Chief	Sec'y	Headquarters, Army Air Staff, A-4	Sea-
		Ammunition	Warfare
		"Copper" and "X".	

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AAF/A-4
HCB/emi

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DOD IAW
8 Jan & 20 June 1974
Hy 241121; Date 5/4/77

MEMORANDUM FOR THE ASSISTANT CHIEF OF STAFF, G-4:

Subject: Shipment of Bombs and Ammunition to "C" and "Copper."

1. Request the following bombs and ammunition be shipped to "C":

- 5,000 ea. 300# Bombardier Bombs
- 5,000 ea. 300# Bombardier Bombs
- 2,367 ea. 100# Bombardier Bombs Mk Series
- 75,000 rds. .37 in Aircraft
- 75,000 rds. .50 in Aircraft

2. Request the following bombs and ammunition be shipped to "Copper":

- 4,000 ea. 300# Bombardier Bombs
- 3,967 ea. 300# Bombardier Bombs
- 15,000 ea. 100# Bombardier Bombs
- 30,000 rds. .37 in Aircraft

3. Above bombs and ammunition have been ordered to San Francisco, and are in addition to shipments requested previously.

For the Chief of the Air Staff:

T. J. BARKER, JR.,
Colonel, Air Corps,
Assistant Chief of the Air Staff, A-4.

JAN 20 1944
AAG

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163

HEADQUARTERS		ARMY AIR FORCES				COORDINATION				
Chief of Staff	Sec'y of Staff	A.A.G.	A-1	A-2	A-3	A-4	A-WPD	A-Insp.	Budget	Statistics
						HCB HCB				

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DOD IIR
1 Jan. & 20 June 1974
By: SMLC: DAW 3/14/77

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RECEIPT

DATE _____

SUBJECT: Shipment of Bombs and Ammunition to "X" and Copter.

Received from Headquarters Army Air Forces, Hanoi

Above subject,

RECEIVED _____

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~~SECRET~~

Subject: Report on Mark XVII Depth Bomb (Mark XXIV hydrostatic fuse).

1st Ind. (Air AG)

War Department, Headquarters Army Air Forces, Washington, D. C.
February 6, 1942 To: Chief of Ordnance.

It is requested that the matter referred to in basic communication be investigated and that this office be advised of the corrective action necessary to overcome the difficulties.

For the Chief of the Army Air Forces:

JOHN B. COOLEY
Lt. Col., A.C.D.
Assistant Air Adjutant General

Incls:
IAF. 1/14/42 fr. Admiral Bristol

471.6
(162)

Dispatched
FEB 7 1942
AAG

HEADQUARTERS				ARMY AIR FORCES				COORDINATION			
Chief of Staff	Secy of Staff	AAG	A 1	A 2	A 3	A 4	A WPD	A Insp	Budget	Secy of Staff	
		gpc				✓					

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AAF/A-4
RCC/hmh

Subject: Report on Mark XVII Depth Bomb (Mark XLIV hydrostatic fuse).

1st Ind.

War Department, Headquarters Army Air Forces, Washington, D. C.
To: Chief of Ordnance.

1. For investigation and recommendations on the necessary corrective action to overcome the difficulties indicated in the inside communication.

Encls
Ltr. 1/14/42 fr. Admiral Bristol

10-4777 AT
FEB 6 1942
AF Form 1

HEADQUARTERS ARMY AIR FORCES - COORDINATION											
Chief of Staff	Secy Air Staff	A.A.G.	A-1	A-2	A-3	A-4	A-WPD	A. Insp.	Budget	Statistics	
						TW/gw Rbb					

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DOD ltra
8 Jan. & 20 June 1994
By *SP/MLC*; Date *3/27/77*

HEADQUARTERS
Newfoundland Base Command, U. S. Army,
A.P.O. #801, Newfoundland.

471.6

DFM/bf.

January 19, 1942.

Subject: Report on Mark XVII Depth Bomb (Mark XXIV hydrostatic fuse).

To : Lt. General H. H. Arnold, Chief of the U. S. Army Air Force, Washington, D.C.

1. In reference to the depth bombs which we have tried on the B-17-Bs at Newfoundland Airport for anti-submarine attacks, we had considerable trouble getting good performance out of the bombs. During November and December 1941 we dropped 19 of these bombs and 9 of them failed to detonate. Apparently there is some condition under which we dropped them, speed, altitude, or temperature, which prevented the hydrostatic fuse from operating.

2. A report on this performance was turned over to Admiral A. L. Bristol, and his attached letter of January 14 is in reference to this report.

G. C. BRANT,
Major General, U. S. Army,
Commanding.

1 incl:
Ltr. 1-14-42 from Admiral Bristol.

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DDI Form

4 Jan. & 20 June 1984
By *SP6EJC*; Date *1/01/77*

• COPY •

UNITED STATES ATLANTIC FLEET
SUPPORT FORCE
U. S. S. Prairie, Flagship.

Care Postmaster, New York, N.Y.
January 14, 1942.

Dear General Brant:

I wish to acknowledge with thanks your letter of December 24, 1941, reporting results obtained in drop tests with Mark XVII aircraft depth bombs. These data are being forwarded, recommending that the erratic results be investigated and that comprehensive series of drop tests with the subject bombs, under various conditions, be initiated.

Very truly yours,

/s/ A. L. Bristol,

A. L. BRISTOL

Major General G. C. Brant, U. S. Army,
Headquarters, Newfoundland Base Command,
A.F.O. 801, Newfoundland.

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Ans. AB 471.6(162)

Copy for Col. York

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DOD ltr.
2 Jan. & 20 June 1976
BY: [Signature] Date: 3/12/79

DIARY
January 21, 1942

The following is information received from the AFPC reference bombing of submarines by the First Air Force on January 16, 1942 with depth bombs:

The First Air Force sent a representative to the Navy (Commander Jennings) who gave this representative a bulletin which stated that the depth bombs should be set at 150 feet. The depth bombs had a setting of 25, 50, and 125 feet, and were set at 125 feet, this being the nearest to 150 feet.

On January 13 the Commander-in-Chief of the Atlantic Fleet issued a letter stating that airplanes bombing submarines should set depth bombs at 50 feet. This was not received in the First Air Force Headquarters until the bombing on January 16 had taken place.

A. W. V.

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JOHN YORK Jr.
Staff Air Corps

~~SECRET~~

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DOD Hqs.
8 Jan. & 20 June 1974
By: *SP8/1C: Data/1/177*

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HEADQUARTERS AIR FORCE ~~SECRET~~ COMMAND

(K-5)

Bolling Field, D. C.

ACC 471.6 (1-21-42)

JAN 25 1942

SUBJECT: Letter of Instruction, Serial No. 41-27, Navy 325-lb., Mk. XVII, Depth Bomb.

TO : The Chief of the Army Air Forces, Washington, D. C.

1. The subject Letter of Instructions, Serial No. 41-27, Navy 325-lb., Mk. XVII, Depth Bomb (Incl. 1) has been received from the Office of the Assistant Chief, Air Service Command, Wright Field, Ohio, and a copy of the 1st Indorsement, this headquarters, to the Air Service Command, is inclosed for your information.

For the Commanding General:

C. W. Russell

C. W. RUSSELL,
Brigadier General, G.S.C.,
Chief of Staff

2 Incls.

- ✓ Incl. 1 - Ltr. of Instructions
- ✓ Incl. 2 - Ord. F.S. Tech. Bul. TB 980-1.

471.6 (158)

Enclosure Filed in Envelope

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DOD Itra.
17 June 1974
LC: Date 10/77

TB 980-1

Ordnance Field Service
Technical Bulletin

War Department, Ordnance Office,
Washington, January 17, 1942.

**BOMB, DEPTH, AIRCRAFT, MARK 17 AND MARK 17 MOD 1 -
INSTRUCTIONS FOR FLIGHT PREPARATION, OF.**

1. These descriptions and instructions are issued for the ready reference of all personnel concerned with the flight preparation of the Mark 17 and Mark 17 Mod 1 Depth Bomb and the Mark 24 and Mark 24 Mod 1 Hydrostatic Fuze. There is also provided an instantaneous nose fuze which seldom will be used on Naval bombing missions.

(A) Description of the Depth Bomb

1. The Mark 17 depth bomb, developed primarily for attack upon submarines, is a light case bomb designed to carry the maximum weight of trinitrotoluene

Incl. 2

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explosive charge within a total bomb weight limit of 325 pounds. Detonated by the functioning of either a hydrostatic fuze or an impact fuze, this bomb may be used for attack upon submerged craft or upon surface vessels. Lugs on the bomb case provide for its suspension from either double or single hook racks, e.g. the Mark 35 or the Mark 41 Bomb Racks, respectively. The lug for single suspension is on the opposite side of the bomb from the double suspension lugs, the two sets of lugs being 180° apart.

(B) Description of Fuzes

1. The principal fuze of the Mark 17 depth bomb is the Mark 24 hydrostatic fuze. Located in a transverse fuze cavity, forward of the bomb's center, this fuze is designed to function, in response to hydrostatic pressure, at a predetermined depth.

The secondary fuze, is the Mark 19 instantaneous nose fuze detonating the bomb upon striking an impeding surface, including the water. Selective arming, therefore, is necessary if this fuze is used.

2. The bomb racks and shackles in service at the present time, however, are equipped with only one arming mechanism. Depth Bombs carried on racks or shackles with single arming mechanisms should not have a nose impact fuze installed unless a demolition effect, and this only, is desired. The Bureau is now procuring auxiliary arming mechanisms of electrical operation which will be secured to the side plate of the bomb rack or to the aircraft structure to permit selective arming of the two fuzes of this depth bomb.

3. The Mark 24 and Mark 24 Mod 1 hydrostatic fuze is a double ended fuze inserted through the bomb and protruding on each side. One arming wire is required for each end of the fuze. When the bomb is dropped from the armed position both of these wires are withdrawn. As the bomb sinks in the water, the hydrostatic pressure built up against the spring plates on each side of the fuze aligns the firing train and fires the pistol which explodes the bomb. Only when both arming wires are withdrawn will the fuze operate.

This hydrostatic functioning of the Mark 24 type fuze must be clearly understood by all personnel who are concerned with loading or unloading the Mark 17 and

- 2 -

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Mark 17 Mod 1 depth bomb. If the bomb is accidentally released while the plane is on water, or if the bomb rolls over the side while being installed, with both arming wires withdrawn, detonation will occur when the bomb sinks to the depth for which the hydrostatic fuze-spring is set.

(C) Installation of Arming Wires

1. Reference (a) recommended that two complete and independent arming wires each with a separate arming plate be used for the hydrostatic fuze. With such an arrangement the accidental pulling of one of the arming wires would not pull both wires from the fuze, presumably improving safety. However, this has not been true because the arming mechanisms of Bomb Racks Mark 35 and Mark 41 were designed to accept only one arming plate, and the use of two arming plates tends to jam the arming mechanism. The small additional safety feature obtained by the use of two arming plates, therefore, is heavily outweighed by the fact that a large percentage of bomb drops in the intended "safe" position were released "armed" due to this jamming.

2. Because of this defect the procedure now approved for the installation of the arming wires on the Mark 24 and Mark 24 Mod 1 hydrostatic fuze is as follows:

(a) Attach the single arming plate to the bombrack arming hook. Note that two arming wires are furnished with one plate as shown on Enclosure (A), and no alterations need be made.

(b) Spread the wires and hoist the bomb into place on the rack.

(c) With the bomb firmly hooked to the rack feed the wires through the fuze and attach a Fahnstock clip to each wire in accordance with enclosure (C).

(d) Cut off the surplus length of arming wire so that not more than six (6) or seven (7) inches extend beyond the Fahnstock clips. In the event that a burr is left on the end of the wire by cutting it must be dressed down smooth.

- 3 -

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(c) Finally, remove the cotter pin and safety wire, but only after the arming wire has been fastened securely in place on the fuze.

3. Attention of all personnel handling a plane loaded with Mark 17 or Mark 17 Mod 1 depth bomb and so armed with a single plate is directed to this condition which now exists:

(a) The arming wire controlling both ends of the fuze is now connected, through the single arming plate, as one wire.

(b) A sharp tug on the wire may pull it either from the arming hook (Release Handle set on "Safe") or from the fuze arming the bomb. Therefore, care must be exercised when mooring a plane at its buoy or when hoisting a plane aboard ship that the fending-off poles do not entangle the arming wire and pull it from the fuze. In case of salvaging a crashed airplane great care should be exercised to avoid accidental arming as a result of fouling the bight of the arming wires.

If a plane returns to base with live loaded and fuzed Mark 17 or Mark 17 Mod 1 bombs aboard, immediately replace the cotter pin and safety wire before any attempt is made to remove the arming wires from the fuze and the bomb from the rack.

4. All personnel entrusted with the installation and operation of the Mark 17 type bomb and Mark 24 type hydrostatic fuze should familiarize themselves by a careful study of the detailed drawings: enclosures (C) and (D).

(D) General Preparation of Bomb and Fuzes

1. The bombs are furnished to the service in two units, the bomb proper and a tail, each separately crated. The openings, or seats, of the transverse tube for the hydrostatic fuze are capped off by means of suitable plates and gaskets held in place with machine screws. This tube is swabbed with gun slushing compound and must be thoroughly cleaned of this and all other foreign matter before the installation of the fuze.

2. The hydrostatic fuzes are furnished to the service in hermetically sealed containers, each fuze consisting of three (3) subassemblies, viz. (1) Pistol,

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(2) Booster and (3) Booster extender, and the necessary machine screws and gaskets for attaching the fuze to the head. Four of these containers are in turn packed in a metal crate (or box) with the lid attached by screws. These crates are intended for magazine stowage.

3. Each hermetically sealed container has the lids attached by means of a soldered on "tear strip" to facilitate opening the container. The metal crate may also contain one or more auxiliary springs which are for the purpose of changing the depth setting of the fuze by adding additional force to the fifty (50) foot fuze spring. Depth settings are now possible for fifty (50) feet, seventy-five (75) feet and one hundred twenty-five (125) feet. If there is no indication on the fuze or container as to the depth spring installed, it is a fifty (50)-foot spring. More recent issues of fuzes are marked as to the springs contained therein. Auxiliary springs are marked with their actual depths. If spring markings are lost or missing, the springs can be identified as follows:

(a) The fifty (50)-foot spring is a smaller coil than the seventy-five (75)-foot and one hundred twenty-five (125)-foot springs and is used in the fuzes for all depth settings. It is painted black.

(b) The seventy-five (75)-foot auxiliary spring is made from round rod cross section and is painted green.

(c) The one hundred twenty-five (125)-foot auxiliary spring is made from square rod cross-section and is painted red.

To change the depth setting from fifty (50) feet to seventy-five (75) feet, the seventy-five (75)-foot auxiliary spring is installed over the fifty (50)-foot spring, i.e. both the fifty (50)-foot and green seventy-five (75)-foot auxiliary spring are used.

To change the depth setting from fifty (50) feet to one hundred twenty-five (125) feet the one hundred twenty-five (125)-foot auxiliary spring is placed over the fifty (50)-foot spring, i.e. both the fifty (50)-foot spring and red one hundred twenty-five (125)-foot auxiliary spring are used.

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Detailed instructions for installation of depth spring auxiliaries are contained in enclosure (E).

4. The nose of the bomb is equipped with a standard fuze seat and fuze seat liner and a special fuze hole plug which allows the fuze seat liner to house two auxiliary boosters. This arrangement permits the use of the nose fuze, if desired. If the Mark 19 nose fuze is used, two boosters are needed in addition to an "Adapter" piece 1 of enclosure (B).

(E) Detailed Procedure for Making Bomb and Mark 24 Fuzes Ready For Flight

1. Remove bomb from crate.
2. Remove tail from crate.
3. Bolt tail upon bomb by the means provided.
4. Remove blanking-off covers from the transverse tube ends and thoroughly clean tube, etc. of all grease and foreign matter. Note: Be careful that this cleaning is well done and that the locating dowel pins are in place and in good condition. This operation might conveniently precede step D(3) above.
5. Remove the fuze container from the crate and tear off the soldered on tear strips thus making available the fuze components. The pistol and booster extender are held in the container by means of two of the holding screws. The necessary additional screws for attaching the fuze to the bomb will be appropriately packed in each end of the fuze container. The booster can is retained in its compartment by means of two wooden blocks and felt pads.
6. Remove the pistol and its gasket from the container and insert it into either end of the transverse tube of the bomb with the gasket interposed between the pistol flange and the head of the tube.

Note (a): Care must be exercised to see that the assembly enters the tube freely and locates itself upon the locating dowel pin properly. The "jump-out pin" should point toward the tail end of the bomb. Insert the holding screws and draw them up evenly.

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Note (b): Care must be exercised to see that a screw at one end of a diameter is not drawn up too tightly ahead of the screw at the other end and to see that the screws as a whole are not over-stressed at the final tightening. It is well to pass from one screw to another until the proper tightening is secured. A crank handled socket wrench (speed wrench) of appropriate size should be used for this operation.

7. Remove the booster, booster extender and gasket from the container, attach the booster to the extender by the slip joint means provided, and insert the assembly in the tube of the bomb opposite the pistol with the gasket interposed between the extender flange and the head of the tube. (See note (a) paragraph 6 above). Insert the holding screws and draw them up evenly. (See note (b) paragraph 6 above.) Installation of the booster and booster extender might conveniently precede the installation of the pistol.

(F) Special Fuze Precautions

1. If the fuzes are removed from the bomb, they should immediately be returned to a fuze container and the container temporarily sealed with a good quality of adhesive tape of two courses about one and one-half (1-1/2) inches wide. Notes on the complete history of the fuze after its first installation in a bomb should be kept.

2. Should some irregularity in the handling of the fuze occur, e.g. dropping on a hard surface, accidental discharge of the jump out pins, etc., the fuze should be carefully examined by competent personnel before being placed again in service or held for instruction from the Bureau of Ordnance as to its proper disposition.

W. H. P. BLAUNDY

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Enclosure (E)

O.D. NO. 3561 (Revised January 9, 1942).

INSTRUCTIONS FOR INSTALLING DEPTH SPRING (AUXILIARY)
IN PISTOL OF BOMB FUZE MK.XXIV (Hydrostatic)

A. GENERAL.

Ordnance men, gunners, and others entrusted with the installation of depth springs in Mk.XXIV fuzes should familiarize themselves with all details of the fuze by a careful study of the applicable drawings listed on Sketches Nos. 62630 and 62631 and particularly Ordnance Drawings Nos. 233403 and 233404, and Ordnance Specifications Nos. 2176 and 2205.

B. BREAKDOWN PROCEDURE.

B1. Remove Primer and Detonator Holder (No. 231898-1) and its assembly by unscrewing, after forcing in a counterclockwise direction by hand to break the staking between it and the Guide Piece (No. 231899-1).

B2. Remove Set Screw (No. 231895-12) which prevents Mechanics Casing (No. 231895-8) and its assembly from turning on Pistol Carrying Flange (No. 231895-3).

B3. Unscrew Mechanism Casing (No. 231895-8) by turning in a counterclockwise direction and remove it from the Pistol Carrying Flange (No. 231895-3) and the Guide Piece (No. 231899-1).

B4. Remove the Guide Piece (No. 231899-1) the Firing Pin (No. 231898-8) and the Locking Balls (No. 231898-5) as a unit from the Hydrostatic Piston Bushing (No. 231899-6) thus affording access to the spring cavity.

C. INSTALLATION OF 125-FT. AUXILIARY DEPTH SPRING, AND REASSEMBLY PROCEDURE.

C1. Install 125-ft. Auxiliary Depth Spring (No. 231898-10) over the Firing Spring (No. 231898-4) as shown by the drawing and reassemble the Pistol in accordance with the following procedure.

C2. Place Firing Pin (No. 231898-8) and Locking Balls (No. 231898-5) in proper position in Guide Piece (No. 231899-1) and while holding the assembly in this position by suitable means insert the assembly into the Hydrostatic Pistol Bushing (No. 231899-6) thus resting the

- 1 -

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Firing Pin (No. 231899-8) and the Guide Piece (No. 231899-1) on the Firing Spring (No. 231898-4) and the depth Spring (No. 231898-10) respectively. (Take note that the Firing Pin bears the proper relation to the Guide Piece as shown by the drawings.)

C3. Place the Mechanism Casing (No. 231895-8) over the Guide Piece (No. 231899-1) and with the Guide Pin (No. 231899-4) registering with the hole in the Guide Piece, screw the Mechanism Casing home on the Pistol Carrying Flange (No. 231895-3).

C4. Replace Set Screw (No. 231895-12) by screwing it tightly home in the Pistol Carrying Flange (No. 231895-3) thus locking the Mechanism Casing (No. 231895-8) to the Pistol Carrying Flange.

C5. Take note that the Firing Pin (No. 231899-8) bears the proper relation to the Guide Piece (No. 231899-1) as shown by the drawings and then replace the Primer and Detonator Holder (No. 231898-1) and its assembly by screwing it tightly home in the Guide Piece.

C6. Secure the Primer and Detonator Holder (No. 231898-1) to the Guide Piece (No. 231899-1) by properly staking the Guide Piece into the holes of the Primer and Detonator Holder, provided for the purpose. A suitable tool and saddle such as is shown by Dr. No. 234585 will facilitate this staking operation.

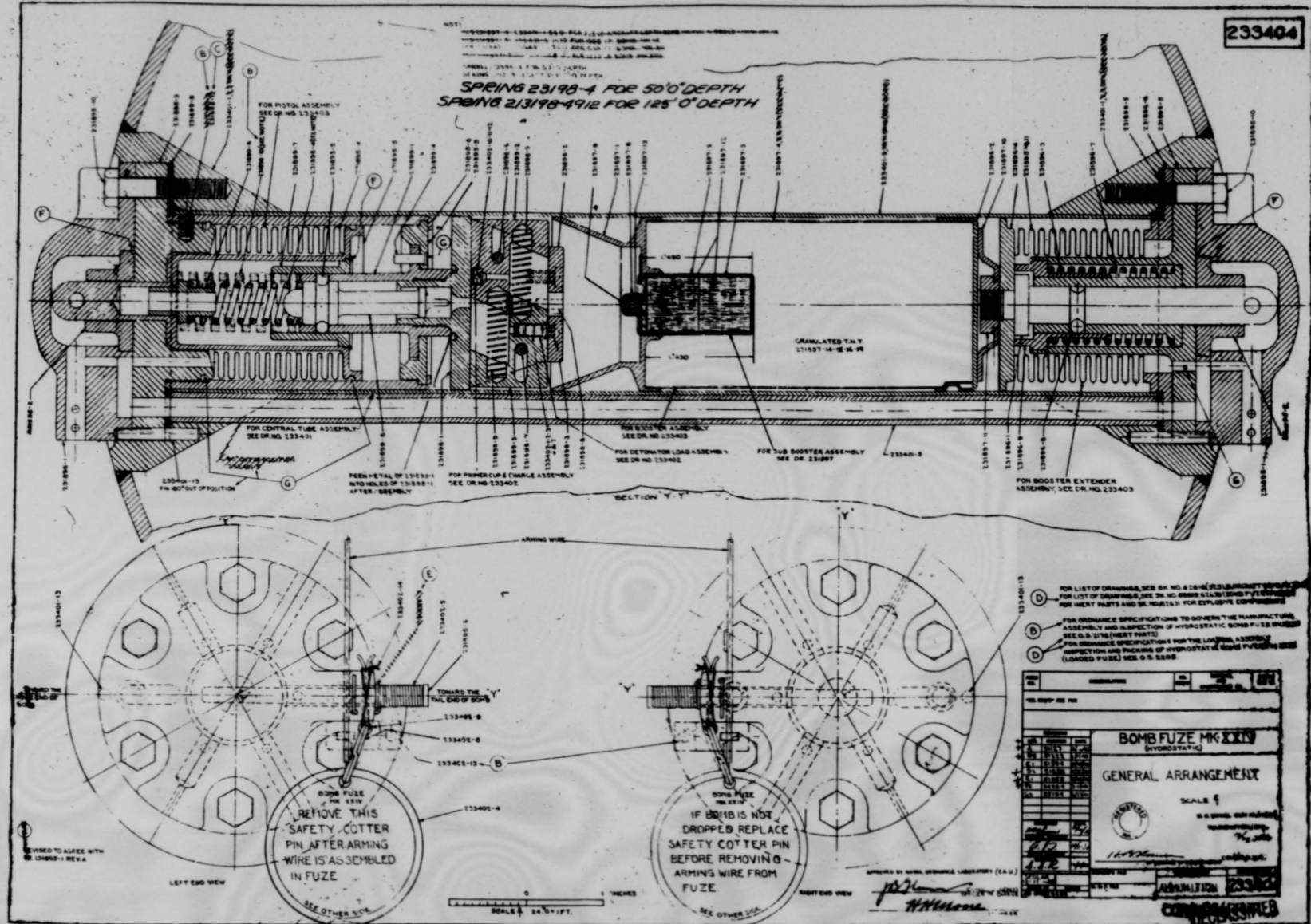
C7. The Pistol is now completely reassembled and will function at a depth of 125 feet, and should be so identified by appropriate markings.

D. INSTALLATION OF 75-FT. AUXILIARY DEPTH SPRING, AND REASSEMBLY PROCEDURE.

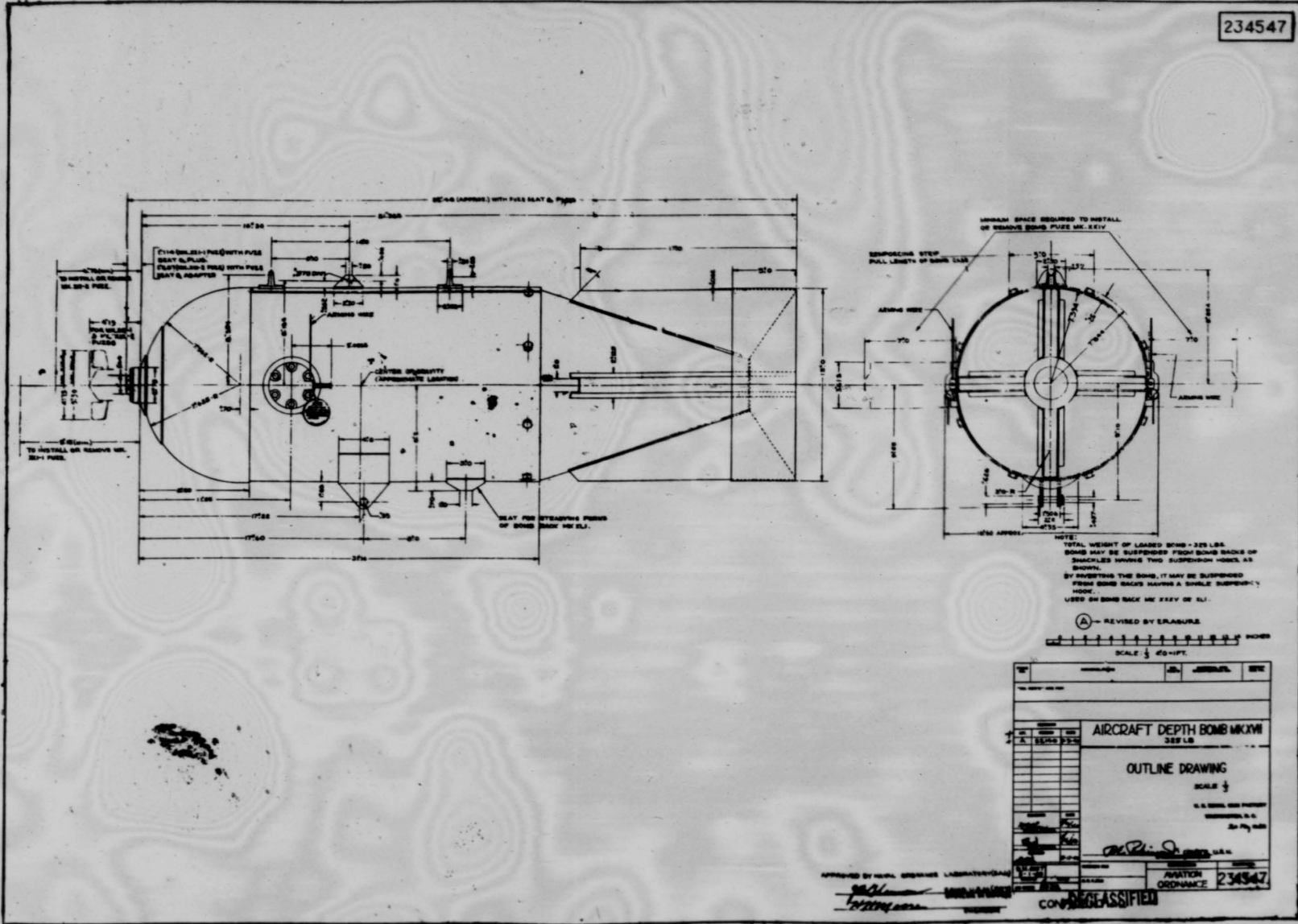
D1. The same procedure is followed as in paragraph C, above, except that the 75-ft. Auxiliary Depth Spring (No. 231898-11) is installed instead of the 125-ft. Auxiliary Spring.

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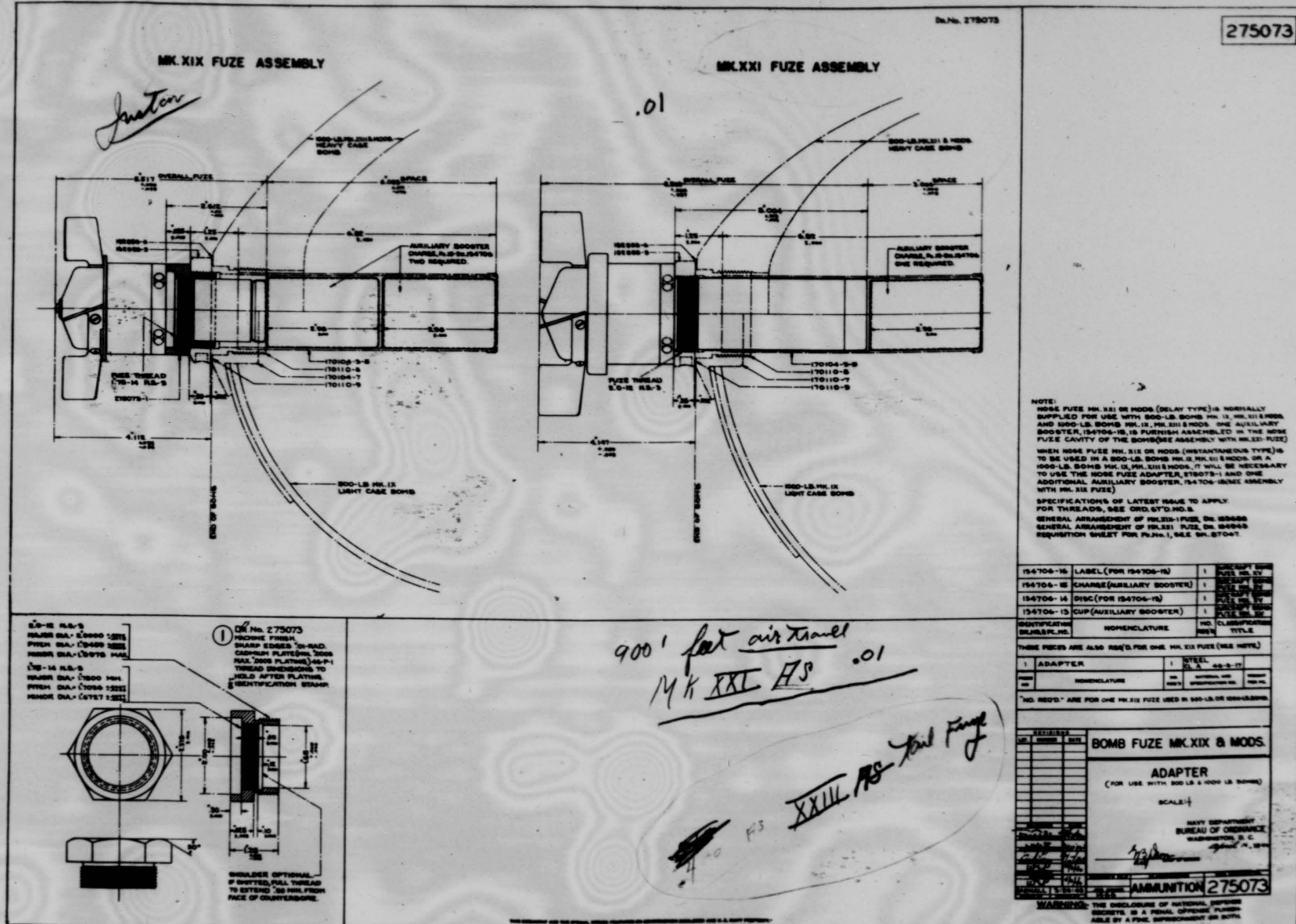


234547

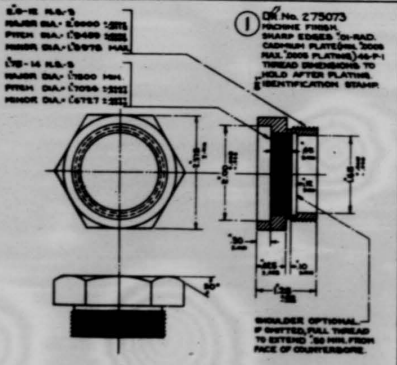


AIRCRAFT DEPTH BOMB MK. XVI 325 LB.	
OUTLINE DRAWING SCALE 1/4" = 1'-0"	
U.S. NAVY AIR FORCE WASHINGTON, D.C. 20 30 200	
APPROVED BY:	234547
DATE:	
BY:	
FOR:	
REVISIONS:	

APPROVED BY: *[Signature]*
DATE: *[Date]*
BY: *[Signature]*
FOR: *[Signature]*
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275073



QTY	DESCRIPTION	UNIT	CLASSIFICATION
1	ADAPTER (FOR 194706-15)	1	STEEL
1	CHARGE (AUXILIARY BOOSTER)	1	CL. A - 58-5-11
1	DISC (FOR 194706-15)	1	CL. A - 58-5-11
1	CUP (AUXILIARY BOOSTER)	1	CL. A - 58-5-11

THESE FIGURES ARE ALSO REPRODUCED FOR ONE MK XIX FUZE (SEE NOTE)

1 ADAPTER 1 STEEL
 CL. A - 58-5-11

NO. 275073 ARE FOR ONE MK XIX FUZE USED IN 800-LB OR 1000-LB BOMBS

BOMB FUZE MK XIX & MODS.

ADAPTER
 (FOR USE WITH 800 LB & 1000 LB BOMBS)

SCALE: 1/2"

NAVY DEPARTMENT
 BUREAU OF ORDNANCE
 WASHINGTON, D. C.

AMMUNITION 275073

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150931

Arming Wire Assembly -
GENERAL ARRANGEMENT

Dr. No. 150931
①

NOTE:
THIS PICTURE THE SAME AS PLATE SHOWN
ON DR. 8007 AND SAME AS PL. 1 ON DR. NO. 11734

② Dr. No. 150931
FERRULE AS SHOWN

END OF WIRE MUST BE
ROUNDED AND FREE
FROM BURRS.

APPROX. LENGTH BEFORE BENDING - 55.75

③ Dr. No. 150931
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BURRS.

④ Dr. No. 150931
FERRULE AS SHOWN
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⑥ Dr. No. 150931
COPPER/ALUM. FERRULE
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NOTE:
SPECIFICATIONS OF LATEST ISSUE APPLY
THE STANDARD ARMING WIRE ASSEMBLY FOR
100-LB., 250-LB., AND 500-LB. BOMBS SHALL CONSIST
OF PLS. 1, 2, 3, AND 4, ASSEMBLED AS INDICATED BY
THE GENERAL ARRANGEMENT.
THE ARMING WIRE TUBES (PLS. 4 AND 5) AND THE
ARMING WIRE SAFETY CLIP (PL. 6) SHALL BE THE WORK
OF THE CONTRACTOR UNLESS SPECIALLY ORDERED.

6	ARMING WIRE SAFETY CLIP	AS SHOWN	
5	ARMING WIRE TUBE	AS SHOWN	
4	ARMING WIRE TUBE	AS SHOWN	
3	FERRULE	AS SHOWN	
2	ARMING WIRE	AS SHOWN	
1	PLATE	AS SHOWN	
REPRODUCTION OF DRAWING NO. 150931 SHOWN AS IS			
ARMING WIRE ASSEMBLY - GENERAL ARRANGEMENT AND DETAILS SCALE - 1:1			
NAVY DEPARTMENT BUREAU OF ORDNANCE WASHINGTON, D. C.			
			150931

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DECLASSIFIED
DOD ltr.
8 Jan. & 20 June 1974
By: ~~SP4~~LC; Date: 3/10/79

2-4-5

~~CONFIDENTIAL~~
WAR DEPARTMENT
AIR CORPS
Office of The Assistant Chief of
The Air Service Command

Wright Field, Dayton, Ohio,
January 21, 1942.

SUBJECT: Confidential Letters
of Instruction.

TO: Commanding General,
Air Force Combat Command,
Bolling Field, D.C.

1. Inclosed herewith for your information and guidance are
Instructions covering the operation and maintenance of Bombights and
related equipment.

2. The inclosed receipt should be accomplished and returned
to the Air Service Command immediately.

For the Assistant Chief, Air Service Command:

J. H. HINKS,
Lieut. Colonel, Air Corps,
Chief, Field Service Section.

(S) By: W. J. Bohrens
1st Lieut., A. C.

DECLASSIFIED

Per Conf. Ltr. CGAC 7-27-58.

~~CONFIDENTIAL~~

44-4716 (158)

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AGC 471.6 (1-21-42)

1st Ind.

(H-3)

HEADQUARTERS AIR FORCE COMBAT COMMAND, Bolling Field, D. C.
TO: Assistant Chief, Air Service Command, Wright Field, Dayton, Ohio

1. Reference paragraph 1, Letter of Instruction, Serial No. 41-27, January 21, 1942, (Enclosure 1), the technical instructions concerning the handling and fusing of the Navy MK 17 Depth Bomb has been published in the form of Ordnance Field Service Technical Bulletin 280-1, dated January 17, 1942, (Enclosure 2, in triplicate). This Technical Bulletin amends Technical Manual 2-280, "Bombs for Aircraft."

2. The instructions contained in sub-paragraph 5b and 5d, Letter of Instruction 41-27, specifically directs that the arming wire from the nose fuse will be attached to a swivel loop and that this swivel loop together with that swivel loop attached to the two arming wires leading to the MK 24 (hydrostatic) fuse will be inserted into the shackle arming wire slot after the bomb has been loaded in the bomb racks. As noted in paragraphs 1 and 2, Section 2, Description of Fuses, OFSTB 280-1, the Mark 19 instantaneous nose fuse detonates the bomb upon striking an impeding surface, including the water. The NAVY nose fuse Mark 19 is instantaneous and is employed on the Depth Bomb only when a demolition effect, and this only, is desired. The NAVY nose Fuse Mark 21 AS (Anti-Submarine) incorporated a one hundredth (0.01) second delay, and is likewise employed only when a demolition effect is desired. Both types of fusing should be employed only if the aircraft arming mechanism is selective, i.e. permits the arming of the desired fuse only.

3. Since the bomb racks and shackles in service at the present time are equipped with only one arming mechanism and arming wire slot, and since auxiliary arming mechanisms which will permit selective arming of the two fuses of the Depth Bomb, Mark 17, are not available on Army bombardment aircraft, it is requested that immediate action be taken to notify all points in receipt of "Letter of Instruction, Serial Number 41-27, Navy 2251b, MK XVII Depth Bomb," January 21, 1942, that the nose fuse will not be used on this Depth Bomb. In view of the tabulation incorporated in sub-paragraph 5c, cited Letter of Instruction, of the maximum speed of release of this bomb at allowable attitudes, the above corrections are deemed of importance to merit urgent consideration because of the hazards involved from the blast effect and bomb fragments striking the airplane releasing this bomb with the nose fuse armed. It is, therefore, recommended that the cited Letter of Instruction be revised accordingly, and that this headquarters be advised of the action taken at the earliest practicable date.

For the Commanding General:

2 Incls.

Incl. 1 - 2/3

Incl. 2 - OFSTB 280-1,

1-17-42 (in trip.)

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-2-

Incl. 1

AGC 471.6 (155)

DECLASSIFIED
• DODI 117K
• Iss. & 20 June 1974
By SP6/PLD Date 3/4/77

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LETTER OF INSTRUCTION SERIAL NUMBER 41-27

NAVY 525 LB MCXVII DEPTH BOMB

January 21, 1942

Per Conf. Ltr. OOAC 7-27-38

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Page 1.

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CONFIDENTIALNo of Pages 4LETTER OF INSTRUCTION SERIAL NO. 41-87Page 2NAVY 325 LB. MKXVII DEPTH BOMB

NOTE: This Letter of Instruction contains all the available data on the Navy 325 lb. MKXVII Depth Bomb, obtained as the result of tests conducted by the Navy Department and safety precautions necessary for the safe handling of this bomb.

1. All aviation Ordnance Companies will obtain instructions on the handling and fuzing of the Navy MKXVII Depth Bomb from the Ordnance Department. Pertinent instructions are given in Circular Letter No. V-66, from the Navy Department Bureau of Ordnance, dated July 8, 1941.

2. Prior to the installation of the 325 lb. depth bomb, the hoisting lug must be pried over to prevent interference with the Air Corps bomb shackle.

NOTE: This bomb is loaded, do not pound lugs.

3. The hoisting equipment supplied with the airplane will be used for loading this bomb, using the 500, 600 lb. bomb sling in the normal manner.

CAUTION: Place bomb sling band far enough forward to prevent contact with the arming jump out pins in the rear of the MKXVII fuse.

4. The 325 lb. depth bomb may be carried interchangeably with the 500 lb., 600 lb., bombs in all Air Corps airplanes in service except the P-40 Series airplanes. Also note (c) in paragraph six.

a. Restrictions governing the number of 500 lb. or 600 lb. Army bombs to be carried in airplanes will be applicable to the 325 lb. depth bomb.

5. Two arming wire swivel loops and three, standard .064" arming wires will be required.

a. An arming wire from each side of the bomb from the MKXIV fuse will be attached to one swivel loop.

b. The arming wire from the nose fuse will be attached to the other swivel loop.

c. Navy arming plates may be used in lieu of arming wire swivel loops if desired and if they are obtainable.

d. Both swivel loops or arming plates are to be inserted into the shackle arming wire slot after the bomb has been loaded in the bomb racks.

Per Conf. Ltr. OGAC 7-87-38

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Page 2.

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No. of pages 4

LETTER OF INSTRUCTION SERIAL NO. 41-57

Page 3

NAVY DEPT. OPNAV FORM 3088

- 5. Draw arming wires tight.
- 6. Adjust Fuhrstuck Clips and cut off surplus length of arming wire so that not more than six (6) or seven (7) inches extend beyond the Fuhrstuck Clips.
- 7. Immediately prior to takeoff, when all the bombs are loaded in the airplane, remove the safety wire and safety setter pins.

8. SPECIAL SAFETY PRECAUTIONS

- a. If the airplane returns to base with live, loaded and fused MKXVII bombs in the racks, the safety setter pins and safety wire should be replaced before any attempt is made to remove the bombs from the racks.
- b. Should any irregularity in handling occur, E.G., dropping on a hard surface or accidental discharge of the arming jump out pins etc., the fuse should be examined by competent personnel before again being placed in service, or held for instructions from the Ordnance Department as to its proper disposition.
- c. To prevent the light cases of the MKXVII bombs from being damaged, and to minimize the chance of the depth bomb ricocheting, it is recommended that the ground speeds listed on the following page not be exceeded for the altitude indicated.

MAXIMUM SPEED OF RELEASE OF 325 LB. DEPTH BOMB
MKXVII AT ALLOWABLE ALTITUDES

<u>ALTITUDE</u>	<u>MAXIMUM SPEED</u>
100 feet	145 M.P.H.
200 feet	190 M.P.H.
400 feet	240 M.P.H.
600 feet	285 M.P.H.
800 feet	310 M.P.H.
1000 feet	300 M.P.H.

- d. The above table is based on incomplete data and will be revised on receipt of results of final tests conducted by the Navy Department. Tests completed indicate that the 325 lb. MKXVII depth bomb can be safely released from an altitude of 1000 feet and 300 M.P.H. It is not recommended that this bomb be used above 1000 feet altitude.
- e. The minimum altitude to provide safety from blast in horizontal bombing is 100 feet.

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No. of pages 4

LETTER OF INSTRUCTION SERIAL NO. 41-27.

Page 4

NAVY 325 LB. MEXVII BOMB CASE

7. Until such a time as the official ballistic data for the 325 lb. MEXVII depth bomb can be published, it is recommended that the dropping angles for the MCGAN practice bomb be used.

For the Assistant Chief, Air Service Command:

J. H. HIGGS
Lieut. Colonel, Air Corps
Chief, Field Service Section

(S) By: P.E. Shanahan
Major

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JAN 24 1942

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DOD ltr.
8 Jan. & 20 June 1974
By SP4 F.L.C. Date 3/29/79

AAF/A-4/471-22

Shipment of 300f Demolition Bombs to "X".

II-6-4

I-Ord.

X-740

II-AAF

JAN 29 1942

I-444

JAN 29 1942

APPROVED
By order of the Secretary of War
Lt. Col. G.S. O'D.
Deputy Chief of Staff



By JOHN R. DEANE
Lt. Col. G.S.O., Asst. Sec. W.D.G.S.

COVER OF CHIEF OF STAFF

AAF/ord
HR/ord

I. 1. Confirming telephone instructions issued to your office (Lt. Col. Rice) January 24, 1942 (Serial 1149) from Lt. Col. Burgess, Air-Staff, A-4, it is desired that the following bombs be released for shipment to "X".

5,000 300f Demolition Bombs JAN 29 1942

4 A. G. O.

II. To be advised of above action.

RECEIVED
222

NOTED-DEPUTY CHIEF OF STAFF
ACTION TAKEN by ltr. for the Chief of the Air Staff
From Ch/AAF, AGO, G-4. LFI/Edp-1705

NOTED.....
Chief of the Air Staff

JAN 26 1942

17874-67

RECEIVED WISC
MAJ. J. HENRY, JR.
Colonel, Air Corps
Assistant Chief of the Air Staff



WAR DEPARTMENT
OFFICE OF CHIEF OF STAFF

Memorandum for Record:

Above action taken to provide bomb storage for "X".

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"Comeback" Copy

air 471.6 207

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DECRYPTED



MAR 28 1945

RECEIVED MISC. DIV., AGO.
S. & C. Section



NOTED
MAY 18 1945

NOTED DEPT. CHIEF OF BUREAU

MAY 18 1945

Faint, mostly illegible typed text in the middle section of the document.

IN THE OFFICE OF THE CHIEF OF BUREAU
MAY 18 1945

CHIEF OF BUREAU OF BUREAU



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DOB 100
3 Sep. 6 20 June 1974
By: [unclear] Date: 3/1/99

AAF/A-4/71-6

AAF/A-4
HCB/emd

January 23, 1942.

MEMORANDUM FOR THE ADJUTANT GENERAL:

Subject: Reversion of Requirement of Clearing Bomb Racks Prior to Landing.

The Secretary of War Directs:

I. That a secret letter be sent to the Commanding General, Field Forces, G.H.Q., Commanding Generals, all Foreign Departments, and Theatre Commanders, substantially as follows:

"1. In view of the current critical shortage of bombs, it is imperative that the peace-time precaution of clearing bomb racks over designated areas prior to landing be made a matter of discretion rather than of compulsion. Due to present conditions it is desired that all interested personnel be advised that clearing bomb racks should now be the exception rather than the rule.

2. Your attention is invited to paragraph 15 i, Section III, AR 780-10 which makes the clearing of bomb racks prior to landing mandatory only in time of peace."

II. That the Chief of the Army Air Forces, Chief of Ordnance, and Assistant Chief of Staff, G-4 be advised of the above action.

For the Chief of the Air Staff,

Handwritten: AAF 284716 (156)

JAN 24 1942
AAF

T. J. HANLEY, JR.,
Colonel, Air Corps,
Assistant Chief of the Air Staff, A-4.

HEADQUARTERS ARMY AIR FORCES - COORDINATION	
Chief of Staff	Noted for record. Above action taken for purpose of not dropping unnecessarily due to present critical shortage.

Handwritten: Return to our AGS
Room 2013

~~SECRET~~
DECLASSIFIED

AAF-39

Handwritten: AAF 284716 (156)

~~SECRET~~

HEADQUARTERS ARMY AIR FORCES
ROUTING AND RECORD SHEET

DECLASSIFIED
DOD Itra.
8 Feb. & 20 June 1974
By: ~~SP-1~~ LC; Date: 3/9/94

Note.--A line will be drawn across sheet after each comment.

File No.,.....
Tally No. AAF/A-4/25.....

SUBJECT: Rescission of Requirement of Clearing Bomb Racks Prior to Landing.

NO.	FROM	TO	DATE	COMMENTS
1.	AAF A-4	AAF (1)A-3 (2)AWPD	1942 1/31	<p style="text-align: right;">AAF/A-4 LWD/soc</p> <p>1. It is proposed to submit the attached draft of a memorandum to the Adjutant General:</p> <p>2. General Arnold directs that the comments of other interested divisions of the Air Staff be obtained as to whether the savings in bombs obtained as a result of this change outweigh the hazards to flying.</p> <p>3. This Division does not believe that the bomb supply is sufficient at the present time to permit clearing bomb racks prior to landing. In addition to the critical shortage of TNT there is the problem of shipping and shipping losses in supplying outlying bases.</p> <p>Incl. Drf. of Memo to Adjutant General</p> <p style="text-align: right;">MMS EJH Jr. etc.</p> <p style="text-align: right;">477/C 156</p>
2.	AAF A-3	AAF AWPD	2/5	<p style="text-align: right;">AAF/A-3 GMcG/3g</p> <p>1. Existing policy in the first four Air Forces, is that airplanes land with unexpended bombs, at the completion of the mission. Only when forced or unpremeditated landings are required and under heavy load conditions, are bombs released before landing.</p> <p>2. This Division is of the opinion that the policy outlined in the attached memorandum for the AG is correct, and recommends that it be submitted for publication.</p> <p>Incl. n/g</p> <p style="text-align: right;">HSV 0/A-3</p>

FEB 6 42 PM



RECEIVED
AIR WAR PLANS DIV.

(Do not use reverse side)

8-4071, AG, Rev. 9/30/41

Page No.

~~SECRET~~

HEADQUARTERS ARMY AIR FORCES
ROUTING AND RECORD SHEET

Note.--A line will be drawn across sheet after each comment.

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File No.

Tally No. AAF

SUBJECT: Rescission of Requirement of Clearing Bomb Racks Prior to Landing.

NO.	FROM	TO	DATE	COMMENTS	AAF/A-WPD KNN/jk
3.	A-WPD	A-4	2/9	This Division concurs in the memorandum. 1 Incl. n/c	<i>[Signature]</i> H. L. G. C/A-WPD
4.	AAF A-4	C/AAF	2/15	1. In accordance with your instructions, the comments of A-3 and A-WPD have been obtained with reference to the attached memorandum to the Adjutant General, and both divisions have concurred in the memorandum. Incl: Memo for A/G frm T.J.Hanley,abv.subj; 1/25/42.	AAF/A-4 HCB/soc for <i>[Signature]</i> F.S.BORUM Acting, C-A-4 1/25/42

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W-0071, AC, Rev. 8/14/41

Page No. 2

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air 4716 (106)

AAF/AS
EPC

Feb. 17, 1942

Proposed directive for dropping bombs

XX Secy, G/S

4716
15-C

In accordance with General Arnold's directions on the attached note from your office, this matter has been referred to A-3 and Air War Plans Divisions of the Air Staff. Both these divisions feel that the saving in bombs is well worth while, and concur in the proposed directive.

For the Chief of the Air Staff:

E. P. Curtis,
Lieut. Col., Air Corps,
Secretary of the Air Staff.

Dispatched
FEB 18 1942
AAG

imm

Title:

MEMORANDUM - ARMY AIR FORCE - COMBINATION						
TO:	FROM:	SUBJECT:	DATE:	INITIALS:	REMARKS:	FILE NO.:
Secy, G/S	Mr. Curtis	Request for A-3 to advise on the feasibility of dropping bombs from B-24's. Recommendation of Req. of Clearing Bomb Backs Prior to Landing 1/23/42				

AAF-28

DECLASSIFIED
DOD Hqs.
8 Jan. & 20 June 1974
Rev. 17-EE LC: Data 3/2/77

~~SECRET~~

JAN 23 1942

AF /A-4/471-20

Shipment of Bombs to Copper.

II G-4

I Ord

I TAG

II AAF

JAN 24 1942

OUT  OUT

I SW directs

OFFICE OF CHIEF OF STAFF

AAF/A-4
HOB/and

I. 1. Confirming telephone instructions issued to your office (Lt. Col. Rice) January 22, 1942 (Serial 1129) from Lt. Col. Burgess, A-4, Air Staff, it is desired that the following bombs be shipped to "Copper":

ACTION TAKEN: Ltr, 1/25/42, to
Ch. of Ord. w/cys to Ch./AAF and
A.C.OFS. G-4.
LFL/evh-1705. Bombs
3,947 300# Demolition Bombs
2 FC section

II. To be advised ~~SECRET~~ "WASHDC" WCO

For the Chief of the Air Staff

85 AGO

JAN 24 1942
OFFICE CHIEF OF STAFF JAN 24 1942

Received
1632P

T. J. HENLEY, JR. ~~SECRET~~
Colonel, Air Corps,
Assistant Chief of the Air Staff, A-4.

ACT ACKNOWLEDGED - AGO,
January 25, 1942.
DRV/LFL/evh-1705.

Memorandum for Record; Above action taken to insure supply of 300# Bombs in Hawaii and to clear Ogden Depot.

~~SECRET~~

Comeback Copy

ADDRESS REPLY TO
CHIEF OF THE AIR CORPS
WAR DEPARTMENT
WASHINGTON, D. C.

~~CONFIDENTIAL~~
DECLASSIFIED

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4916

WAR DEPARTMENT
OFFICE OF THE CHIEF OF THE AIR CORPS
WASHINGTON JAN 22 1942

DECLASSIFIED
DOD Hqs.
EX-101 Date 3/14/77

MEMORANDUM FOR: Assistant Chief of Air Staff, A-4

SUBJECT: Netherland East Indies' Bombs

1. In compliance with telephone conversation of Colonel Coupland and Colonel Moore, this office, the following information has been obtained in regard to Netherland East Indies' bombs. Lately, the Netherlands East Indies government have been buying a large number of the following type of bombs, both from the United States Ordnance Engineers, Inc., and from the American Armament Corporation:

- 100-pound incendiary white phosphorus
- 100-pound incendiary thermite
- 100-pound fragmentation
- 100-pound demolition
- 220-pound demolition
- 500-pound demolition
- 600-pound demolition
- 1100-pound demolition

4-51 3/11/42

All of these bombs were bought complete with fuzes and arming wires from this country. Drawings of the above bombs have been received and are on file in this office. All of these bombs are equipped with a normal set of two suspension lugs, distance fourteen inches apart, while the 100-pound bombs have an extra lug on the opposite side in order that they may be used in the A-3 bombracks on the Curtiss airplanes.

2. Inasmuch as all the bombracks and shackles which the Netherlands East Indies government has are of normal American types, their bombs should be interchangeable for use in either their own airplanes or Air Corps airplanes. The bombracks installed on their aircraft have been designed and built by either Curtiss Airplane Company or Pollak Manufacturing Company.

File
Hors

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JAN 22 1942
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C-9132

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To: Chief of Air Staff, A-4

3. Quite a number of bombs have been manufactured in the Netherlands East Indies but no drawings are available of these bombs. Since they were designed to also be used in American built airplanes on American bombracks, there should be no question of their use on either aircraft. A cable has been sent requesting drawings of the bombs manufactured in the Netherlands East Indies be forwarded to this country; upon receipt, a detailed check will be made.

For the Chief of the Air Corps

F. I. Ordway, Jr.

F. I. ORDWAY, JR.,
Major, Air Corps,
Asst. Sres., Mat. Div.

Hq. Army Air Forces
JAN 22 1946
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4716 (154)

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EOD Item
8 Feb. & 20 June 1974
By SP-10 Date 5/1/99



JBC/rrb
(AIR AG)
CG 71

January 24, 1942.

SUBJECT: Rescission of Requirement of Clearing Bomb Racks Prior to Landing.

TO: Commanding General, Air Force Combat Command.

1. In view of the current critical shortage of bombs, it is imperative that the peace-time precaution of clearing bomb racks over designated areas prior to landing be made a matter of discretion rather than of compulsion. Due to present conditions it is directed that all interested personnel be advised that clearing bomb racks should now be the exception rather than the rule.

2. Attention is invited to paragraph 15 ¹, Section III, AR 750-10, which makes the clearing of bomb racks prior to landing mandatory only in time of peace.

By command of Lieutenant General ARNOLD:

JOHN B. COOLEY
Lieutenant Colonel, A.C.D.
Assistant Air Adjutant General.

air AG 471.6
153

HEADQUARTERS				ARMY AIR FORCES				COORDINATION			
Chief of Staff	Sec'y Air Staff	A.A.G.	A-1	A-2	A-3	A-4	A-WPD	A-Inspr.	Budget	Statistics	

AAP-39

SECRET

air AG 471.6 (153)

DECLASSIFIED
A. DOD ltr.
8 Jan. & 20 June 1974
By: JHE/LO; Date: 3/6/89

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DECLASSIFIED

~~SECRET~~
BY AUTHORITY OF THE
CHIEF OF THE ARMY AIR FORCES
DATE INITIALS

JBC/rfb
(Air AG)
AG 201

January 24, 1942.

SUBJECT: Rescission of Requirement of Clearing Bomb Racks Prior to Landing.

TO: Chief of the Air Corps.

1. In view of the current critical shortage of bombs, it is imperative that the peace-time precaution of clearing bomb racks over designated areas prior to landing be made a matter of discretion rather than of compulsion. Due to present conditions it is directed that all interested personnel be advised that clearing bomb racks should now be the exception rather than the rule.

2. Attention is invited to paragraph 15 ¹, Section III, AR 750-10, which makes the clearing of bomb racks prior to landing mandatory only in time of peace.

By command of Lieutenant General ARBOLD:

JOHN R. COOLEY
Lieutenant Colonel, A.G.D.
Assistant Air Adjutant General.

HEADQUARTERS				ARMY AIR FORCES				COORDINATION			
Chief of Staff	Sec'y Air Staff	A.A.G.	A-1	A-2	A-3	A-4	A-WPD	A-Insp.	Budget	Statistics	

AAF-39

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air 20 4716 (53)

HEADQUARTERS ARMY AIR FORCES
ROUTING AND RECORD SHEET

~~DECLASSIFIED~~
DOD Form
8 Jan. & 20 June 1944
By: AFM:LC; Date: 3/16/97

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DECLASSIFIED

File No.

Note. -- A line will be drawn across sheet
after each comment.

Tally No. AAF

SUBJECT: Rescission of Requirement of Clearing Bomb Racks Prior to Landing.

NO.	FROM	TO	DATE	COMMENTS
1.	AAF A-4	AAF AAG	1942 1/23	<p style="text-align: right;">AAF/A-4 HCB/END</p> <p>1. Request that a <u>secret</u> letter, substantially as follows be sent to the Office Chief of Air Corps, and the Commanding General, Air Force Combat Command:</p> <p>"1. In view of the current critical shortage of bombs, it is imperative that the peace-time precaution of clearing bomb racks over designated areas prior to landing be made a matter of discretion rather than of compulsion. Due to present conditions it is desired ^{deemed} that all interested personnel be advised that clearing bomb racks should now be the exception rather than the rule.</p> <p>2. Your attention is invited to paragraph 15 i, Section III, AR 750-10 which makes the clearing of bomb racks prior to landing mandatory only in time of peace."</p> <p style="text-align: center;">WJF</p> <p style="text-align: right;">JMK 1/23/42 S/A-4 HCS</p>

~~CONFIDENTIAL~~
DECLASSIFIED

AAW/A-4
JFW/mb

Ent 1/30/42

SUBJECT: Military Characteristics of Controllable High Angle Bomb.

1st Ind.

War Department, Headquarters, Army Air Forces, Washington, D.C.
To the Chief of the Air Corps.

1. Approved.

By Command of Lieutenant General Arnold

JOHN B. COOLEY
Lt. Colonel, A. G. D.,
Assistant Air Adjutant General

Handwritten: Col. A.G. 471.6 (52)

FEB 23 1942
AAG

HEADQUARTERS		ARMY AIR FORCES - COORDINATION								
Chief of Staff	Sec'y of Staff	A.A.G.	A-1	A-2	A-3	A-4	A-WPD	A-Insp.	Budget	Statistics
						TJH/pw				

AWP-59

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DECLASSIFIED
DDP ltr.
8 Jan & 20 June 1974
Hy. E.O. Data: 3/19/77

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DECLASSIFIED

(b-7)

**Military Characteristics of
Controllable High Angle Bomb.**

JAN 23

Chief of the Army Air Forces.

1. The following principal characteristics for a controllable high angle bomb are submitted for approval.

CONTROLLABLE HIGH ANGLE BOMB

- A. CLASS - Controllable Bomb, High Angle (i.e., with trajectory approaching that of a freely falling bomb)
- B. MISSION - Use against military objectives which require an extremely high degree of accuracy.
- C. REQUIREMENTS -
 - 1. This controllable bomb shall be equipped with control surfaces.
 - 2. This controllable bomb may also be equipped with stabilizing equipment, radio control (with or without television) and/or heat, light, sound or radio detecting and directing equipment.
 - 3. This controllable bomb shall be capable of being carried in the bomb bay of a standard bombardment airplane.

For the Chief of the Air Corps

D. H. MEYERS
COLONEL, AIR CORPS
EXEC., MAT. DIV.

JAN 1942

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HE-106

61-954
831

am 471.6 (52)

CONFIDENTIAL

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(4-F)

DECLASSIFIED
DOD Itr.

8 Jan. & 20 June 1974
By: JME/C: Data 3/24/77

JAN 27 1942

**Military Characteristics of
Controllable Glide Bomb**

Chief of the Army Air Forces.

1. The following principal characteristics for a controllable glide bomb are submitted for approval. These characteristics, when approved, are to supersede and cancel the military characteristics for a gliding bomb, radio controlled, as approved by The Adjutant General by 1st Indorsement dated May 17, 1941.

CONTROLLABLE GLIDE BOMB

- A. CLASS - Controllable Bomb, Glide.
- B. MISSION - Use against objectives which will require an extremely high degree of accuracy.
- C. REQUIREMENTS -
 - 1. This controllable bomb shall be equipped with lift-producing airfoils and control surfaces.
 - 2. This controllable bomb may also be equipped with stabilizing equipment, radio control (with or without television), and/or heat, light, sound or radio detecting and directing equipment. Further, this controllable bomb may be equipped with pre-set data devices whereby the path to be followed by it can be set in prior to its release.

For the Chief of the Air Corps

B. E. MEYERS
COLONEL, AIR CORPS
EXEC., MAT. DIV.

JAN 1942

AGS Received

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MX-108

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en600

201 44 47.6

CONFIDENTIAL
DECLASSIFIED

AAF/A-4
JFW/amb

Went 1/30/42

SUBJECT: Military Characteristics of Controllable
Glide Bomb.

1st Ind.

War Department, Headquarters, Army Air Forces, Washington, D. C.
To The Chief of the Air Corps.

FEB 2 1942

1. Approved.

By Command of Lieutenant General Arnold

WM. W. DICK
Lt. Col., A.G.D.
Air Adjutant General

FEB 2 1942

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151

FEB 2 1942
AAS

HEADQUARTERS		ARMY AIR FORCES				COORDINATION				
Chief of Staff	Sec'y Air Staff	A.A.G.	A-1	A-2	A-3	A-4	A-WD	A-Insp.	Budget	Sec-Fin
						W/D/AJ				

AMP-39

DECLASSIFIED

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DECLASSIFIED
HEADQUARTERS ARMY AIR FORCES
ROUTING AND RECORD SHEET

DECLASSIFIED
DD Form 1374
1 Jan 42 & 20 June 1974
Revised: 3/16/77

Note:--A line will be drawn across sheet after each comment.

File No. _____
Tally No. AAF _____

SUBJECT: Test for Bombs.

NO.	FROM	TO	DATE	COMMENTS
1.	AAF/A-4	AAF/A-3 & C/AS IN TURN	1942 1/15	1. For your information. Incls: Memo for A-4, 1/13 w/6 photos and 1 cy program of test.
2.				<i>Noted</i>
3.	AFCC	Ch/AAF	1942 1/31	ACC 471.6 (1-26-42) Bombs - General Noted. 1 Incl. No change.
				<i>File per MFS</i>

13011 FEB 24 1942
DECLASSIFIED CENTRAL MAIL SECTION AAF
E-4071, IC, Rev. 8/10/41
Page No. 4716 150

DECLASSIFIED
 DOD Ltr.
 8 Jan. & 20 June 1974
 By: ~~SP-1~~ LC: Data 3/16/77

~~CLASSIFIED~~
 WAR DEPARTMENT
 HEADQUARTERS ARMY AIR FORCES
 DISPOSITION FORM

Date January 26, 1942.....

AG

AAF

SUBJECT: Test for Bombs

	USW	ASW	ASWA	B-LP	BOWD	EPR
	C/S	G-1	G-2	G-3	G-4	MPD
	Sec.G/S	NGB	JAG	IG	QMG	SG
TO:	OCAC	CSO	Fin.	Ord.	Ex.R.A.	ENGR
I.	<u>AFCC</u>	Inf	FA	Cav	CAC	CMS
	TAG					

FOR: SW directs
 Draft of reply attached
 Approved
 Disapproved
 File

Comment or concurrence
 Direct reply made
 Inviting attention to
 See notation of
 Information

Information for reply
 Ind. approved
 Primary interest
 I. Notation and return
 Noted *(initials)*

AFCC *OK*
 AAF/A-4
 MPS/mhh

Incls.
 BAR abv. subj.
 1/15/42 frm.
 A-4 to C/AS;
 Memo for A-4,
 1/13/42 w/6 photos
 and 1 cy program of
 test.

For the Chief of the Air Staff:

(Signature)
 MAX F. SCHNEIDER
 Col. Air Corps

for T. J. HANLEY, JR.
 Colonel, Air Corps,
 Assistant Chief of Air Staff, A-4.

HQ., AFCC

JAN 28 10 27 59 AM

MAIL & DISPATCH

DECLASSIFIED

1301 FEB 24 1942

CENTRAL MAIL SECTION AAF
 4-2689, A.C.

AFCC 471.6
 (U-26-42) Bonds - Manual

Ord

DECLASSIFIED

WAR DEPARTMENT

HEADQUARTERS OF THE ARMY AIR FORCES

WASHINGTON

January 13, 1942

DECLASSIFIED
DOD ltra
100-20 June 1974
By JAF/C. Date 3/28/77

MEMORANDUM FOR A-4, AIR STAFF:

Subject: Test for Bombs.

1. Pursuant to instructions A-4 Division, Air Staff the undersigned witnessed a test of dropping incendiary cluster bombs from an airplane at Edgewood Arsenal on Saturday, January 10th. This test was originally scheduled for Friday the 9th but was postponed until the following day.
2. The attached photographs show the make up of the cluster bomb. Each cluster consists of 34 bombs, thermate filled, each bomb weighing approximately 3.75 pounds. The adapter and other metal parts weigh about 13 pounds, making the total weight of the cluster approximately 140 pounds.
3. The test was carried out according to the attached program. Eight clusters were dropped at about five minute intervals between clusters in an open field, from a height of 1000 feet. All the individual bombs seemed to ignite. The burning time was about 1 1/2 minutes.
4. Especial attention was paid to observing whether or not the cluster opened up before leaving the plane. From close observation it was judged that the clusters opened and the individual bombs started falling as separate bombs at about 10 or 15 feet below the plane. This was confirmed by other observers.
5. The pattern formed by the separate bombs was about 150 yards long and 50 to 60 yards wide. However, there were a few individual bombs outside this pattern in each instance. The arrangement of the bombs as described in the program of test seemed to affect the pattern somewhat. For example, when all noses were forward the bombs were thicker in the forward half of the pattern.
6. The entire test was carried out according to schedule and the performance of the cluster bomb approved to be very satisfactory.

Alexander Wilson
ALEXANDER WILSON
Colonel C.W.S.

Incls:
6 Photographs
1 copy Program of Test.

1301 FEB 24 1942

CENTRAL MAIL SECTION AAF

DECLASSIFIED

air 64 4716 (158)

PROGRAM OF TEST
CONDITIONS DEVELOPMENT DIVISION

Item: Adapter, Cluster, 100 lb., M2 for Incendiary Bombs.

Test No.: 5-1942

Date of Program: January 9, 1942

Authority: Project B 3.5

Date of Tests: January 10, 1942

1. Object.

The object of this test is to determine the functioning of the Adapter, Cluster, 100 lb., M2 (for incendiary bomb) when dropped from an airplane.

2. Method of Test.

The method to be used in this test will be as follows:

a. Preparation of Adapters.

Live bombs will be used in all adapters and the bombs in each adapter will conform to the following arrangements:

Adapter #1 - Noses of all bombs in each bundle forward.

#2 - Noses of twelve (12) outside bombs in each bundle forward, tails of the five (5) inside bombs in each bundle forward.

#3 - Noses of ten (10) outside bombs in each bundle forward, tails of the seven (7) inside bombs of each bundle forward.

#4 - Ten (10) outside bombs in each bundle arranged nose to nose, seven (7) inside bombs of each bundle arranged tail to tail.

#5 - Same as #1.

#6 - Same as #2.

#7 - Same as #3.

#8 - Same as #4.

1301 FEB 24 1942

CENTRAL MAIL SECTION A.A.F.

b. Adapters will be suspended from the uppermost stations in the bomb rack. All adapters will be dropped from an altitude of 1000 feet. The adapters will be dropped in chronological order.

c. Communication will be maintained with airplane by means of a portable field radio which will be located in vicinity of "C" field tower. Sufficient time for inspection of dispersion of bombs will be allowed between each drop.

3. Basis for Conclusion.

- a. Delay in opening of adapter components.
- b. Station of cluster in bomb rack.
- c. Clearance of airplane by bombs and adapter components.
- d. Flight of bombs.
- e. Pattern on ground.
- f. Burning time of bombs.
- g. Number of duds.

4. Materials Required.

- 8 - Adapters, Cluster, 100 lb., M2 loaded with live AN-M54 incendiary bombs.
- 1 - Airplane
- 6 - Stop Watches
- 1 - Radio transmitter, portable
- 1 - Panel, airplane
- Notebooks and pencils.

5. Personnel.

a. Air Corps

- 1 - Pilot
- 1 - Co-pilot
- 1 - Bombardier
- 1 - Radio operator

b. Munitions Development Division

- 1 - Observer in airplane
- 2 - Engineers on ground
- 2 - Range guards
- 2 - Observers

Detail for loading bombs in airplane at Harmon Field
Ground. 1301 FEB 42

5. Engineering Division

Photographers.

6. Location.

"C" Field

7. Preliminary Data.

- a. Weight of individual bombs.
- b. Weight of load: adapter.
- c. Advance weather forecast (18 hours).

8. Operations Data.

- a. Weather data.
- b. Time required for adapter to break open.
- c. Flight of bombs.
- d. Dispersion of bombs.
- e. Burning time of bombs.
- f. Number of duds.

9. Preliminary Arrangements.

- a. Pack adapters with AN-M54 bombs.
- b. Arrange with Aberdeen Proving Ground, Air Corps Detachment, for airplane and crew.
- c. Arrange with Engineering Division for photographers.
- d. Coordinate with Safety Division relative to personnel in area of "C" field.
- e. Arrange with Air Corps Detachment, Edgewood Arsenal, for portable field radio transmitter and operator.
- f. Arrange for transportation to:
 - (1) Aberdeen Proving Ground.
 - (2) "C" Field.

10. Safety Precautions.

a. Two (2) guards will be posted, one at intersection of Ricketts Point Road and "C" Field Road and one at Coordinates 185 .0-690.5.

b. Personnel at the Aberdeen tank garage located at north end of "C" field will be notified of these tests and necessary precautions will be taken to prevent endangering personnel, equipment, and buildings in immediate vicinity of the tank garage.

c. Dropping of bombs will be coordinated with airplane crew by means of radio.

d. A panel will be displayed in front of "C" Field tower, and when not displayed, no bombs will be dropped from airplane.

Submitted by:

W. W. REAGAN
1st Lieut., C.W.S.
Munitions Development Division

Recommending approval:

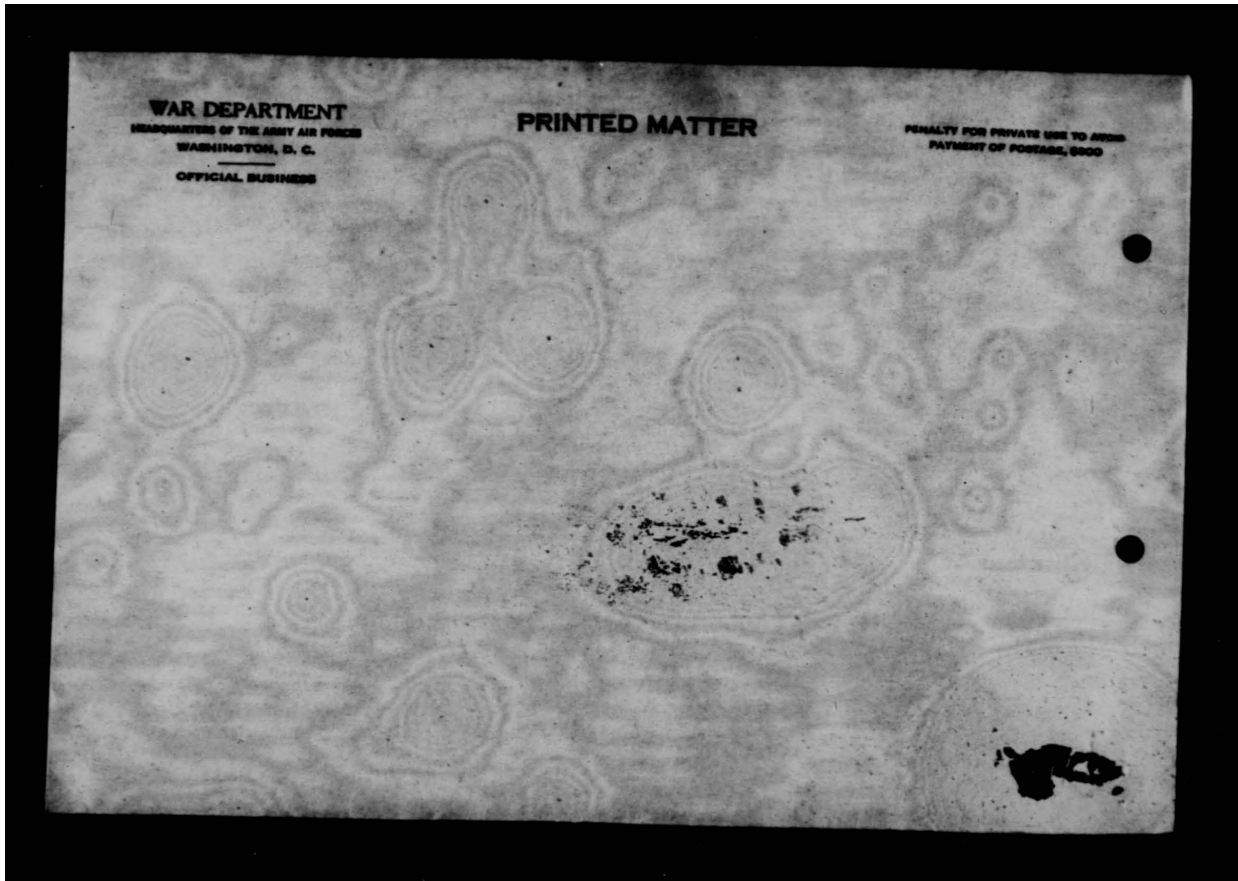
F. W. GERRARD
Lt. Col., C.W.S.
Chief, Munitions Development Division

APPROVED:

W. C. KARRICH
Lt. Col., C.W.S.
Technical Director

1301: FEB 242
CENTRAL MAIL SECTION A.A.F.

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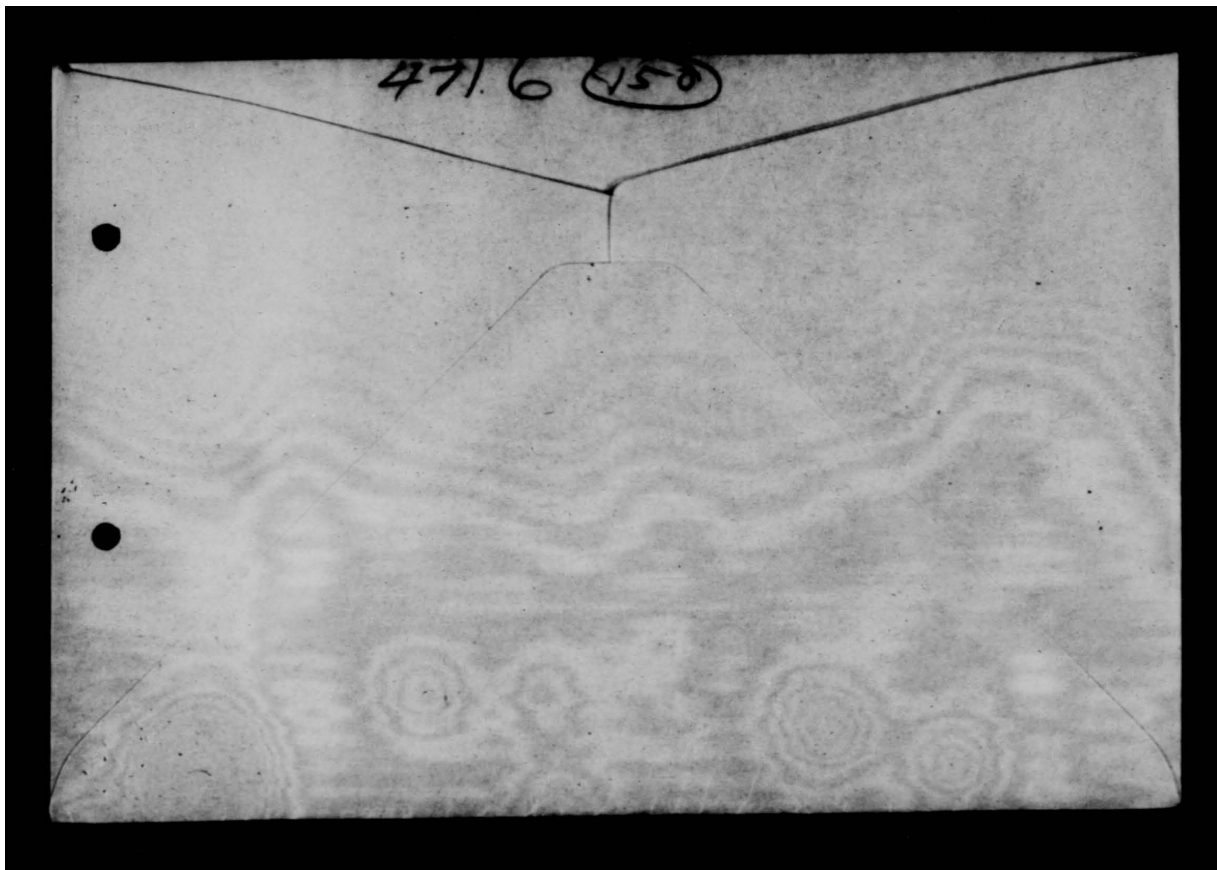
WAR DEPARTMENT
HEADQUARTERS OF THE ARMY AIR FORCE
WASHINGTON, D. C.
OFFICIAL BUSINESS

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PENALTY FOR PRIVATE USE TO SEND
PAYMENT OF POSTAGE, 5000

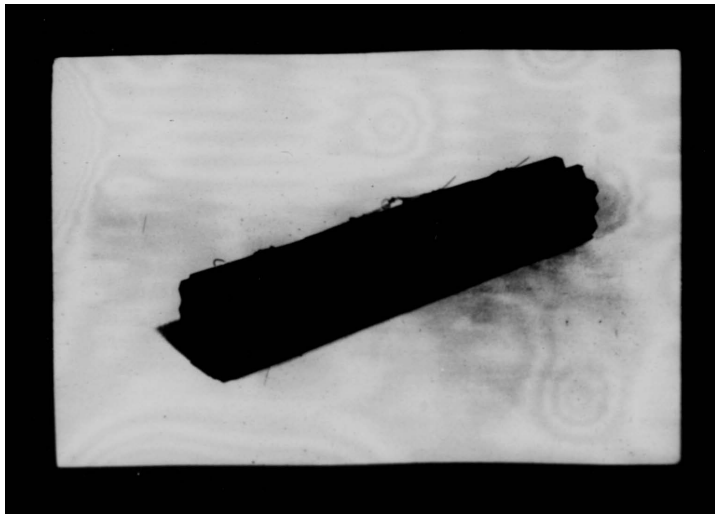
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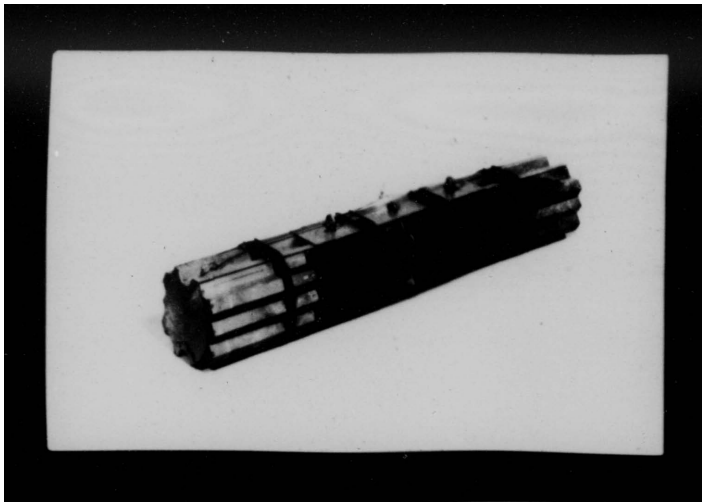
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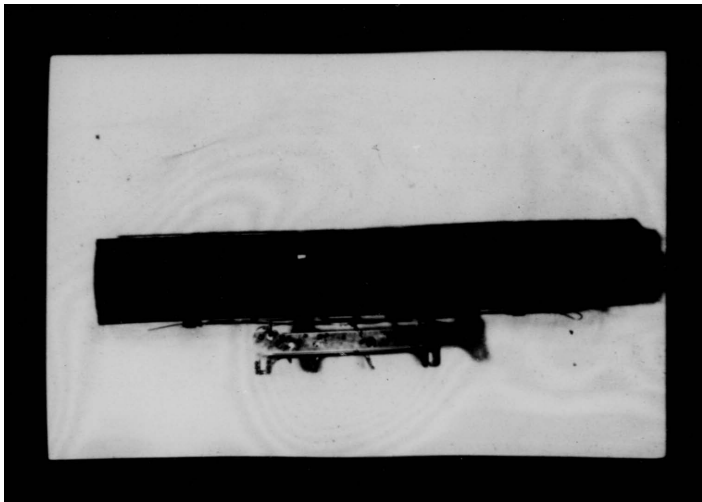
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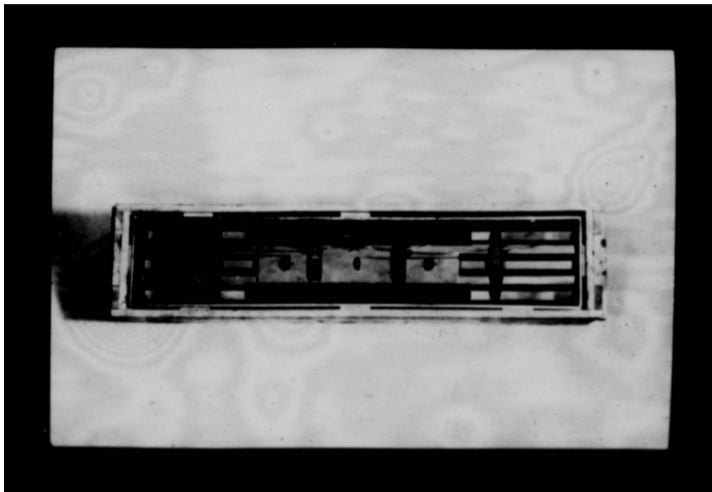
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DDO Mtr.
20 June 1974
By: [Signature] Date: 3/16/77

January 26, 1942.

Test for Bombs

~~Is [unclear]~~

~~In [unclear]~~

AAF/4
WFO/444

Incls.
RAR abv. subj.
1/15/42 fym.
A-4 to C/AS;
Memo for A-6,
1/15/42 w/8 photos
and 1 ey program of
test.

For the Chief of the Air Staff:

Dispatched
JAN 27 1942
AAG

T. J. GIBNEY, JR.
Colonel, Air Corps,
Assistant Chief of Air Staff, A-4.

HEADQUARTERS		ARMY AIR FORCES - COORDINATION								
Chief of Staff	Sec'y of Staff	A.A.G.	A-1	A-2	A-3	A-4	A-WPD	A-Insp.	Budget	Sta-tistics

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AAF-39

Air ab 471.6 (150)

Air ab 471.6 (150)

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DECLASSIFIED
DOD Item
S I 20 2 20 Item 1974
By: SP-1C: Date: 3/10/77

Test for Bombs.

AAF/A-4
C/A-4

1. AAF/A-4 AAF/A-3 1942
& C/A-4 1/15
IN TUNE

1. For your information.

Incls:
Memo for A-4, 1/13
w/6 photos and 1 copy
program of test.

TJH, Jr.,
C/A-4

DECLASSIFIED

62-4766 (150)

DECLASSIFIED

DECLASSIFYING
DOD Item #
8 Dec 8 20 June 1974
BY: J.C. Data 3/14/77

January 13, 1942

MEMORANDUM FOR A-4, AIR STAFF:

Subject: Test for Bombs.

1. Pursuant to instructions A-4 Division, Air Staff the undersigned witnessed a test of dropping incendiary cluster bombs from an airplane at Edgewood Arsenal on Saturday, January 10th. This test was originally scheduled for Friday the 9th but was postponed until the following day.
2. The attached photographs show the make up of the cluster bomb. Each cluster consists of 34 bombs, thermate filled, each bomb weighing approximately 3.75 pounds. The adapter and other metal parts weigh about 13 pounds, making the total weight of the cluster approximately 140 pounds.
3. The test was carried out according to the attached program. Eight clusters were dropped at about five minute intervals between clusters in an open field, from a height of 1000 feet. All the individual bombs seemed to ignite. The burning time was about $1\frac{1}{2}$ minutes.
4. Especial attention was paid to observing whether or not the cluster opened up before leaving the plane. From close observation it was judged that the clusters opened and the individual bombs started falling as separate bombs at about 10 or 15 feet below the plane. This was confirmed by other observers.
5. The pattern formed by the separate bombs was about 150 yards long and 50 to 60 yards wide. However, there were a few individual bombs outside this pattern in each instance. The arrangement of the bombs as described in the program of test seemed to affect the pattern somewhat. For example, when all noses were forward the bombs were thicker in the forward half of the pattern.
6. The entire test was carried out according to schedule and the performance of the cluster bomb appeared to be very satisfactory.

ALEXANDER WILSON
Colonel C.W.S.

Incls:
6 Photographs
1 by Program of Test.

DECLASSIFIED

PROGRAM OF TEST
MUNITIONS DEVELOPMENT DIVISION

Item: Adapter, Cluster, 100 lb., M2 for Incendiary Bombs.

Test No.: 5-1942

Date of Program: January 9, 1942

Authority: Project B 3.5

Date of Test: January 10, 1942.

1. Object.

The object of this test is to determine the functioning of the Adapter, Cluster, 100 lb., M2 (for incendiary bomb) when dropped from an airplane.

2. Method of Test.

The method to be used in this test will be as follows:

a. Preparation of Adapters.

Live bombs will be used in all adapters and the bombs in each adapter will conform to the following arrangement:

Adapter #1 - Noses of all bombs in each bundle forward.

#2 - Noses of twelve (12) outside bombs in each bundle forward, tails of the five (5) inside bombs in each bundle forward.

#3 - Noses of ten (1) outside bombs in each bundle forward, tails of the seven (7) inside bombs of each bundle forward.

#4 - Ten (10) outside bombs in each bundle arranged nose to nose, seven (7) inside bombs of each bundle arranged tail to tail.

#5 - Same as #1.

#6 - Same as #2.

#7 - Same as #3.

#8 - Same as #4.

b. Adapters will be suspended from the uppermost stations in the bomb rack. All adapters will be dropped from an altitude of 1000 feet. The adapters will be dropped in chronological order.

c. Communication will be maintained with airplane by means of a portable field radio which will be located in vicinity of "C" field tower. Sufficient time for inspection of dispersion of bombs will be allowed between each drop.

3. Basis for Conclusion.

- a. Delay in opening of adapter components.
- b. Station of cluster in bomb rack.
- c. Clearance of airplane by bombs and adapter components.
- d. Flight of bombs.
- e. Pattern on ground.
- f. Burning time of bombs.
- g. Number of duds.

4. Materials Required.

- 8 - Adapters, Cluster, 100 lb., M2 loaded with live AM-M54 incendiary bombs.
- 1 - Airplane
- 6 - Stop Watches
- 1 - Radio transmitter, portable
- 1 - Panel, airplane
- Notebooks and pencils.

5. Personnel.

- a. Air Corps
 - 1 - Pilot
 - 1 - Co-pilot
 - 1 - Bombadier
 - 1 - Radio operator
- b. Munitions Development Division
 - 1 - Observer in airplane
 - 2 - Engineers on ground
 - 2 - Range guards
 - 2 - Observers
 - Detail for loading bombs in airplane at Aberdeen Proving Ground.

e. Engineering Division.

Photographers.

6. Location.

"C" Field

7. Preliminary Data.

a. Weight of individual bombs.

b. Weight of loaded adapter.

c. Advance weather forecast (18 hours).

8. Operations Data.

a. Weather date.

b. Time required for adapter to break open.

c. Flight of bombs.

d. Dispersion of bombs.

e. Burning time of bombs.

f. Number of duds.

9. Preliminary Arrangements.

a. Pack adapters with AN-M54 bombs.

b. Arrange with Aberdeen Proving Ground, Air Corps Detachment, for airplane and crew.

c. Arrange with Engineering Division for photographers.

d. Coordinate with Safety Division relative to personnel in area of "C" field.

e. Arrange with Air Corps Detachment, Edgewood Arsenal, for portable field radio transmitter and operator.

f. Arrange for transportation to:

(1) Aberdeen Proving Ground.

(2) "C" Field.

10. Safety Precautions.

a. Two (2) guards will be posted, one at intersection of Ricketts Point Road and "C" Field Road and one at Coordinates 1869.0-690.5.

b. Personnel at the Aberdeen tank garage located at north end of "C" Field will be notified of these tests and necessary precautions will be taken to prevent endangering personnel, equipment, and buildings in immediate vicinity of the tank garage.

c. Dropping of bombs will be coordinated with airplane crew by means of radio.

d. A panel will be displayed in front of "C" Field tower, and when not displayed, no bombs will be dropped from airplane.

Submitted by:

W. W. BREMAN
LST.Lt., C.W.S.
Munitions Development Division

Recommending approval:

F. W. Gerhard
Lt. Col.CWS
Chief, Munitions Development Div.

APPROVED:

W. C. Kabrich
Lt. Col., CWS
Technical Director

DECLASSIFIED

DECLASSIFIED
DOD 1182
1 Jan 80 June 1976
BY: [unclear] Date: 3/27

HEADQUARTERS GHQ AIR FORCE
Office of the Commanding General
BOLLING FIELD, D. C.

(X-6)

AF 471.6 (4-29-41)

April 29, 1941.

SUBJECT: Painting of High Explosive Bombs.

TO : The Adjutant General, Washington, D. C.

1. Reference Section IV, War Department Circular No. 45, March 18, 1941, it is noted that all motor vehicles when originally purchased or re-painted will be painted an approved lusterless olive drab. It is presumed that such action was taken in order that ground materiel would be rendered less conspicuous from observation.

2. In view of the necessity of open storage of large quantities of high explosive bombs in ammunition areas in the vicinity of dispersed airdromes, and the transportation of these bombs to the individual airplane of the airdrome, it appears that the present method of identification would be very objectionable in a theater of operations.

3. It is recommended that consideration be given to a change in the present method of identification of high explosive bombs for the purpose of rendering them less discernible from enemy observation.

For the Commanding General:

33 AG-D

MAY 5 1941

Received

C. W. Russell
C. W. RUSSELL,
Brigadier General, G. S. C.,
Chief of Staff.



33
471.6
MAY 13 1941
NOV 10 1941
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471.6
4-29-41
4-29-41

AG 471.6
(4-29-41)MU

58

1st Ind.

EJ:co

War Department, AGO, May 8, 1941 - To the Chief of the Air Corps and the Chief of Ordnance, IN TURN.

For remark and recommendation.

By order of the Secretary of War:

471.86(EB 103)/120

WAR CORPS
MAY 8 1941

[Signature]
Adjutant General.

471.86(149)

00471.62
674

DECLASSIFIED
DOD Hqs.
4 Jan. & 28 June 1974
By: [unclear] IC: Data 3/10/77

SUBJECT: Painting of High Explosive Bombs.

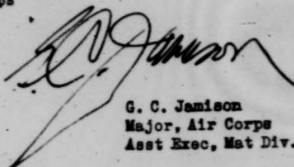
(4-E-1)

89 2nd Ind.

4716
War Department, Office, Chief of the Air Corps, Washington, D. C.,
May 9, 1941. To: The Chief of Ordnance, 5362 Social Security Building,
Washington, D. C.

1. The recommendations of GHQ, as contained in basic correspondence, are concurred in.

For the Chief of the Air Corps



G. C. Jamison
Major, Air Corps
Asst Exec, Mat Div.

O.O. 471.62/674
A.F. 471.6 (4-29-41)
A.G. 471.6 (4-29-41)MO

62 3rd Ind.

KFA/eff

War Department, Ordnance Office, Washington, D. C. May 24, 1941.
To: The Adjutant General.

1. The system of painting the several types of munitions for the purpose of identification was adopted by the War Department many years ago and has been followed consistently not only by the War Department but by the Navy Department as well.

2. The purpose of this coloring was to permit identification under the most adverse conditions even though stencilled information had been obliterated or unreadable because of light conditions. The Field Artillery has ammunition stored in the open much closer to troops than the Air Corps. These positions are just as vulnerable for air observation and it is just as necessary to move this ammunition from place to place as that which applies to the condition explained in the originating communication.

3. The same metal container for bombs may be loaded with different materials, such as the 100-lb. chemical bomb which may be loaded with gasoline or other incendiary material, white phosphorus or other smoke producing material, or persistent or non-persistent gases of the many types available.

4. Very definite color schemes have been adopted for the purpose



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Office of the
Chief of Customs
MAY 13 1941
Executive Office

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OFFICE OF THE
Chief of Customs
MAY 13 1941
Executive Office

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MAY 13 1941
CUSTOMS SEAL
AND RECORD BRANCH
WAR DUPL.

of identifying these lesser used forms of filling, and the painting of all one neutral color, it is believed, would introduce a condition which could hardly be justified on any assumed grounds. The storage of bombs of different fillers is prohibited at times because of safety considerations and with all bombs of the same color it would be nearly impossible to prevent such conditions, arising through error. Furthermore, it is felt that a similar condition, possibly to a much lesser extent, would react adversely with respect to tactics.

5. The Ordnance Department has in storage thousands of tons of bombs of the high explosive type and a change in the color scheme would necessitate the taking out of storage all of these bombs and repainting, which expense and effort could hardly be justified under existing conditions. Contracts have been let for the loading and assembling of great numbers of bombs. Some of these production lines are just starting operation, the necessary paints have been procured by the contractor, and while it would be possible to change these contracts, at this stage it is earnestly requested that due consideration be given before the recommendation of the GHQ Reserve and the approval of the Chief of Air Corps is ordered. Your attention is further invited to the fact that a standardization of bombs has recently been brought into effect and any changing in color would have to be approved by the British Services and the U. S. Navy.

6. While it is appreciated that the standard yellow color used on high explosive ammunition is one of the easiest observed, it is felt that the painting of all bombs of every type and description non-lustrous olive drab would be exchanging one danger for a greater one, and it is recommended that the present color system of identification be adhered to. Methods of concealing piles of bombs from the air by suitable covering should not be difficult to work out.

For the Chief of Ordnance:

R. H. Somers

R. H. SOMERS
Brigadier General, U. S. Army
Chief of Technical Staff

4 A. G. O.
MAY 28 1941
RECD BAKK



11 A.G.O.
JUN 4 1941
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MAY 29 1941
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IN
G-4 DIVISION
W-3-PT GEN STAFF

471.66(2B 103)/150

OFFICE
CHIEF OF ORDNANCE

MAY 26 12 55 PM 1941

OUT



DECLASSIFIED
DDI: ltra.
8 Feb. & 20 June 1974
By: SP-1C: Date 3/10/77

✓ C.O. 471.62/674

Subject: Painting of High Explosive Bombs.

AG 471.6
(4-29-41)10-D

85
4th Ind.

WP:SL

War Department, AGO, June 5, 1941 - To the Commanding General, GHQ
Air Force, Bolling Field, D.C.

1. Attention is invited to the 3rd Indorsement above.
2. In view of the information contained therein, no change will be made in the method of identification of high explosive bombs at the present time.

By order of the Secretary of War:

JUN 6 1941



HEADQUARTERS
4TH AIR FORCE

JUN 6 1941
[Signature]
Adjutant General.

[Handwritten signature]
Owl/AMG

FILE JUN - 2 1941

471.86(SB 103)/120

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*EOD. Inv.
8 Jan. & 20 June 1974
Rev. 1/22/77
Revised I.C. Date 3/10/77

(K-5)

✓ 0.0.471.62/674
ACC. 471.8 (4-29-41)

85
5th Ind.

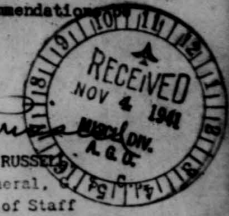
HEADQUARTERS AIR FORCE COMBAT COMMAND, Bolling Field, D. C., Nov. 1, 1941.
TO: The Adjutant General, Washington, D. C.

In view of instructions contained in letter, AG 321.7 (8-5-41) MC-D-M, September 15, 1941, it is requested that basic recommendations further considered.

For the Commanding General:

Rec'd Back
NOV 4 1941
64 AGO

Ch...
C. W. RUSSELL
Brigadier General,
Chief of Staff



NOV 5 1941
22396-77
IN IN
G-4 DIVISION
WAR DEPT. GEN. STAFF

471.86(E² 103)/120

DECLASSIFIED
 - DOD - ltr.
 8 Jan. & 20 June 1974
 By: JWF/PC: Date: 2/10/77
 C. 471.6 2/6/74
 AG 471.6 (4-29-41)
 G- 4/22396-77

WAR DEPARTMENT GENERAL STAFF
 DISPOSITION FORM

SUBJECT: Painting of High Explosive Bombs.

Date **NOV 29 1941**

TO:	C/S	G-1	G-2	G-3	G-4	Air Staff	
	TAG	WPD	USW	ASW	ASWA	CG	Army
	AC	BLP	BOWD	ExRA	NGB	CG	Army Corps
	INF	FA	CAV	CA	ENGR	CG	CA
	I ORD	QMG	CSO	SG	FIN	CG	Dept.
	GHQ	JAG	CWS	IG	B/PR		

FOR:	<input checked="" type="checkbox"/> S/W directs	Comment or concurrence	Necessary action
	Draft of reply	Remark and recommendation	Information for reply
	Direct reply	Inviting attention to	Ind. approved
	Approved	See notation of	Primary interest
	Disapproved	Information	Notation and return
	File	Consult	Noted

By: Spcl Msgr Radio Air Mail Immed Action Ltr Letter

1. Remarks and recommendations are desired with reference to 5th Indorsement, dated November 1, 1941, to basic letter dated April 29, 1941, subject as above (AG 471.6 (4-29-41)).

2. Particularly desired are detailed comments with reference to advisability of painting bombs a lustreless olive drab color matching the standard color called for in U. S. Army Specification ES 474 a, June 28, 1940, except for a narrow band of proper distinctive color just back of the nose and a similar band on the rear section in front of the fin cone.

3. With reference to Paragraph 2, above, if such a scheme for identification were adopted, it appears that such should be applicable only to new contracts, and should not require repainting present stocks or changes in present contracts, difficulties of which were outlined in your 3d Indorsement dated May 24, 1941 to basic letter, attached file.

S. J. CHAMBERLIN,
 Colonel, General Staff Corps,
 Acting Assistant Chief of Staff.

C. F. Townsley
 C. F. TOWNSLEY
 Lieut. Col., General Staff,
 Chief, Planning Section, W & D Branch

85

Incl. 2/1
 Ltr fm Hq GHQ Air
 Fc., 4-29-41,
 w/5 Ind.

COPY FOR THE CHIEF OF ORDNANCE

OUT-G-4 NOV 29 1941

OFFICE
CHIEF OF ORDNANCE

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NOV 30 1941

DECLASSIFIED
MOD Item
8 Jan & 20 June 1974
By SAETC: Date 11/17

DECLASSIFIED
CONFIDENTIAL

NO.O. 471.627674
Attn: Arm. Div., Ind. Serv.
AG 471.6 (4-29-41)
G-4/22396-77

7th Ind.

Adelman/mfm

War Department, Ordnance Office, Washington, D. C. January 13, 1942.
To: The Adjutant General.

1. Action has already been taken to modify the painting of bombs in accordance with action recommended by the Joint Committee on Standardization of Bombs (Army, Navy and British).

2. There is being forwarded herewith a copy of Item 17576, Ordnance Committee Minutes, covering such action. Another item is now in process which extends the repainting to existing contracts as soon as the modification can be put into effect without delaying production and also to the repainting of bombs which are in open storage or which are now in magazines, the latter to be done prior to placing them in open storage or as soon thereafter as practicable.

For the Chief of Ordnance:

4 A. G. O.
JAN 19 1942
REC'D BACK

G. M. Barnes
G. M. BARNES
Brig. Gen., Ord. Dept.
Asst. Chief, Industrial Service
Research and Engineering

1 Inclosure: ~~1~~ 2
Cy. Item 17576, O.C.M.
not rec'd by Ind. Serv. - 2/11/42

JAN 19 42 PM



RECEIVED MISC. DIV., AGO.
S. & C. Section

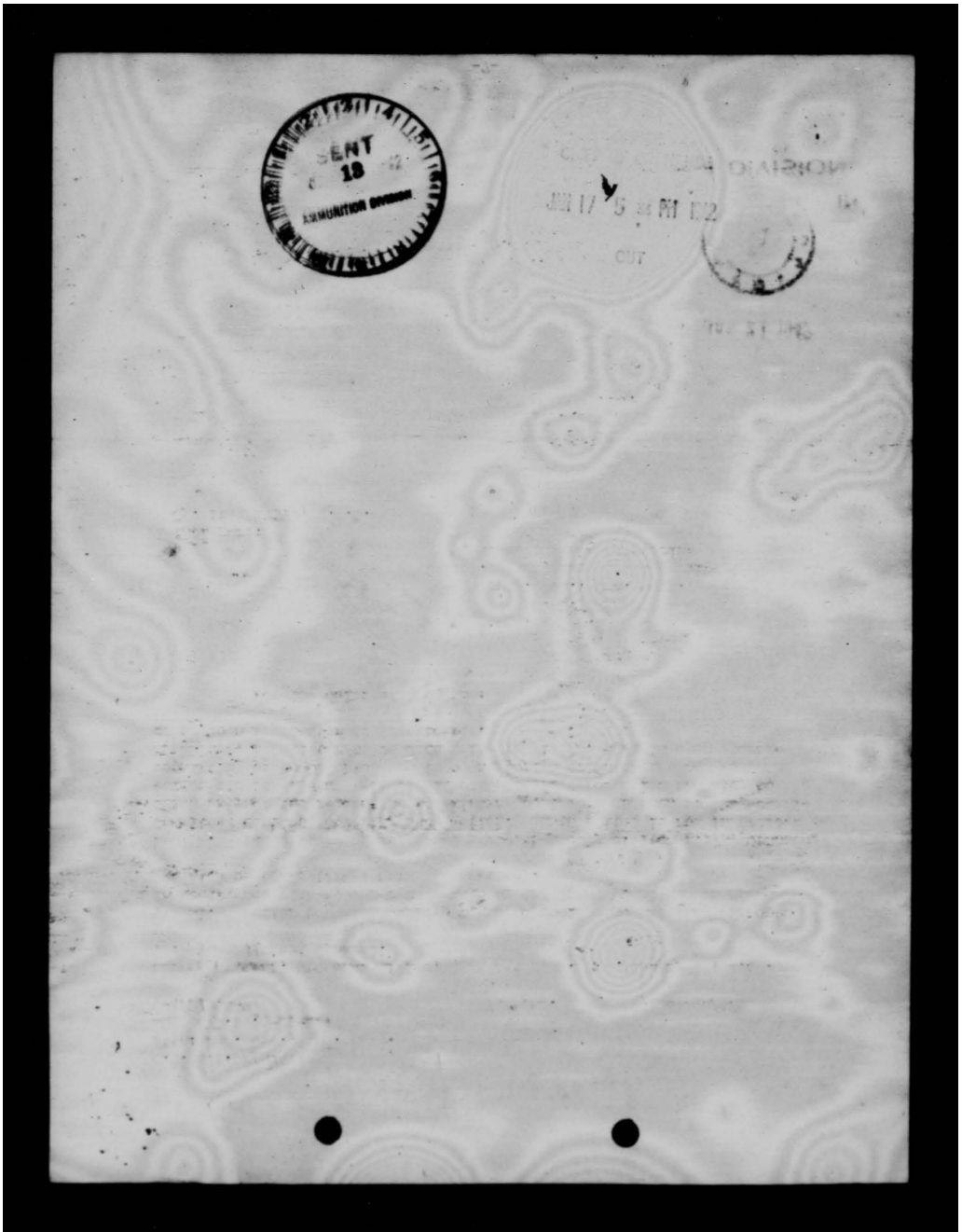
JAN 21 1942
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IN
G-4 DIVISION
WAR DEPT GEN. STAFF
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CONFIDENTIAL

AG 471.6 (189)



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ADMINISTRATIVE DIVISION

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DOD ltr.

8 Jan. & 20 June 1974

By: D/M/C: Date 3/18/77

WAR DEPARTMENT

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CONFIDENTIAL

17576

Project O. K.

Item December 16, 1941

T. S. T. P.

Date

Bombs

From: Subcommittee on

To: The Ordnance Committee, Technical Staff

PAINTING AND MARKING OF BOMBS

Subject:

1. REFERENCE:

- a. O.O.N. Item 12493
- b. O.O. 471.62/674
- c. Memorandum from the Special Sub-Committee for the Standardisation of Aircraft Bombs to the Recorder of the Joint Aircraft Committee, dated November 21, 1941, Subject: "Standardisation of Aircraft Bombs"
- d. O.O. 471.62/2591

2. DISCUSSION:

a. Reference 1a covers action taken previously regarding painting of bombs which provided for the use of yellow with high explosive, gray with chemical, blue for practice bombs containing explosive charges, and black for inert drill or dummy bombs.

b. Reference 1b is a communication from the Air Corps recommending the use of non-lustrous, olive drab paint with all types of bombs in order that they would not be so visible when observed from the air. This was not concurred in by the Ordnance Department at that time. By 5th indorsement the subject was reopened, and it was noted in paragraph 3 of the 6th indorsement which was from G4 that if such a scheme of identification were adopted it should be applicable only to new contracts and should not require repainting of present stocks or changes in present contracts.

c. This same subject was discussed by the Special Sub-Committee for the Standardization of Aircraft Bombs for the Army, Navy, and British at a meeting held November 17, 1941. The following action was agreed upon at the meeting:

- "(1) High explosive, practice, and drill bombs be painted olive drab, Specification E.S. 474c, entitled "Enamel, Synthetic Olive Drab, Lusterless"."

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~~CONFIDENTIAL~~

- (2) That a one inch wide yellow band be painted at the extreme nose end of the bomb body to indicate high explosive.
- (3) That a wide yellow band be also painted on the tail section extending from the rear of the bomb body to approximately one inch forward of the position where the fin sleeve seats on the tail section of the bomb to indicate high explosive.
- (4) That a broken yellow band about 1/4" wide be also painted at the center of gravity of high explosive bombs.
- (5) That the bands, three inches on each side of the band which indicates the center of gravity, now specified on Army bomb drawings to indicate location of suspension band, be eliminated.
- (6) That blue bands positioned as indicated above be used to indicate practice bombs.
- (7) That black bands positioned as indicated above be used to indicate drill or inert loaded bombs.
- (8) That the above specification be furnished to the Navy Department and to the British.
- (9) That the fin assemblies be painted the same color as the bomb bodies, i.e., dull olive drab."

d. The recommendations of the Sub-Committee, contained in the previous paragraph, were approved at the meeting of the Joint Aircraft Committee on November 24, 1941. Notice of this action was forwarded to the Ordnance Department by the Adjutant General by 1st indorsement on reference 1d.

e. No mention of chemical bombs is contained in these recommendations, and it is considered that the present method of painting and marking, namely gray with yellow or green stripes and marking, be continued in use since this color is not readily distinguishable against ordinary backgrounds.

3. RECOMMENDATIONS:

The sub-committee recommends:

a. that the system of painting bombs as outlined in paragraph 2c (with a quick drying paint substituted for that called for therein) be adopted for all AN and other standard Army bombs, exclusive of chemical bombs, and that this change be put into effect immediately and be applicable only to new contracts (present stocks and present contracts will not be affected).

b. that this be interpreted so that the painting of fragmentation bombs is similar to that for high explosive types; namely olive drab body and fin, with base and head painted yellow.

-2-
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CONFIDENTIAL

subcommittee on Bombs
SUBJECT: PAINTING AND MARKING OF BOMBS

c. that the practice bombs which simulate the fragmentation type be painted the same as the latter with blue substituted for yellow.

d. that the markings (lot number, type, etc.) on the bombs referred to in paragraphs 3a, b, c, be in black.

e. that the present system of painting and marking of chemical bombs be continued in use.

J. K. CHAIN
Brig. Gen., U. S. Army

B. M. BARNES
Brig. Gen., U. S. Army

SAMUEL R. SHUMAKER
Capt., U. S. Navy

F. R. STRIBLING
Lt. Col., Ord. Dept.

W. E. BAKER
Lt. Col. C. W. S.

R. C. COUPLAND
Lt. Col., Ord. Dept.
(AC)

JOHN G. MOORE
Lt. Col., Air Corps.

Action by: Ammunition Division, Industrial Service
(Approval of Higher Authority Not required)

APPROVED BY ORDNANCE COMMITTEE
DEC 26 1941
R. B. EFFERT
Major, Ord. Dept., U. S. A.
Secretary.

APPROVED
EARL McFARLAND
Brigadier General
Asst. to the Chief of Ordnance

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DOD. Str.
2 Dec. & 20 June 1974
By: JFC.LC: Date: 3/6/77

CONFIDENTIAL

AAF/A-4
JFK/mb

Wrt 1/30/42

**SUBJECT: Military Characteristics of Controllable Power
Driven Bomb.**

1st Ind.

War Department, Headquarters, Army Air Forces, Washington, D.C.
FEB 3 1942 To The Chief of the Air Corps.

1. Approved.

By Command of Lieutenant General Arnold

471.6
148

WM. W. DICK
Col., A.G.D.
Air Adjutant General

1 1942

AAG Received

Dispatched
FEB 3 1942
AAG

HEADQUARTERS			ARMY AIR FORCES			COORDINATION				
Chief of Staff	Sec. 7 Air Staff	A.A.G.	A-1	A-2	A-3	A-4	A-4FD	A-Inspr.	Budget	Sec. Affairs
						7/11/42				

AW-39

- 2 -

CONFIDENTIAL
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471.6 148

DECLASSIFIED
DOD Item
8 Jan & 20 June 1974
BY: SP-1/CI Date 1/11/77

~~CONFIDENTIAL~~
DECLASSIFIED

(4-P)

**Military Characteristics of
Controllable Power Driven Bomb.**

JAN 21 1942

Chief of Army Air Forces.

1. The following principal characteristics for a controllable power driven bomb are submitted for approval. These characteristics, when approved, are to supersede and cancel the military characteristics for an aerial torpedo as approved by The Adjutant General by 1st Indorsement dated February 26, 1940.

CONTROLLABLE POWER DRIVEN BOMB

- A. CLASS - Controllable Bomb, Power Driven.
- B. MISSION - Use against objectives which will require an extremely high degree of accuracy.
- C. REQUIREMENTS -
 1. This controllable bomb shall be equipped with lift-producing airfoils, control surfaces and a power plant.
 2. This controllable bomb may also be equipped with stabilising equipment, radio control (with or without television) and/or heat, light, sound or radio detecting and directing equipment. Further, this controllable bomb may be equipped with pre-set data devices whereby the path to be followed by the bomb can be set in prior to its launching.
 3. This controllable bomb may be designed for launching from the ground or for launching from a suitable carrying vehicle or airplane.

For the Chief of the Air Corps

JAN 1942
ASD Record

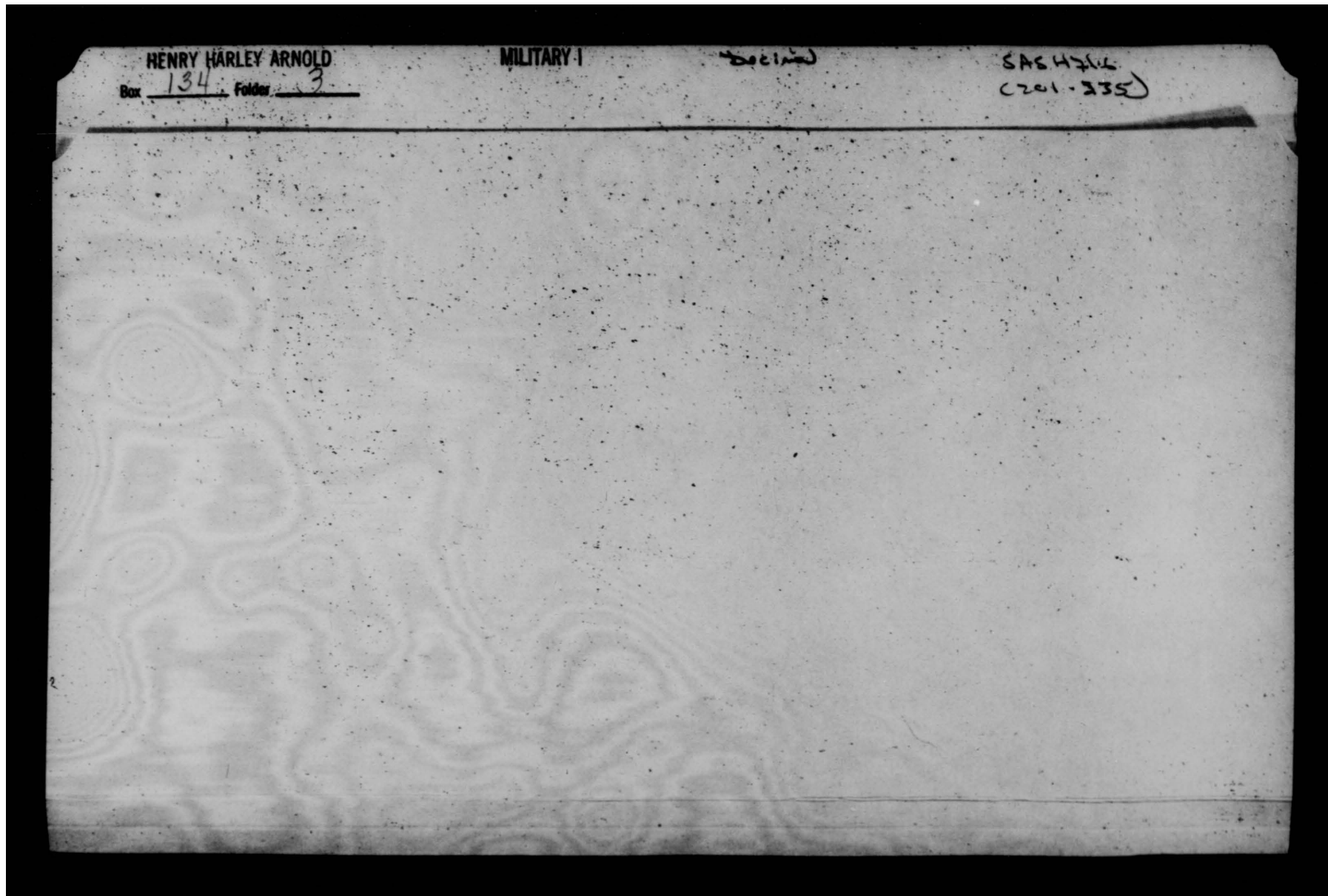
Oliver P. Echols,
Maj. Gen. Air Corps,
Chief Materiel Division.

~~CONFIDENTIAL~~

MX-106

71-638

Orig 22471.6 (148)



DECLASSIFIED

AAF/A-4/455
EBB

DECLASSIFIED
DOD ltr.
8 Jan. & 20 June 1974
By: [Signature] L.C. Data: 3/10/77

MAR 12 1942

MEMORANDUM FOR THE CHIEF OF ORDNANCE:

**Subject: Procurement of 307 Chemical Bomb and
237 Parachute Fragmentation Bomb.**

1. Pending the development of adequate adapters for the release of the subject bombs, the Ordnance Department is authorized to suspend procurement of these bombs as items in the Requisition Program pertaining to the Fourth Supplemental National Defense Act, P. L. 1942.

For the Commanding General, Army Air Forces.

T. J. HANLEY, JR.,
Colonel, Air Corps,
Assistant Chief of Air Staff, A-4.

elm

MAR 13 1942
AAG

DECLASSIFIED
SECRET

"Comeback copy"

air ac 4-11.6 (235)

DECLASSIFIED
DOD Hqs.
9 Jan 20 June 1976
By: [Signature] Date: 3/2/77

CONFIDENTIAL
DECLASSIFIED

AAF/D Bomb.
EFS:mld
March 19, 1942

**SUBJECT: Joint Aircraft Committee Case No. 225,
Standardization of Aircraft Bomb Fuses
1st Ind.**

War Department, Headquarters, Army Air Forces, Washington, D. C.
MAR 20 1942 TO: Office, Chief of Ordnance.

- 1. Action indicated in paragraph 1 basic letter is desired.

For the Commanding General, Army Air Forces:

EDGAR P. SCHREIBER,
Colonel, Air Corps,
Director of Bombardment.

Incls:
n/s

471.6
224

Dispatched MAR 20 1942
MAR 21 1942
AAG

HEADQUARTERS		ARMY AIR FORCES				COORDINATION				Sta-
Chief of Staff	Secy of Staff	A.G.	A-1	A-2	A-3	A-4	A-100	A-100	Direct	Officer

41F-39

CONFIDENTIAL

471.6 224

DECLASSIFIED
DOD ltr.
8 Jan. & 26 June 1974
By SP7/LOJ Data 2077

~~CONFIDENTIAL~~

JOINT AIRCRAFT COMMITTEE
WASHINGTON, D.C.

February 28, 1942

MEMORANDUM TO: Adjutant General

SUBJECT: Joint Aircraft Committee Case No. 235,
Standardization of Aircraft Bomb Fuzes

1. It is requested that a directive be issued to the Chief of Ordnance to take the necessary action to carry out the agreement reached by the Army, Navy, and British Air Commission, as outlined in Report No. 6 of Case No. 235, the Standardization of Aircraft Bomb Fuzes.

2. Report No. 6 of Case No. 235 was approved in the meeting of the Joint Aircraft Committee on February 24, 1942. This approval was based upon the recommendation of the Special Subcommittee on the Standardization of Aircraft Bombs.

3. The authority of the Joint Aircraft Committee to make arrangements of this nature is contained in a letter from the Secretary of War, dated April 22, 1941, Subject: "Joint Aircraft Committee," Reference: File No. WD 452 (14-23-41)M. A copy of this letter is attached.

/s/ N. H. Shea
N. H. SHEA,
2nd Lieut., Air Corps,
Assistant Recorder.

Incls.:
Cy. Case #235
Cy. ltr frm Sect'y War
CC - Chief of Ordnance

~~CONFIDENTIAL~~

4716 (224)

DECLASSIFYING
DOD Itra.
8 Jan. & 20 June 1974
By: [unclear], Date: 3/11/77

SECRET
DECLASSIFIED

AAF/A-4/444
HCB/esp
Written March 9, 1942.
March 9, 1942.

AAF/A-4/471-65

Shipment of Bombs, Pyrotechnics, and Ammunition to "X" and "Copper".

II
G-4

I
Ord.

II
TAG

II AAF

I
SW directs

Hq. Army

MAR 10 1942
AAG Recd.

AAF/A-4
HCB/esp

491.6
231

I. 1. Confirming telephone instructions issued to your office (Lt. Col. Rice) March 9, 1942 (Serial 1787) from Lt. Col. Burgess, A-4, Air Staff, it is desired that the following bombs, pyrotechnics and ammunition be shipped as indicated:

To "X"

- 400 ea. 1000# Demolition Bombs
- 5000 ea. 500# " "
- 5000 ea. 300# " "
- 5000 ea. 100# " "
- 500 High Explosive Grenades HES
- 11700 Flares HFL
- 13776 Signals HSL
- 500 Flares HFL

HEADQUARTERS ARMY				COORDINATION						
Chief of Staff	Secy Air Staff	A. A. G.	AF-1	A-2	A-3	A-4	A-WD	A-Inspr.	Budget	Statistics
			5000	5000	5000					
			5000	5000	5000					
			5000	5000	5000					
			5000	5000	5000					
			5000	5000	5000					
			5000	5000	5000					
			5000	5000	5000					
			5000	5000	5000					
			5000	5000	5000					

(See Over)

SECRET
DECLASSIFIED

471.6 231

~~SECRET~~
~~DECLASSIFIED~~

To "Copper"

100 ea. 1000# Demolition Bombs
50,000 rounds 57 mm Aircraft Ammunition
50,000 " 20 mm "

II. To be advised of action taken above.

For the Chief of the Air Staff:

Office NOTED... *EJC 3/10/42*
Chief of the Air Staff

T. J. HANLEY, JR.,
Colonel, Air Corps,
Assistant Chief of Air Staff, A-4.

MEMORANDUM FOR RECORD: Above action was taken to provide a stockage of bombs, pyrotechnics, and ammunition for "I" and "Copper."

Dispatched
MAR 11 1942
AAG

HEADQUARTERS			ARMY AIR FORCES			COORDINATION				
Chief of Staff	Sec'y of Staff	A.A.G.	A-1	A-2	A-3	A-4	A-WD	A-Insp.	Budget	Scatterics

~~SECRET~~
~~DECLASSIFIED~~

DECLASSIFIED
 DOD Item
 8 Jan. & 20 June 1976
 By: SP4 J.C. Date: 3/11/97

SECRET
 BY AUTHORITY OF THE
 CHIEF OF THE ARMY AIR FORCES
 DATE INITIALS

March 11, 1942

SUBJECT: British Bombs.

TO: Major General J. E. Chaney
 Chief, Special Army Observers Group
 American Embassy, London, England.

1. This letter is in reference to reply to your cable #669, dated February 28 1942, with respect to bombs.
2. The British 1900# general purpose bomb and the two thousand and four thousand high capacity bomb cannot be carried internally in B-17 or B-24 type airplanes due to the length of the bombs which is somewhat greater than that of American bombs.
3. When the external racks are installed on the wings of B-17's and B-24's as described in the previous letter on the subject, it will be possible to carry the British bombs externally. It is to be noted that the British do not use a carrying lug to suspend the 4000# bomb as we do, but employ a cable sling similar to the Navy method of carrying torpedoes. The Chief of the Material Division has been instructed to investigate this matter further with a view to arriving at a satisfactory method of hanging the British 4000# bombs on the Air Corps 4000# bomb external racks.

471.6 (230)

For the Commanding General:

Dispatched
 MAR 12 1942
 AAG

WILLIAM V. DICK
 Colonel, A.G.D.

HEADQUARTERS ARMY AIR FORCES - COORDINATION											St- Budget	St- Statistics
Chief of Staff	Asst. Chief of Staff	A.A.G.	A-1	A-2	A-3	A-4	A-MPD	A-Inspr.	Budget	Statistics		
		RCB										

AIF-30

DECLASSIFIED

DECLASSIFIED
 E.O. 12958, Sec. 3.402
 DOD Directive 5200.10, June 18, 1979
 By: SP4 J.C. Date: 3/11/97

DECLASSIFIED

471.6 (230)

DECLASSIFIED
HEADQUARTERS ARMY AIR FORCES
ROUTING AND RECORD SHEET

DECLASSIFIED
DOD ltr.
8 Jan. & 20 June 1974
By: SA/CLC; Date: 3/10/97

No. _____ A line will be drawn across sheet after each comment.

File No. _____
Tally No. AAF/A-4 23

SUBJECT: British Bombs - Letter to Gen. Chaney.

NO	FROM	TO	DATE	COMMENTS	AAF/A-4 MFS/scc
1.	AAF A-4	AAF AAG	1942 3/9	<p>1. Request that a secret Air Mail letter, substantially as follows be sent to General J. E. Chaney, SPOBS, American Embassy, London, England:</p> <p>"1. This letter is in reference to reply to your cable #669, dated February 28, 1942, with respect to bombs."</p> <p>"2. The British 1900# general purpose bomb and the two thousand and four thousand high capacity bomb cannot be carried internally in B-17 or B-24 type airplanes due to the length of the bombs which is somewhat greater than that of American bombs."</p> <p>"3. When the external racks are installed on the wings of B-17's and B-24's as described in the previous letter on the subject, it will be possible to carry the British bombs externally. It is to be noted that the British do not use a carrying lug to suspend the 4000# bomb as we do, but employ a cable sling similar to the Navy method of carrying torpedoes. The Chief of the Materiel Division has been instructed to investigate this matter further with a view to arriving at a satisfactory method of hanging the British 4000# bombs on the Air Corps 4000# bomb external racks."</p> <p style="text-align: right;"><i>WJF</i> <i>Ans</i> for T.H., Jr., C/A-4</p>	

DECLASSIFIED

MAF/D/Bomb.
EPS/is
Rm. 4321

~~CONFIDENTIAL~~
DECLASSIFIED

DECLASSIFIED
DOD IAW
8 Jan. & 20 June 1974
By: JAL/LC; Date: 3/17/77

March 11, 1942.

MEMORANDUM FOR THE ADJUTANT GENERAL:

Subject: Development of Adjustable Delay Bomb Fuses.

1. The attached copy of report of Sub-Committee is approved and is recommended the project be assigned to the National Defense Research Committee.

For the Commanding General, Army Air Forces:

Major F. Swenson,
Colonel, Air Corps,
Director of Bombardment.

Incls:
Ltr. fr. C/Ord. 3/5
to TAG w/att:

Dispatched
MAR 11 1942
AAG

HEADQUARTERS				ARMY AIR FORCES				COORDINATION			
Chief of Staff	Deputy Air Staff	A. G. C.	A-1	A-2	A-3	A-4	A-5	A-6	A-7	Budget	Statistics

447-39

CONFIDENTIAL

air abs 476.6 (229)

476 9164
385 39

DECLASSIFIED
DOD / Hrs.
8 Jan 8 20 June 1974
By: JAC/DAW 3/14/77

~~SECRET~~
DECLASSIFIED

AAF/A-4/435
RCC
Written 2-7-42

MAR 8 - 1942

MEMORANDUM TO THE CHIEF OF THE AIR CORPS

Subject: Bands for Carrying American Bombs on British Bomb Racks.

1. Confirming telephone conversation (Mr. Boehm, Armament Section, Material Div.) March 5, 1942. One hundred and forty shackles, bomb, type B-9 which will be available should be shipped to the Port Quartermaster, Port of Embarkation, Charleston, S. C. Shipment number 8090 and marked for "Magpie".
2. This shipment should reach the Port Quartermaster at Charleston not later than March 12th, 1942.

By Command of Lieutenant General Arnold

Dispatched
MAR 8 1942
AAG

JOHN B. GOOLEY
Lt. Colonel, A. G. D.,
Assistant Air Adjutant General

hrh

7-34-
AAG Rebell

O.C. 25 4111 C
726

HEADQUARTERS—ARMY AIR FORCES—COORDINATION											
Chief of Staff	Sec'y Air Staff	A. A. G.	A-1	A-2	A-3	A-4	A-WPD	A-Insp.	Budget	Statistics	
						166					

DECLASSIFIED

AAF-80

DECLASSIFIED
DOD Itr.
3 Jan. & 20 June 1974
By SS/MS/CJ Date 3/21/77

AAF471.6

~~SECRET~~
DECLASSIFIED BY THE
ARMY AIR FORCES
PMW:HRH:ldl
(AIR AD)
DATE INITIALS

Status of Air Force Bombs and Ammunition.

Commanding General, Field Forces, Army War College,
Washington, D. C.

Information is requested on the amount of bombs and
ammunition on hand for Aircraft in each of the following sectors:
Atlantic Bases, Caribbean Bases, and Alaska.

For the Chief of the Army Air Forces:

P. M. WITNEY,
Lieutenant Colonel, A.G.D.,
Assistant Air Adjutant General.

471.6 (227)

DISTRIBUTION:
A-4

DISPATCHED
MAR 8 1942
AAG

HEADQUARTERS - ARMY AIR FORCES - COORDINATION

TO	BY	A-1	A-2	A-3	A-4	A-5	A-6	A-7	A-8	A-9	A-10	A-11	A-12

Handwritten: *W.* in the first cell of the table body.

DECLASSIFIED

Air AD 471.6 (227)

DECLASSIFIED
 DOD Form
 8 Jan. & 20 June 1974
 By: *SP-10, Date: 3/16/97*

HEADQUARTERS ARMY AIR FORCES
 ROUTING AND RECORD SHEET

DECLASSIFIED

~~SECRET~~
 DECLASSIFIED OF THE
 CHIEF OF THE ARMY AIR FORCES
 File No. *3/74-896*
 DATED 10/19/89

Note:—A line will be drawn across sheet
 after each comment.

③AAF471.6

SUBJECT: Status of Air Force Bombs and Ammunition.

NO	FROM	TO	DATE	COMMENTS	AAF/A-4 LWD/soc
1.	AAF A-4	AAF AAG	1942 3/5	<p>1. Request that a letter substantially as follows be sent to General Headquarters:</p> <p>"a. Information is requested on the amount of bombs and ammunition on hand for Aircraft in each of the following sectors: Atlantic Bases, Caribbean Bases, and Alaska".</p> <p><i>for Mrs TJB, JR. C/A-4</i></p>	
<p>RECEIVED MAR 6 1942 AIR AG-7</p>					

DECLASSIFIED
~~SECRET~~

Do not use reverse side!
 Page No. 1

AG/1566

FORM 8-4071, 20, Rev. 8/16/41
AG 471.6 (22)

DECLASSIFIED
EOD: N/A
1 Jan. & 20 June 1974
BY: [Signature] Date: 3/14/77

~~SECRET~~
~~DECLASSIFIED~~

AAF/A-4/4-23
March 6, 1942.

AAF/A-4/471-63

Shipment of Bombs to Eglin Field and Wright Field.

II C-4

I. Sub.

I. Sub.

II. AMF

I. III. 437000

AAF/A-4
[Signature]

471-6
226

1.1. Confirming telephone instructions issued to your office (Major Stone) March 6, 1942 (Serial 1736) from Lt. Col. Burgess, A-4 Air Staff, it is desired that the following bombs be shipped as indicated:

To Air Corps Board,
Eglin Field,
Valparaiso, Florida.

12 ea. 500# Bombardier Bombs

2. Confirming instructions issued to Major Stone (Serial 1730)

To Colonel Officer,
Wright Field,
Dayton, Ohio.

3 ea. 4,000# Bombs, empty otherwise complete

HEADQUARTERS, ARMY AIR FORCES		COORDINATION								
Chief of Staff	Secy of Staff	A.A.G.	A-1	A-2	A-3	A-4	A-WD	A-Inspr.	Budget	Sta-istics
Release No. 1736 dated March 5, 1942 under in part as follows										
.....										
(See over)										

~~SECRET~~

AAF-39

~~SECRET~~
DECLASSIFIED

36 Depth Bombs Hickam Field, Washington
32 Depth Bombs March Field, California
32 Depth Bombs Fresno, California

.....

Change to read:

120 Depth Bombs Seattle Port of Embarkation for shipment to Hawaii.

Above change has been incorporated in written continuation of instructions issued on March 9, 1942.

II. To be advised of action taken above.

For the Chief of the Air Staff:

NOTED *ELC 3/9/42*
R. Rice Chief of the Air Staff

T. J. HENLEY, JR.,
Colonel, Air Corps,
Assistant Chief of the Air Staff, A-4.

~~REVISION FOR BOMBING~~ Above action taken to provide 12 on 2000 Bombition Bombs for test purposes at Wright Field and 3 on 4,000 Bombs, empty, otherwise complete for test purposes at Wright Field.

Disposition
MAR 9 1942
AAG

RE: AAG
MAR 7 1942
AAG

HEADQUARTERS			ARMY AIR FORCES			COORDINATION				
Chief of Staff	Sec'y Air Staff	A.A.G.	A-1	A-2	A-3	A-4	A-WPD	A-Insp.	Budget	Statistics
						<i>NS</i>				

AAF-39

~~SECRET~~

air 080716 (226)

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DECLASSIFIED
DOD ltr.
8 Jan. & 20 June 1974
By *W/LC* Date *3/6/77*

RECEIPT

DATE _____

SUBJECT: Shipment of Bombs to Eglin Field and Wright Field.

Received from Headquarters Army Air Forces, Disposition Form
above subject.

Officer: _____ Rank _____

Office

~~SECRET~~

~~SECRET~~
DECLASSIFIED

AAF/A-4/429

DECLASSIFIED
DOD ltra.
8 Jan. & 20 June 1976
By: [Signature] Date: 3/16/77

March 6, 1948.

AAF/A-4/471-62

Shipment of Aircraft Depth Bombs and Pyrotechnics to "GH" and "X".

II. 2-4

I. 2-4

I. TAG

II. AAF

I. SW directs

34-4000
MA 7 342
ADD 12000

AAF/A-4
SW/ASH

I. 1. Confirming telephone instructions issued to your office (Major Stone) March 6, 1948 (Serial 1736) from Lt. Col. Burgess, A-4 Air Staff, it is desired that the following depth bombs and pyrotechnics be released to GH and "X" and shipped as follows:

<u>Q-</u>	<u>To: "U.S.C."</u>	<u>Destination</u>
	1. <u>Mark XVII Aircraft Depth Bombs</u>	
	100	Waco
	75	Four's Base
	75	Trinidad
	50	Bumala
	100	Waldenland
	50	Day Field, Maine
	50	Wichita Field, L.I.
	50	Wichita Field, L.I.

HEADQUARTERS			ARMY AIR FORCES				COORDINATING		
Chief of Staff	Sec'y Air Staff	A. A. G.	A-1	A-2	A-3	A-4	A-4PD	A-4TR	
			50						Waco
			50						Four's Base
			50						Trinidad
			50						Bumala
			50						Waldenland
			50						Day Field, Maine
			50						Wichita Field, L.I.

117-35

~~SECRET~~

SEE OVER

471-6 (225)

~~SECRET~~

25
100

Wheeler Field,
Key West, Fla.
Naval Air Station
for Alaska.

Procedural.
000 Flares M13

Punam

To W-1
100 ca. Mark XVII Depth Bombs.

2. 000 depth bombs are available at Yankton, Va. and 100 at Hawthorn, Nevada.

II. To be advised of action taken above.

MEMORANDUM

For the Chief of the Air Staff:

NOTED... 3/7/42... EPC
Chief of the Air Staff

T. J. HAWLEY, JR.,
Colonel, Air Corps,
Assistant Chief of Air Staff, A-4.

MEMORANDUM FOR RECORD: Above action taken to provide depth bombs for "W-1" and "2" and pyrotechnics for Punam.

Dispatched
MAR 9 1942
AAG

HEADQUARTERS ARMY AIR FORCES						COORDINATION				
Chief of Staff	Secy Air Staff	A.A.G.	A-1	A-2	A-3	A-4	A-4P	A-4I	Budget	Statistics
						#1				

41F-39

~~SECRET~~

DECLASSIFIED
DOD ltr.
8 Feb. & 20 June 1994
By: SP-10; Date: 3/27/77

~~SECRET~~
DECLASSIFIED

AAF/A-4/390

March 5, 1942.

AAF/A-4/471-61

Shipment of Bombs to Venezuela.

II-2-A

I-2-A

I. TAG

II. AAF

I. SW directs

Dispatched
MAR 7 1942
AAG

AAF/A-4
ECU/abk

471.6
223

I. 1. Confirming telephone instructions issued to your office (Lt. Col. Rice) March 3, 1942 (Serial 1088) from Lt. Col. Burgess, A-4, Air Staff it is desired that the following bombs be shipped as indicated:

To: U.S. Military Attache
Caracas,
Venezuela.

144 ea. 100# Demolition Bombs.

II. To be advised of action taken above.

Eq. Army Air Forces

By: the Chief of the Air Staff;

NOTED
SFC 3/6/42
Office Chief of the Air Staff

HEADQUARTERS ARMY AIR FORCES					COORDINATION			
Chief of Staff	Secy Air Staff	A. A. G.	A-1	A-2	A-3	A-4	Stations	
							Colonel, Air Corps, Station	
							Assistant Chief of Air Staff, A-4.	

MEMORANDUM FOR RECORD: Above action taken to provide a three months' supply of bombs for four AAF-4's allocated to Venezuela in accordance with memorandum from the Chief of the Army Air Forces to the President.

117-38

DECLASSIFIED
~~SECRET~~

471.6 223

DECLASSIFIED
~~SECRET~~

DECLASSIFIED
DOD Hqs.
8 Jan. & 20 June 1976
By: [Signature]

RECEIPT

DATE _____

SUBJECT: Shipment of Bombs to Venezuela.

1. Received from the Headquarters, Army Air Forces, disposition form, above subject.

OFFICER _____ RANK _____

OFFICER

DECLASSIFIED
~~SECRET~~

DECLASSIFIED
DOD Inr.

EX-100 June 1974
By: SP/PLC; Date: 3/10/77

~~SECRET~~

AAF/144/390

March 5, 1942.

AAF/A-4/471-61

Shipment of Bombs to Venezuela.

II. G-4

I. Ord.

I. TAG

II. AAF

I. SW directs

AAF/A-4
ECS/mhh

I. 1. Confirming telephone instructions issued to your office (Lt. Col. Rice) March 3, 1942 (Serial 1688) from Lt. Col. Burgess, A-4, Air Staff it is desired that the following bombs be shipped as indicated:

MAR 9 1942

To: U.S. Military Attache
Madison, Venezuela.
144 ea. 100# Demolition Bombs.
ACTION TAKEN: 3-10-42 by
I. Ltr to Ch/Ord. II. Cys.
to CG, AAF and CG, SOS.
MME/im-1705.

OUT  OUT
For the Chief of the Air Staff:
OFFICE OF CHIEF OF STAFF

II. To be advised of action taken above.

45 A G O

MAR 9 1942

Received

NOTED.....
Office Chief of the Air Staff

MAR 9 1942
NOTED-OFFICE CHIEF OF STAFF

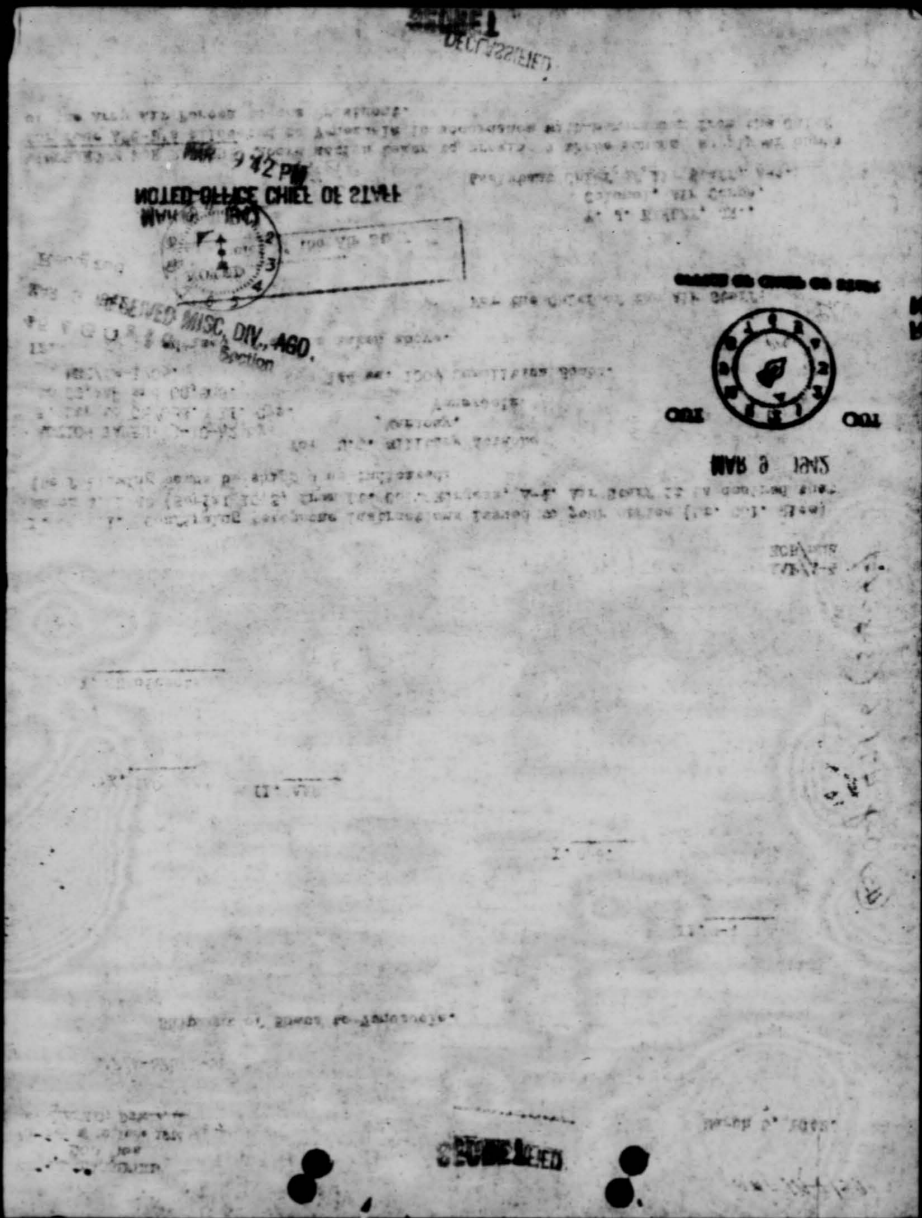
T. J. HANLEY, JR.,
Colonel, Air Corps,
Assistant Chief of Air Staff, A-4.

MEMORANDUM FOR RECORD: Above action taken to provide a three months' supply of bombs for four ANW-1's allocated to Venezuela in accordance with memorandum from the Chief of the Army Air Force to the President.

DECLASSIFIED

AAF/A-4/471.6 223

45-08-471.6 (3-5-42)
Doc 471.6 (3-5-42)



DECLASSIFIED
BY THE DIRECTOR OF THE
AIR FORCE AND AIR NAVY FORCES
(AIR AG)

March 6, 1942.

SUBJECT: Reply to Cablegram #669.

TO: Major General J. E. Chasay
Chief, Special Army Observers Group
American Embassy, London, England.

1. This letter is in reply to your cablegram #669, dated February 28, 1942, with respect to bombs.

2. The 1600# armor-piercing bomb AN-MARK I when provided with an adapter can be carried on any 3000# bomb station. An adapter is necessary because the lug spacing in the armor piercing bomb is fourteen inches whereas the station spacing is thirty inches.

a. Four armor-piercing bombs can be carried at present on the B-24. If, and when, external wing racks are installed, one additional armor piercing bomb can be carried under each wing between the fuselage and the inboard engine.

b. Two 1600# armor-piercing bombs can be carried internally on the B-17E. If, and when, the external wing racks are installed on the B-17E, it will be possible to carry one additional bomb externally on each wing between the fuselage and the inboard engine.

3. The 1000# armor-piercing bomb AN-M52 can be carried on any 1000# bomb station.

a. Eight 1000# armor-piercing bombs can be carried internally on the B-24 with one additional under each wing when external racks are provided.

b. Six 1000# armor-piercing bombs can be carried on the B-17E with one additional bomb under each wing when the external racks are provided.

4. Neither the B-24 nor the B-17E have as yet been equipped to carry the 4000# light case M56 bomb. A satisfactory arrangement has been worked out for installing one 4000# bomb rack under each wing of the B-24.

4711.6 (1222)

DECLASSIFIED

DECLASSIFIED
EO 12958, Sec. 3.402
DOD Directive 5200.30, June 18, 1978
By A.C. Date 3/11/82

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DECLASSIFIED

between the fuselage and the inboard engine. Every effort is being made to incorporate this provision in production airplanes as early as practicable. Changes necessary to permit carrying 4000# bombs externally under the wings of B-17E airplanes are still under study, but it is not known when a satisfactory solution of the problem will be reached. A method of hanging the 4000# bomb under the belly of the B-17E has been developed, but it is not considered satisfactory due to the fact that there is only eight inches clearance between the bomb and the ground.

5. The four pound incendiaries are made up in 100# clusters which can be carried on any 100# bomb station. The B-24 will carry twenty such clusters and the B-17E will carry twenty-four. A cluster weighing five hundred pounds has been developed to permit a fuller utilization of the bomb-carrying capacity of these airplanes. Your comments are requested with respect to the tactical value of such a cluster.

6. The forty pound magnesium incendiary bomb was destandardized some time ago with the concurrence of the British because it was felt that with the limited amount of magnesium available, it was desirable to concentrate on the production of the four pound bombs which could be clustered. There is a 100# incendiary bomb composed of a light bombcase which is filled with gasoline, hexosone, and fuel oil, together with a thickener. Heretofore rubber latex has been used as the thickener. Due to the critical nature of this item the Chemical Warfare Service is attempting to develop a suitable substitute. The 100# incendiary bomb M47 can be hung on any 100# bomb station. The B-24 can carry twenty and the B-17E can carry twenty-four of these bombs.

7. From the data available, it is doubtful that the British two thousand and four thousand high capacity bomb and the 1900# general purpose bomb can be carried on either the B-24 or the B-17. The matter will be investigated further with a view to procuring definite information on the subject.

8. Latest revised editions of Air Corps Technical Orders CO-30-74 and 11-1-6C are being forwarded by Air Mail as requested.

For the Chief of the Army Air Forces:

MAJ GEN AIR FORCE

MAR 6 1942
AAS

*Reinstated by Dept of Air Mail
Copy via Diplomatic pouch.*

HEADQUARTERS ARMY AIR FORCES							COOPERATION			
Chief of Staff	Sec'y of Staff	A.A.G.	A-1	A-2	A-3	A-4	Cooperation	Records	Inspection	

11F-39

DECLASSIFIED

DECLASSIFIED
DOD ltr.

R JAN. & 20 June 1974
By *DME* LC: Date *3/2/77*

HEADQUARTERS ~~SECRET~~ DEPARTMENT OF DEFENSE
ROUTING AND RECORD SHEET

Note.--A line will be drawn across sheet
after each comment.

File No.
Tally No. AAF *1A-4/371*

SUBJECT: Letter to Gen. J. E. Chaney.

NO.	FROM	TO	DATE	COMMENTS	AAF/A-4 MFS/mhh
1.	AAF A-4	AAF AAG	1942 3/3	<p>1. Request that a secret Air Mail letter, substantially as follows, be sent to General J. E. Chaney, SPOBS, American Embassy, London, England:</p> <p>"1. This letter is in reply to your cablegram #669, dated February 28, 1942, with respect to bombs."</p> <p>"2. The 1600# armor-piercing bomb AN-MARK 1 when provided with an adapter can be carried on any 2000# bomb station. An adapter is necessary because the lug spacing in the armor piercing bomb is fourteen inches whereas the station spacing is thirty inches.</p> <p>a. Four armor-piercing bombs can be carried at present on the B-24. If, and when, external wing racks are installed, one additional armor piercing bomb can be carried under each wing between the fuselage and the inboard engine.</p> <p>b. Two 1600# armor-piercing bombs can be carried internally on the B-17E. If, and when, the external wing racks are installed on the B-17E, it will be possible to carry one additional bomb externally on each wing between the fuselage and the inboard engine."</p> <p>"3. The 1000# armor-piercing bomb AN-M52 can be carried on any 1000# bomb station.</p> <p>a. Eight 1000# armor-piercing bombs can be carried internally on the B-24 with one additional under each wing when external racks are provided.</p> <p>b. Six 1000# armor-piercing bombs can be carried on the B-17E with one additional bomb under each wing when the external racks are provided."</p> <p>"4. Neither the B-24 nor the B-17E have as yet been equipped to carry the 4000# light case M58 Bomb. A satisfactory arrangement has been worked out for installing one 4000# bomb</p>	

DECLASSIFIED (Do not use reverse side)

F-4071, IC, Rev. 8/14/61

HEADQUARTERS ARMY AIR FORCES
~~SECRET~~
 ROUTING AND RECORD SHEET

Note.--A line will be drawn across sheet
 after each comment.

File No.,.....

Tally No. AAF.....

SUBJECT: Letter to Gen. J. E. Chaney.

NO.	FROM	TO	DATE	COMMENTS	EXP/AC MFS/mhh
1. cont.	AAF A-4	AAF AAG	1942 3/3	<p>rack under each wing of the B-24, between the fuselage and the inboard engine. Every effort is being made to incorporate this provision in production airplanes as early as practicable. Changes necessary to permit carrying 4000# bombs externally under the wings of B-17E airplanes are still under study, but it is not known when a satisfactory solution of the problem will be reached. A method of hanging the 4000# bomb under the belly of the B-17E has been developed, but it is not considered satisfactory due to the fact that there is only eight inches clearance between the bomb and the ground."</p> <p>"5. The four pound incendiaries are made up in 100# clusters which can be carried on any 100# bomb station. The B-24 will carry twenty such clusters and the B-17E will carry twenty-four. A cluster weighing five hundred pounds has been developed to permit a fuller utilization of the bomb-carrying capacity of these airplanes. Your comments are requested with respect to the tactical value of such a cluster."</p> <p>"6. The forty pound magnesium incendiary bomb was de-standardized some time ago with the concurrence of the British because it was felt that with the limited amount of magnesium available, it was desirable to concentrate on the production of the four pound bombs which could be clustered. There is a 100# incendiary bomb composed of a light bombcase which is filled with gasoline, kerosene, and fuel oil together with a thickener. Heretofore rubber latex has been used as the thickener. Due to the critical nature of this item the Chemical Warfare Service is attempting to develop a suitable substitute. The 100# incendiary bomb M47 can be hung on any 100# bomb station. The B-24 can carry twenty and the B-17E can carry twenty-four of these bombs."</p> <p>"7. From the data available, it is doubtful that the British two thousand and four thousand high capacity bomb and the 1900# general purpose bomb can be carried on either the B-24 or the B-17. The matter will be investigated further with a view to procuring definite information on the subject."</p>	

(Do not use reverse side)

W-4071, AC. Rev. 8/14/41

~~SECRET~~
 DECLASSIFIED Page No. 2

HEADQUARTERS ARMY AIR FORCES
 ROUTING AND ~~SECRET~~ SHEET

Note.--A line will be drawn across sheet
 after each comment.

File No.

Tally No. AAF

SUBJECT: Letter to Gen. J. E. Chaney.

NO.	FROM	TO	DATE	COMMENTS	AAF/AAG MFS/mhh
1. cont.	AAF A-4	AAF AAG	1942 3/3	<p>"8. Latest revised editions of Air Corps Technical Orders OO-30-74 and 11-1-6C are being forwarded by Air Mail as requested."</p> <p>Incl. Cy. #689 cable frm. Chaney</p> <p><i>[Handwritten signature]</i> for TJH, Jr., C/A-4</p>	

... 4 194
 ... Receipt

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~~SECRET~~

(Do not use reverse side)

F-4071, AC, Rev. 8/14/41

Page No. 3

20471.6 (222)

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AMDI6
755P/28

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DECLASSIFIED

AG-4

February 28

AG 471 (2-28-42)MSG

429 PM

From: Am Embassy London England

DECLASSIFIED
DOD Trn.
8 Jan. & 20 June 1974
By: SP-10 Date: 3/22/77

ACTION COPY

To: Adjutant General

No. 669 February 28th

For our operations in the United Kingdom, a probable shortage of heavier type American bombs is indicated by the best available information. It is desired that you advise by cable as to the bomb capacities of the B-24C, B-24D and B-17E aircraft for the following bombs:

- A. 1600 pound Armor Piercing AN-MARK 1.
- B. 1000 pound Armor Piercing AN-M52.
- C. 4000 pound light case M56.
- D. 4 pound incendiaries AN-M50, M50X, and M54.
- E. 40 pound incendiary AN-M51.

Following for Chief of Air Corps: It is indicated by studies made by the Ministry of Aircraft Production that installation in American B-24C and B-17E of British 2000 pound high capacity, 1900 pound general purpose, and 4000 pound high capacity bombs can not be accomplished. If your studies indicate otherwise advise by cable. It is desired that the latest revised edition of Air Corps Technical Orders 00-30-74 and 11-1-6C on American Aircraft ammunition capacities and armament installation be sent to me by air mail.

Chaney

Exact Action Copy to: Chief Army Air Forces, Cy No. 1

Exact Information Copies to: Secretary, General Staff, Cy No. 2
A. C. of S., WFD, Cy No. 3
A. C. of S., G-2, Cy No. 4

Received in Cable Section, AAF/AAF
2/28/42 1:35 PM

Distribution:
ACTION COPY TO A-4.

Prepared by Lt. Kingtjlm

Air Forces
Gen. Arnold
Gen. Harmon
A-3

Air Corps
Air Serv. Com.
Material

DECLASSIFIED
~~SECRET~~

DECLASSIFIED
DOD Hqs.
8 Jan. & 20 June 1974
By: *SP/MLC*; Date: *3/10/77*

DECLASSIFIED
BY A
CHIEF OF
(Air 4G)
DATE

March 6, 1942.

SUBJECT: Reply to Cablegram #669.

TO: Major General J. E. Chaney
Chief, Special Army Observers Group
American Embassy, London, England.

1. This letter is in reply to your cablegram #669, dated February 28, 1942, with respect to bombs.

2. The 1600# armor-piercing bomb AN-MARK I when provided with an adapter can be carried on any 2000# bomb station. An adapter is necessary because the lug spacing in the armor piercing bomb is fourteen inches whereas the station spacing is thirty inches.

a. Four armor-piercing bombs can be carried at present on the B-24. If, and when, external wing racks are installed, one additional armor piercing bomb can be carried under each wing between the fuselage and the inboard engine.

b. Two 1600# armor-piercing bombs can be carried internally on the B-17E. If, and when, the external wing racks are installed on the B-17E, it will be possible to carry one additional bomb externally on each wing between the fuselage and the inboard engine.

3. The 1000# armor-piercing bomb AN-M52 can be carried on any 1000# bomb station.

a. Eight 1000# armor-piercing bombs can be carried internally on the B-24 with one additional under each wing when external racks are provided.

b. Six 1000# armor-piercing bombs can be carried on the B-17E with one additional bomb under each wing when the external racks are provided.

4. Neither the B-24 nor the B-17E have as yet been equipped to carry the 4000# light case M56 bomb. A satisfactory arrangement has been worked out for installing one 4000# bomb rack under each wing of the B-24,

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REF ID: A66577
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between the fuselage and the inboard engine. Every effort is being made to incorporate this provision in production airplanes as early as practicable. Changes necessary to permit carrying 4000# bombs externally under the wings of B-17E airplanes are still under study, but it is not known when a satisfactory solution of the problem will be reached. A method of hanging the 4000# bomb under the belly of the B-17E has been developed, but it is not considered satisfactory due to the fact that there is only eight inches clearance between the bomb and the ground.

5. The four pound incendiaries are made up in 100# clusters which can be carried on any 100# bomb station. The B-24 will carry twenty such clusters and the B-17E will carry twenty-four. A cluster weighing five hundred pounds has been developed to permit a fuller utilization of the bomb-carrying capacity of these airplanes. Your comments are requested with respect to the tactical value of such a cluster.

6. The forty pound magnesium incendiary bomb was destandardized some time ago with the concurrence of the British because it was felt that with the limited amount of magnesium available, it was desirable to concentrate on the production of the four pound bombs which could be clustered. There is a 100# incendiary bomb composed of a light bombcase which is filled with gasoline, kerosene, and fuel oil, together with a thickener. Heretofore rubber latex has been used as the thickener. Due to the critical nature of this item the Chemical Warfare Service is attempting to develop a suitable substitute. The 100# incendiary bomb M17 can be hung on any 100# bomb station. The B-24 can carry twenty and the B-17E can carry twenty-four of these bombs.

7. From the data available, it is doubtful that the British two thousand and four thousand high capacity bomb and the 1900# general purpose bomb can be carried on either the B-24 or the B-17. The matter will be investigated further with a view to procuring definite information on the subject.

8. Latest revised editions of Air Corps Technical Orders OO-30-74 and 11-1-60 are being forwarded by Air Mail as requested.

For the Chief of the Army Air Forces:

WILLIAM W. DICK
Colonel, A.C.D.
Air Adjutant General.

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AAF/A-4/1868

DECLASSIFIED
DOD ltra.
8 Jan. & 20 June 1974
By: JLC; Date: 5/10/77

~~SECRET~~
DECLASSIFIED

March 2, 1942.

AAF/A-4/L71-58

Shipment of Incendiary Bombs to "Magpie".

II Col

I Col

II Col

I Col

DDSS
471.6
(3-2-42)
3-2-42
AM/col
HM/col

I. 1. Confirming telephone instructions issued to your office (Capt. Lacey) March 2, 1942 from Lt. Col. Burgess, A-4 Air Staff, it is desired that the following bombs be released and shipped as indicated:

The Port Quartermaster,
Charleston Port of Embarkation,
Charleston, South Carolina.

For: Shipment 8090

1,000 each 100# Incendiary Bombs
200,000 each 4# Incendiary Bombs

- 2. This shipment should reach Charleston, South Carolina by March 12, 1942.
- II. To be advised of action taken above.

(See over)

DECLASSIFIED
~~SECRET~~

3-2-42 (221)

SECRET
DECLASSIFIED

For the Chief of the Air Staff:

copy
NOTED.....
Chief of the Air Staff

T. J. HAWLEY, JR.,
Colonel, Air Corps,
Assistant Chief of the Air Staff, A-4.

REMARKS FOR RECORD: Above action taken to provide incendiary bombs for combat
loads of 1 Heavy Group and 2 Pursuit Groups for Hagan project. 33 Pursuit Airplanes
and 33 Light Bombardment airplanes for China Assistance Project.

ACTION TAKEN: 3-10-42 by I. L. [unclear]
C/MSG. II. Cys. to CG, AAF and [unclear]
MSG. HNS/CG-1705.

1942
NOTED-DEPUTY CHIEF OF STAFF A)
7: 69

MAR 13 42 AM



RECEIVED MISC. DIV., AGO.
S. & C. Section

MAR 9 1942

OUT



OUT

OFFICE OF CHIEF OF STAFF

MAR 13 1942



RECEIVED
OFFICE OF CHIEF OF STAFF

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AAF/A-4/1387

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DOD ITR
8 Jan. & 20 June 1974
Hy. 1/10/77

SECRET

March 3, 1942.

AAF/A-4/471-57

Shipment of Bombs, Pyrotechnics and Ammunition to "Magpie."

II. C-4

I. Bul.

I. TIG II. AM

I. AM circles

②
00
2/11

I. 1. Confirming telephone instructions issued to your office (Lt. Col. Rice) March 2, 1942 (Serial 1600) from Lt. Col. Burgess, A-4 Air Staff, it is desired that the following bombs, pyrotechnics, and ammunition be released and shipped as indicated:

To: Port Quartermaster,
Charleston Port of Embarkation,
Charleston, South Carolina.

For: Shipment \$090

- 599 ea. 1,000# Demolition Bombs
- 5,912 ea. 500# Demolition Bombs
- 15,000 ea. 300# Demolition Bombs
- 25,000 ea. 100# Demolition Bombs
- 111,000 rounds 37 mm Aircraft Ammunition
- 50,000 rounds 20 mm Aircraft Ammunition
- 300 Flares M1
- 3,000 Flares M9
- 10,000 Signals M11
- 300 Flares M13
- 10,000 Signals M14
- 10,000 Signals M15
- 10,000 Signals M16

(3-3-42)

(See over)

SECRET CLASSIFIED

AAF/A-4/363

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SECRET

DECLASSIFIED
A DOD ltr.
Top. # 20 June 1974
By SP7E/LC; Date 3/24/77

March 2, 1942.

AAF/A-4/471-58

Shipment of Incendiary Bombs to "Haggie".

II 2nd

I AM

I TAG

II AM

47116
287

I AM directs

AAF/A-4
HBM/aml

I. 1. Confirming telephone instructions issued to your office (Capt. Leroy) March 2, 1942 from Lt. Col. Burgess, A-4 Air Staff, it is desired that the following bombs be released and shipped as indicated:

To: Port Quartermaster,
Charleston Port of Embarkation,
Charleston, South Carolina.

Port Shipment 6090

1,000 each 100# Incendiary Bombs
200,000 each 4# Incendiary Bombs

2. This shipment should reach Charleston, South Carolina by March 12, 1942.

II. To be advised of action taken above

HEADQUARTERS		WESTERN FORCES						COORDINATION			
Chief of Staff	Deputy Air Staff	A.A.G.	A-1	A-2	A-3	A-4	A-INFO	A-INS.	Output	Station	

(See memo)

117-39

SECRET

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SECRET

For the Chief of the Air Staff:

Office NOTED. EPC 3842
Chief of the Air Staff

T. J. HANLEY, JR.,
Colonel, Air Corps,
Assistant Chief of the Air Staff, A-4.

REMARKS FOR FILE: Above action taken to provide immediate funds for outfit
lease of 1 Heavy Group and 2 Pursuit Groups for Hagan project. 323 Pursuit Airplanes
and 39 Light Bomber/Attack airplanes for China Aviation Project.

Dispatched
MAR 6 1942
AAG

HEADQUARTERS ARMY AIR FORCES						COORDINATION				
Chief of Staff	Secy of Staff	L. & G.	A-1	A-2	A-3	A-4	A-MP	A-Inv.	Budget	Statistics
	TS					MS MB TSH				

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DOD Itra.
8 Jan. & 28 June 1974
By: SP-1 LC; Date: 3/27/77

~~SECRET~~

*** R E C E I P T ***

DATE _____

SUBJECT: Shipment of Incendiary Bombs to "Maggie."

Received from Headquarters Army Air Forces, Disposition Form
above subject.

Officer _____ Rank

_____ Office

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DECLASSIFIED
DOD Item
1 Jan. & 20 June 1974
By: SP-1/ELC Date: 3/14/77

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DECLASSIFIED

AAF/A-41367

March 3, 1942.

AAF/A-4/471-57

Shipment of Bombs, Pyrotechnics and Ammunition to "Maple."

II G-4

I G-4

I HQ II AGF

I IN Circula

AAF/A-4
11/11/9

I. 1. Continuing telephone instructions issued to your office (Lt. Col. Rice) March 2, 1942 (Serial 1889) from Lt. Col. Burgess, A-4 Air Staff, it is desired that the following bombs, pyrotechnics, and ammunition be released and shipped as indicated:

For Port Quartermaster,
Charleston Port of Subordination,
Charleston, South Carolina.

For: Shipment 8890

- 579 ea. 1,000# Demolition Bombs
- 5,512 ea. 500# Demolition Bombs
- 15,000 ea. 300# Demolition Bombs
- 25,000 ea. 100# Demolition Bombs
- 111,000 rounds 37 mm Aircraft Ammunition
- 50,000 rounds 20 mm Aircraft Ammunition

HEADQUARTERS			COORDINATION						
Chief of Staff	Sec'y Air Staff	A. G.	Signal	Eng	A-4	A-WP	A-Ins.	Budget	Statistics
			10,000	Signal	H21				
			500	Signal	H23				
			10,000	Signal	H24				
			10,000	Signal	H25				
			10,000	Signal	H26				

11F-30

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SECRET

700 Photo-Clock Bombs MKM1
1,000 Flares MK4
7,000 Signals MK5
1,000 Electronic Grenades MK6

- 2. This shipment should reach Charleston, South Carolina by March 22, 1942.
- II. To be advised of action taken above.

For the Chief of the Air Staff:

NOTED..... *EPC 3/5/42*
Office Chief of the Air Staff

I. J. HENKIN, JR.,
 Colonel, Air Corps,
 Assistant Chief of the Air Staff, A-4.

REMARKS FOR RECORD: Above action taken to provide bombs, pyrotechnics, and ammunition for combat life of 1 Heavy Group and 2 Pursuit Groups, for Magic Project, 303 Pursuit Airplanes and 33 Light Bombardment Airplanes for China Aviation Project.

my A'
 Mar 4 1942
 AG Recd

Dispatched
 MAR 6 1942
 AAG

HEADQUARTERS - ARMY AIR FORCES						COORDINATION				
Chief of Staff	Sec'y Air Staff	A.A.G.	A-1	A-2	A-3	A-4	A-APP	A-Ins.	Budget	Statistics
	<i>SPL</i>					<i>HCB</i>				

117-30

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~~SECRET~~

DECLASSIFIED
DOD ltra.
8 Jan. & 20 June 1974
By *SP/ELC*; Date *5/10/77*

RECEIPT

DATE _____

SUBJECT: Shipment of Bombs, Pyrotechnics and Ammunition to "Magpie."

Received from Headquarters Army Air Forces, Disposition Form
above subject.

Officer

Rank

Office

~~SECRET~~

DECLASSIFIED
~~SECRET~~

700 PhotoFlash Bombs M23A1
1,000 Flares M24
7,000 Signals M25
1,048 Minesweepers M26

2. This shipment should reach Charleston, South Carolina by March 12, 1942.

II. To be advised of action taken above.

For the Chief of the Air Staff
ACTION TAKEN: 3-10-42 by I. Ltr
to Ch/Ord. II. Cys. to CG, AAF
and CG, SCS. MNE/fm-1705.

NOTED.....
Office Chief of the Air Staff.

T. J. HANNEY, JR.,
Colonel, Air Corps,
Assistant Chief of the Air Staff, A-4.

MEMORANDUM FOR RECORD: Above action taken to provide bombs, pyrotechnics, and ammunition for combat life of 1 heavy Group and 2 Pursuit Groups, for Haggis Project, 323 Pursuit Airplanes and 33 Light Bombardment Airplanes for China Aviation Project.

MAR 9 1942

NOTED-DEPUTY CHIEF OF STAFF

MAR 6 1942

48 AGO

MAR 9 1942

Received

MAR 10 '42 AM



RECEIVED MISC. DIV., AGO.
S. & C. Section

MAR 9 1942



OFFICE OF CHIEF OF STAFF



WAR DEPARTMENT
OFFICE OF CHIEF OF STAFF

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~~SECRET~~ - 2 -

204 224 716 (220)

025 471 (3-9-42)

RAF/A-4/369
HCB/omd

SECRET

DECLASSIFIED
DOD ltr.
8 Jan. & 20 June 1974
By: *SLC*; Date: *3/10/77*

March 3, 1942.

MEMORANDUM FOR THE ASSISTANT CHIEF OF STAFF, G-4:

Subject: Shipment of Bombs, Ammunition, and Pyrotechnics to "Haggle".

1. Request the following quantities which have been released and ordered shipped to Fort Quartermaster, Charleston Port of embarkation be sent to "Haggle" on first available transportation:

Bombs

599	ea.	1,000 ^g Bombition
5,912	ea.	500 ^g Bombition
15,000	ea.	300 ^g Bombition
25,000	ea.	100 ^g Bombition
1,000	ea.	100 ^g Incendiary
200,000	ea.	4 ^g Incendiary

Ammunition

111,000	rounds	37 mm Aircraft
50,000	rounds	20 mm Aircraft

Pyrotechnics

300	Flares	M5
3,000	Flares	M9
10,000	Signals	M11
300	Flares	M13
10,000	Signals	M14
10,000	Signals	M15
10,000	Signals	M16
700	PhotoFlash Bombs	M20A1
1,500	Flares	M24
7,000	Signals	M25
1,000	Master Grenades	M28

44 Army A
MAR 4 1942
AAG Receive
Dispatched
MAR 5 1942
AAG

471.6
219

HEADQUARTERS ARMY AIR FORCES						COORDINATION				
Chief of Staff	Deputy Air Staff	S.A.G.	A-1	A-2	A-3	A-4	A-4P	A-4I	Budget	Statistics
						<i>WMS</i>				
							T. J. HANLEY, Jr., Colonel, Air Corps			
							Assistant Chief of the Air Staff, G-4.			

SECRET

Final 471.6 (219)

DECLASSIFIED
DOD Itra.
200 & 30 June 1984
By: JAC/LC; Date: 4/17

~~SECRET~~
DECLASSIFIED

RECEIPT

DATE _____

SUBJECT: Shipment of Bombs, Ammunition, and Pyrotechnics to "Magpie."

Received from Headquarters Army Air Forces, Memorandum
above subject.

Officer _____ Rank _____

_____ Office _____

DECLASSIFIED
~~SECRET~~

~~SECRET~~

DECLASSIFIED
MOD Rev.
8 Jan. & 20 June 1974
By: SP4/LG; Dab 3/14/99

AG 471.6 (3-2-42)MEO-C

MEM/ra-1705

March 7, 1942

SUBJECT: Shipment of Incendiary Bombs to "Copper".

~~SECRET~~

TO: Chief of the Chemical Warfare Service. Auth: T.A.G.
Initials: DRV
Date: MAR 7 1942

Confirming telephone instructions issued to your office (Captain Leroy) February 27, 1942, from Lt. Colonel Burgess, A-4, Air Staff, it is desired that the following bombs be shipped to "Copper":

100,000 ~~lb~~ Incendiary Bombs.

By order of the Secretary of War:

Hq. Army A
MAR 9 1942

D. B. Van Sicker
Adjutant General.

471.6
218

- INFORMATION COPIES TO:
1. Chief of the Army Air Forces, ref his memo 3-2-42, AAF/A-4/471-54, to TAG.
 2. A. C. of S., G-4.

DECLASSIFIED

~~SECRET~~

Can # 471.6 (218)

DECLASSIFIED
DOD Ltr.
4 Jan. & 20 June 1974
By SP-1 L.C. Data 3/10/77
AAF/A-4/471-54

~~SECRET~~
DECLASSIFIED

AAF/A-4/339
HCB

Shipment of Incendiary Bombs to "Gopper".

II G-4

X TAG

II AAF

X SW directs

100
471.6
218
MAR 5 1942
MAR 6 1942
IN

I. L. Confirming telephone instructions issued to your office (Capt. Leroy) February 27, 1942 from Lt. Col. Burgess A-4, Air Staff, it is desired that the following bombs be shipped to "Gopper":

100000 of Incendiary Bombs

II. To be advised of action taken above.

NOTED-OFFICE CHIEF OF STAFF
o.a.a.

NOTED EPC 3/4/42
Chief of the Air Staff
office

ACTION TAKEN: 3-7-42
I. Ltr to C/CMS. II. Ltr to C/AAF and G-4.
For the Chief of the Air Staff
IN

MAR 5 1942

I. J. Hanley, Jr.
Colonel, Air Corps
Assistant Chief of Air Staff
MAR 6 1942

MEMORANDUM FOR RECORD: Above action taken to comply with radio request for General Bombs for 100,000 of Incendiary Bombs.

OUT
MAR 6 1942

800

DECLASSIFIED

"COMBACK COPY"

471.6 (218)

ADDRESS REPLY TO
HEADQUARTERS, WAR DEPARTMENT
WASHINGTON, D. C.

~~SECRET~~

SECRET
BY A. ~~DECLASSIFIED~~
CHIEF of the ARMY AIR FORCES
DATE _____ INITIALS _____

WAR DEPARTMENT
Department of the Army Air Forces

WASHINGTON

~~SECRET~~

DOD ltr.
8 Jun. & 20 June 1942
By: *WHE L.C. Date 3/21/77*

July 2, 1942.

MEMORANDUM FOR GENERAL HARMON:

Subject: Status of .50 cal. Incendiary Ammunition.

1. The following is the status of .50 cal. incendiary ammunition (foreign stocks and shipments).

a. Middle East

1. 1,700,000 rounds of .50 cal. incendiary ammunition. *To be shipped*

b. India

1. 2,000,000 rounds there; 150,000 en route.

c. Australia

1. There is no stock of .50 cal. incendiary ammunition in Australia so far as is known. The ammunition that was en route was destroyed when the vessels were sunk.

2. 1,000,000 rounds of .50 cal. incendiary ammunition is now en route to Australia.

air 08 471.6 (2) B

Noted [Signature]

MJS

MAX P. SCHNEIDER,
Colonel, G. S. C.,
Acting Assistant Chief of the Air Staff, A-4.

FOR DEFENSE



~~SECRET~~
DECLASSIFIED

*File
ci 5/26/42
air 08 471.6 (2) B*

DECLASSIFIED
GOD Inc.
8 Feb. 20 2000
Re: ~~SECRET~~; Date: 3/14/77

~~SECRET~~
DECLASSIFIED

AAFA-4/339
HCB/soo
Date: 2/24/42

AAFA-4/471-54

March 2, 1942

Shipment of Incendiary Bombs to "Copper".

II C-4

I TAG

II AAF

I SW directs

AAFA-4
HCB/soo

L. L. Confirming telephone instructions issued to your office (Capt. Lacey) February 27, 1942 from Lt. Col. Burgess A-4, Air Staff, it is desired that the following bombs be shipped to "Copper":

100000 4 1/2 Incendiary Bombs

II. To be advised of action taken above.

For the Chief of the Air Staff:

Dispatched

Hq. Army Air Forces

MAR 5 1942

MAR 2 1942

AAG

AAG RECEIVED

NOTED. EPC 3/9/42
Chief of the Air Staff

HEADQUARTERS ARMY AIR FORCE									
[REDACTED]									
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

11P-35

~~SECRET~~
DECLASSIFIED

44-25 491.6 (211)

SECRET
DECLASSIFIED

AA/1-1342
BCH/ab

DECLASSIFIED
DOD Item
8 Jan. & 20 June 1979
By TS/ELG; Date 5/16/79

March 1, 1942.

(M)

MEMORANDUM FOR THE SACRED AIR DIVISION
(Attention: Chief Distribution Branch)

Subject: Release of Munitions

1. The following aircraft munitions are released for export transfer to Defense Aid Commissions:

Country	Quantity	Item & Inventory Books
United Kingdom	10,000	

4716 (217)

Dispatched
MAR 4 1942
AAG

For the Chief of the Air Staff:

Hq. Army Air Forces
MAR 2 1942
AAG RECEIVED

T. J. HANLEY, Jr.,
Colonel, Air Corps,
Assistant Chief of Air Staff, A-4.

HEADQUARTERS ARMY AIR FORCES							COORDINATION				
Chief of Staff	Sec'y of Staff	A.A.G.	A-1	A-2	A-3	A-4	A-4D	A-4S	Budget	Statistics	
						WCS					
						DECLASSIFIED					

117-39

SECRET

4716 (217)

SECRET
DECLASSIFIED

DECLASSIFY
DOD Hqs.
8 Jan. & 20 June 1974
By SP2/CLC Date 3/1/77

RECEIPT

DATE MAR 4 - 1942

SUBJECT: Release of Munitions.

1. Received from the Headquarters, Army Air Forces,
one memorandum, above subject.

M. A. Chapman

 OFFICER RANK
Civilian Aide

Defense Aid Director

 OFFICE

DECLASSIFIED
SECRET

air 471.6 (217)

DECLASSIFIED
DOD. ltra.
2 Feb. & 20 June 1974
BY: MLC: DAW 3/16/77

~~SECRET~~
DECLASSIFIED

AAF/A-4/351
HCB/soo
Wrtn. 2/28/42

AAF/A-4/471-53

Shipment of Bombs and Pyrotech misc for Colonel Deolittle and Ammunition for General Headquarters.

II G-4

I Ord.

X TAG

II AAF

471.6
215

X SW directs

Hq. Army Air Forces
MAR 6 1942
RAG RECEIVED

AAF/A-4
HCB/soo

I. 1. Confirming telephone instructions issued to your office (Lt. Tiner) February 27, 1942 (Serial 1558) from Lt. Colonel Burgess, A-4, Air Staff it is desired that the following munitions be shipped as indicated:

To Ordnance Officer, Eglin Field Valparaiso Florida Marked for Lt. Colonel J. H. Deolittle A. C.

Bombs

- 80 ea. 500# Practice Bombs Empty for Sand Loading
- 80 ea. 100# Demolition Bombs

Pyrotechnics

To Lt. Colonel J. H. Deolittle A. C. c/o Benicia Arsenal, California
400 ea. Signals, drift M25

Ammunition

Released to G.H.Q. for shipment to Western Defense Command;

4000 rounds 27 MM Aircraft Ammunition.

HEADQUARTERS ARMY AIR FORCES - COORDINATION						
Authority is granted to remove 80 ea. 500# bombs empty for sand loading from program of staff						
	A-1	A-2	A-3	A-4	A-5	A-6

DECLASSIFIED

AAF-39

Serial 471.6 215

DECLASSIFIED

II. To be advised of action taken above.

For the Chief of the Air Staff:

T. J. Huxley, Jr.
Colonel, Air Corps
Assistant Chief of the Air Staff, A-4

MEMORANDUM FOR RECORD: Above action taken to provide bombs and pyrotechnics for special project of Colonel Deelittle and 57 MM Ammunitions for S.H.Q. to be reallocated to W.D.C.

NOTED *EPC*
W.C. Chief of the Air Staff

Dispatched
MAR 4 1942
AAG

HEADQUARTERS ARMY AIR FORCES							COORDINATION				
Chief of Staff	Chief of Staff Air Corps	A.A.G.	A-1	A-2	A-3	A-4	A-100	A-101	Director	Station	
<i>WJF</i>						<i>H-5</i>					

117-39

DECLASSIFIED

See 471-6 (213)

DECLASSIFIED
DOD ltr.
5 Jan. & 20 June 1974
by ~~TOP~~ LC: Date 3/14/77

~~SECRET~~
DECLASSIFIED

AAF/A-4/332
HCB/soc
Wrtn. 2/28/42

MAR 4 1942

Authority to Expend Bombs at Eglin Field, Florida.

Chief of the Air Corps

1. The following bombs have been released and ordered shipped to the Ordnance Officer, Eglin Field, Florida marked for Lt. Colonel J. H. Deedittle A. C., Special Project:

- 80 ea. 500# Practice Bombs Empty to be sand loaded
- 80 ea. 100# Demolition Bombs

2. Authority is granted for the expenditure of these bombs for this special project and for the expenditure of 1000 ea. 100# Practice Bombs M56A8 from available stocks at Eglin Field.

By Command of Lieutenant General Arnold

R. C. LEWIS
Major, Air Corps
Acting Ass't Air Adjutant General

471.6 (214)

disposition
MAR 4 1942
AAG

Eq. Army Air Forces
MAR 2
AAG DISBURSING

HEADQUARTERS		ARMY AIR FORCES				COORDINATION				
Chief of Staff	Permy Air Staff	A. A. G.	A-1	A-2	A-3	A-4	A-4P	A-Ins.	Budget	Sta-tion
	WOT	ACK				HCB 100 28				

117-39

DECLASSIFIED

Acc'd 471.6 (214)

DECLASSIFIED
DOD Hqs.
8 Jan. & 20 June 1974
By: JAC/LC; Date: 3/24/77

DECLASSIFIED

RECEIPT

Date _____

SUBJECT: Authority to Expend Bombs at Eglin Field , Florida.

1. Received from Headquarters, Army Air Forces one letter, above subject.

Officer

Rank

Office

DECLASSIFIED

and 471.6 (214)

CONFIDENTIAL

DECLASSIFIED

AAF/A-4
WFG/mbh

DECLASSIFIED
DOD Itra.

8 Jan. & 20 June 1914
By: S/LC: Date 3/16/77

March 8, 1942.

MEMORANDUM FOR THE ASSISTANT CHIEF OF STAFF, WFG:
(Attention: General Crawford)

Subject: Conversion of 12", 12" and 14" Seacoast
Projectiles into Aircraft Bombs.

1. In accordance with your conversation with Col. Schneider, (A-4), the proposed G-4 Memorandum to the Adjutant General referring to the conversion of Coast Artillery projectiles to armor piercing bombs is returned.

2. Five thousand 12" deck-piercing projectiles are now being converted. Under date of February 7, 1942, the Deputy Chief of Staff, (General Moore) authorized the conversion of an additional 17,000 Coast Artillery projectiles. Since then, the President has made available for Defense Aid eighty-three (83) coast defense guns for which the projectiles were originally procured.

3. In his proposed memorandum, the Assistant Chief of Staff, G-4 provides that 180 projectiles per gun be held for Defense Aid. This action would reduce the total number of projectiles to be converted from about 21,800 to 8,881.

4. Estimated minimum stockage requirements of armor piercing bombs are as follows:

Alaska (Multiple stockage factor w/c transportation). 5 Missions for 2 Bomb Sqdns. at 4 different places. 1200

Atlantic Bases and Caribbean Area
5 Missions for 1 Bomb Group at Panama, Puerto Rico and Trinidad. 2100
5 Missions for 2 Bomb Sqdns. at Bermuda.

HEADQUARTERS		NAVY				AIR FORCES				COORDINATION	
Chief of Staff	Secy Air	A-1	A-2	A-3	A-4	A-4PT	A-Inst.	Budget	Statistics		
		5 Missions for 2 Heavy Bomb Grps.							2100		

117-30

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DECLASSIFIED

471.6

213

~~CONFIDENTIAL~~
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<u>Australia (50% distribution factor)</u>	1975
3 Missions for 1 Bomb Sq.	
<u>India</u>	1600
3 Missions for 1 BS Sq.	
<u>United States (East and West Coast Air Bases)</u>	2800
3 Missions for 4 Bomb Groups	
<u>U. S. Reserves for Tank Forces</u>	2800
3 Missions for 3 Bomb Groups	
	16,200

5. The number of surplus projectiles available for conversion (including the 2000 now under conversion) is approximately 21,500. Conversion of the 16,200 required to provide the stockage listed in Paragraph 4 would leave a balance unconverted and immediately available for Defense Aid of approximately 5,300 projectiles - an average of better than 60 projectiles per gun. The Chief of Ordnance (Lt. Swaver) states that if necessary, and provided the rotating bands have not been damaged, converted projectiles can be reconverted to Coast Artillery use without serious difficulty.

6. It is recommended that the reservation of projectiles for Defense Air purposes be reduced from the total of 12,257 recommended by the Assistant Chief of Staff, G-4 to a total of 8200 and that the number of additional projectiles to be converted to armor piercing bombs (over and above the 2000 now undergoing conversion) be increased from the 2001 he recommends to 11,200, to provide a grand total of 16,200 armor piercing bombs for the Army Air Forces.

Incls.
Memo to AS frn.
G-4/2000-200, 2/24/42
w/let Indlty. to AS
thru C/IA 2/2/42 frn.
C/Ords Exhibit 1, Ord.
2/2/42 - Ammunition.

For the Chief of the Air Staff:

T. J. HANLEY, JR.,
Colonel, Air Corps,
Assistant Chief of Air Staff, A-4.

HQ. ARMY A
MAR 7 1942
AAG Recd.

HEADQUARTERS ARMY AIR FORCES						COORDINATION				
Chief of Staff	Secy of Air Staff	A. A. G.	A-1	A-2	A-3	A-4	A-4P1	A-4P2	Director	Stabilizer
						HWS				
Dispatched										

MAR 7 1942
AAG

~~CONFIDENTIAL~~
DECLASSIFIED 60125-4716 (215)

DECLASSIFIED

DOD Hqs.

5 Jan. & 20 June 1974
By: D/M/LC; Date: 3/20/77

CONFIDENTIAL
DECLASSIFIED

WAR DEPARTMENT
WAR DEPARTMENT GENERAL STAFF
SUPPLY DIVISION, G-4

WASHINGTON, D. C.

AG 471.6 (2-3-42)
G-4/28664-258

MEMORANDUM FOR THE ADJUTANT GENERAL:

Subject: Conversion of 10" and 14" Seacoast
Projectiles into Aircraft Bombs.

The Secretary of War directs:

1. That the attached communications (AG 471.6 (2-3-42)) be returned to the Chief of Ordnance by indorsement substantially as follows:

Type Projectile	No. Loaded	No. Unloaded
A.P. (817-lb) 10" guns	419	none
B.P. (1046-lb) 12" mortars	1846*	51
A.P. (1400-lb) 14" guns	77	1458

*This is in addition to the 5,000 now being converted to air bombs by the Ordnance Department. (In this connection it is not apparent from the records of this office that authority was granted for the conversion of these 5,000 projectiles).

2. All remaining surplus A.P. and D.P. seacoast projectiles of 10" or larger caliber are to be made available for defense aid purposes.

II. That the Assistant Chief of Staff, War Plans Division, be advised of the above action and additionally as follows:

1. The amounts of surplus loaded and unloaded 10" and 12" A.P. and 12" D.P. seacoast projectiles available for defense aid are as follows:

Type	No. Loaded	No. Unloaded
A.P. (817-lb) 10" guns	1878	5324
A.P. (900-lb) 12" guns	none	1567
D.P. (824-lb) 12" mortar	1751	none
D.P. (1046-lb) 12" mortar	none	2449

DECLASSIFIED

REF ID: A66000
DECLASSIFIED

III. That the Chief of Coast Artillery be advised of Actions I and II above.

Concurrence:
A. G. of S., WPD ()
Chief, Army Air Forces ()

BRENON SOMERVELL,
Major General,
Assistant Chief of Staff

/s/ Lt. Col., G.S. Ass't. Exec.

Incls:
Ltr fm OCh/Ord
(R-3-42) w/1 Incl.
& 1 Incl. (1 cy
w/Drawn in G-4)

FOR RECORD ONLY:

1. In basic letter (O.O. 471/8) dated February 3, 1942, subject: Conversion of Seacoast Projectiles into Aircraft Bombs, the Chief of Ordnance states that in view of present shortage of Armor Piercing and Semi-armor Piercing Bombs it is suggested certain surplus loaded and empty seacoast A.P. and D.P. projectiles be converted for such use as a stop gap, in addition to 5,000 12" D.P. Mortar Projectiles now in process of conversion. A list of surpluses suitable for conversion was included and requests the Chief of Coast Artillery to indicate how many of these surpluses could be spared for conversion. Surplus Stocks A.P. or D.P. Ammunition 10" or larger based on current need of guns installed:

Type	Requirement	On Hand	
		Loaded	No. Surplus Unloaded
D.P. (1046-lb) 12" Mortar	8,970	15,818	6,845
A.P. (617-lb) 10" gun	4,253	6,548	2,295
A.P. (900-lb) 12" gun	300	297	3
D.P. (824-lb) 12" mortar	773	2,324	1,751
A.P. (1400-lb) 14" gun	2,056	2,133	77

5,000 are "earmarked" for conversion into 1000-lb bombs, NS2.

2. In the 1st Indorsement, basic letter, dated February 17, 1942, the Chief of Coast Artillery recommends, pending the extent and priority of Defense aid requirements, that the following quantities of projectiles be released to the Chief of Ordnance for conversion to air bombs:

Type	No. Loaded	No. Unloaded
D.P. (1046-lb) 12" mortar	8845	2500
A.P. (617-lb) 10" guns	1998	5324
A.P. (900-lb) 12" guns	-	1567
D.P. (824-lb) 12" mortar	1751	-
A.P. (1400-lb) 14" gun	77	1458

5,000 "earmarked" for conversion into 1000-lb bombs NS2.

DECLASSIFIED

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FOR RECORD ONLY: (Continued)

3. The Assistant Chief of Staff, War Plans Division (Lt. Col. Mathewson) and Colonel Brett, Ordnance Department, advises that the Defense aid requirements probably will utilize the following types of seacoast guns and further requests that approximately 150 projectiles for each gun be made available:

Caliber	Model	Type of Carriage	No. of Guns
10" Guns	M1888	D.C. M1894	12
	M1888	D.C. M1896	24
	M1896	D.C. M1896	7
	M1900	D.C. M1901	3
		Total	46
12" Guns	M1888	D.C. M1892	2
	M1888	D.C. M1896	8
	M1888	D.C. M1897	2
	M1900	D.C. M1901	3
		Total	15
12" Mortars	M1890	M1 M1896	23

4. For purposes of estimating defense aid requirements, it is assumed that all complete ammunition will be made available for defense aid. The additional projectiles required to meet the defense aid requirements will be unloaded projectiles whenever possible.

	For Conversion to Bombs		For Defense Aid		Total Supply	
	Loaded	Empty	Loaded	Empty	Loaded	Empty
A.P. (817-lb) 10" gun	419	0	1578	5324	1985	5324
A.P. (900-lb) 12" gun	0	0	0	1567	0	1567
D.P. (824-lb) 12" mortar	0	0	1751	0	1751	0
D.P. (1046-lb) 12" mortar	6846	51	0	2449	6846	2500
A.P. (1490-lb) 14" gun	77	1458	0	0	77	1458

5. The 2nd Indorsement (AG 471.6 (6-20-41) ME-d) dated July 1, 1941, to the Chief of Ordnance, authorizes the manufacture of accessories to permit conversion of 5,000 of the 12" mortar projectiles now on hand to bombs, armor-piercing, 1000-lb, M52.

6. The 1st Indorsement (AG 471.6 (10-14-41) ME-D), dated October 20, 1941, to the Chief of Ordnance authorizes the expenditure of \$125,000 for the manufacture of accessories to permit the above conversion.

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FOR RECORD ONLY: (Continued)

It is not apparent from The Adjutant General's records that authority was granted for the conversion of 5000 - 12-inch mortar projectiles into air bombs.

7. Informal Concurrence:
Lt. Colonel Mathewson (NPD)

DECLASSIFIED

DECLASSIFIED

DOD

8 Jan. 23 June 1974

By: *3/14/77* DAW

~~CONFIDENTIAL~~
DECLASSIFIED

SUBJECT: Conversion of Seacoast Projectiles into Aircraft Bombs.

471.6U-2

1st Ind.

War Department, Office, Chief of Coast Artillery. February 17, 1942. - TO:
The Adjutant General.

1. Prior to release of surplus stocks of seacoast ammunition for conversion to air bombs, the extent and priority of the defense aid requirements for seacoast artillery ammunition should be determined. The extent of the commitments for defense aid purposes is not known to the Chief of Coast Artillery.

2. Assuming there is no defense aid commitment for any of the stocks listed on Inclosure No. 1 herewith, the following are the comments and recommendations of the Chief of Coast Artillery.

a. Projectile DP (1046-lb) for 12-inch mortar. The Requirement of 8970 is in agreement with the records of the Office, Chief of Coast Artillery. The large surplus appears to arise from the elimination of one regiment of 12-inch railway mortars from the mobilization troop basis. It is recommended that 6846 loaded and 2500 unloaded projectiles be released to the Chief of Ordnance for conversion to bombs.

b. Projectiles AP (617-lb) 10-inch guns. The records of the Office, Chief of Coast Artillery indicate that there is a total requirement (including the Philippine Department) for 4553 projectiles. It is recommended that 1995 loaded and 5324 unloaded projectiles be released to the Chief of Ordnance for conversion to air bombs.

c. Projectile AP (900-lb) 12-inch gun. It is recommended that 1587 of the unloaded projectiles be released to the Chief of Ordnance for conversion to air bombs.

d. Projectile DP (824-lb) 12-inch mortar. There is no requirement for any of these projectiles except in the Philippine Department where the requirement is 773. It is recommended that 1751 loaded projectiles be released to the Chief of Ordnance for conversion to air bombs.

e. Projectile AP (1400-lb) 14-inch gun. It is recommended that 77 loaded and 1458 unloaded projectiles be released to the Chief of Ordnance for conversion to air bombs.

For the Chief of Coast Artillery:

/s/
C. E. COTTER,
Colonel, C.A.G.,
Assistant.

1 Incl. in Dupl.
(Trip. w/d)

DECLASSIFIED

DECLASSIFIED

DOD ltr.

8 Jan. 3 29 June 1974
By: SP/CLC; Date: 3/20/77

DECLASSIFIED

WAR DEPARTMENT
OFFICE OF THE CHIEF OF ORDNANCE
WASHINGTON

February 3, 1942

Subject: Conversion of Seacoast Projectiles into Aircraft Bombs

To: The Adjutant General - THRU: Chief of Coast Artillery

1. In view of the present shortage of Armor Piercing and Semi-armor Piercing Bombs (see attached inclosure - Exhibit 1), it is suggested that certain surplus loaded and empty seacoast A.P. and D. P. projectiles might be converted for such use as a stop gap in addition to the 5,000 12" D.P. Mortar Projectiles now in process of conversion. A list of these surpluses suitable for conversion is shown in attached inclosure (Exhibit 2) in order of priority of conversion.

2. It is requested that the Chief of Coast Artillery designate how many of the above surpluses could be spared for conversion into bombs if it is decided to use the surpluses for this purpose.

For the Chief of Ordnance.

/s/ M. K. Barrell, Jr.,
Col., Ord. Dept.
Executive Assistant

1 Incl.
Tabulation

DECLASSIFIED

ORDNANCE OFFICE, WFO
February 5, 1942 WFL:as

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EXHIBIT 1

Surplus Stocks of A.P. or D.P. Ammunition 10" or larger based on current need of guns installed:

Item	Total Requirements	On Hand		No. Surplus		
		Loaded	Unloaded	Loaded	Unloaded	
Projectile D.P. (1046-lb.) 12" mortar	8,970	15,816	6,846	2,800	6,000	of these
Projectile A.P. (617-lb.) 10" gun	4,255	6,548	2,295	5,324	are	"earmarked"
Projectile A.P. (900-lb.) 12" gun	300	297	-	1,570	for	conversion
Projectile D.P. (824-lb.) 12" mortar	773	2,524	1,751	-	into	1000-lb.
Projectile A.P. (1400-lb.) 14" gun	2,066	2,133	77	1,458	bombs	MS2.

EXHIBIT 2

BR0:as

Status of A.P. and S.A.P. Bombs:

DECLASSIFIED

	Total		Monthly				Estimated Delivery Rates - 1942			
	On Order		In F.S.							
	thru 3rd	1st Sup.	for Issue		April July Aug.					
	Sup. '42	'42	Reg. '42		March	June	Nov.	December:		
	12/12/41	6/25/41	6/9/41	1/21/42						
Bomb 500-lb. S.A.P.	134,087	114,087	20,000	0	0	10,000	30,000	60,000		
Bomb 1000-lb. SAA.P.	45,250	30,250	15,000	0	0	0	5,000	25,000		
Bomb 1800-lb. A.P.	18,750	15,750	5,000	0	Dependent on Navy Production					
Bomb 1000-lb. A.P. MS2 (12" Mortar Projectile)	5,000	5,000	0	0	3,800	2,000	-	-		

It is understood that any further conversion of projectiles to bombs will be delayed by the adapter booster and the M182A1 fuse.

DECLASSIFIED
CONFIDENTIAL

DECLASSIFIED
DOD ltr.
3 Jan. & 30 June 1974
BY: [Signature] Date: 3/10/77
AG 471.6
(2-28-42) SC-G

~~SECRET~~

410

LVR/ved-1735.

March 6, 1942.

SUBJECT: Release of Bombs to Bolling Field,
D. C., and Brazil.

TO: Chief of Ordnance.

~~DECLASSIFIED~~

Auth: T.A.G.

DRV

Initials:

MAR 6 1942

Date:

Confirming telephone instructions issued to your office
(Major Stone) February 26, 1942, (Serial 1556) from Lt. Col. Burgess,
A-4, Air Staff, it is desired that the following bombs be released
and shipped as indicated:

To Chief U. S. Military Air Mission,
Rio de Janeiro, Brazil.

360 ea. 100# Demolition Bombs.

To Ordnance Officer, Bolling Field, D.C.

12 ea. 1000# Demolition Bombs
18 ea. 500# Demolition Bombs
42 ea. 300# Demolition Bombs
192 ea. 100# Demolition Bombs
60 ea. 30# Fragmentation Bombs.

By order of the Secretary of War:

Hq. Army:

MAR 8 1942

AAG Received

W.R. Ven Sick

Adjutant General.

INFORMATION COPIES TO:

1. A. C. of S., G-4.
2. Chief of the Army Air Forces re
his Disp Form AAF/A-4/471-53 2-28-42
to TAG.

471.6 (212)

DECLASSIFIED
~~SECRET~~

AAC/1635

AG 471.6 (212)

~~SECRET~~

DECLASSIFIED
 POD Hrs.
 1 Jan. & 20 June 1974
 By: SP4/LCJ; Date: 5/14/77

February 28, 1942.

AAF/A-4/L71-53

Release of Bombs to Bolling Field, D. C. and Brazil.

II. g-4

I. g-4

I. g-2

II. AAF

I. g-4

Hq. Army Air Forces
 FEB 28 1942
 AAF RECEIVED

AAF/A-4
 HCS/ahh

Rec. 00 4916 318

I. 1. Confirming telephone instructions issued to your office (Major Stans) Feb. 26, 1942 (Serial 1568) from Lt. Col. Burgess, A-4, Air Staff, it is desired that the following bombs be released and shipped as indicated:

To Chief U. S. Military Air Mission,
 Rio de Janeiro
 Brazil

200 ea. 100# Demolition Bombs

To Ordnance Officer, Bolling Field, D.C.

12 ea. 1000# Demolition Bombs

18 ea. 500# Demolition Bombs

42 ea. 500# Demolition Bombs

192 ea. 100# Demolition Bombs

60 ea. 30# Fragmentation Bombs.

Dispatched
 MAR 3 1942
 AAG

II. To be advised of action taken by the following FORCES - COORDINATION

Chief of Staff	Secy of Staff	A. G. C.	A-1	A-2	A-3	For the Chief of the Air Staff	Statistics
						HCS W/S T/SR	

NOTED... gdc 3/2/42
 office Chief of the Air Staff

~~SECRET~~
 DECLASSIFIED

T. J. HANLEY, JR.,
 Colonel, Air Corps
 Assistant Chief, Air Staff, A-4

11F-39

~~SECRET~~
DECLASSIFIED

MEMORANDUM FOR RECORD: Above action taken to provide 500 ea. 100# bombs for Brazil in accordance with directive from the Chief of the Army Air Forces and a storage of bombs at Bolling Field for emergency bombing missions.

HEADQUARTERS			ARMY AIR FORCES				COORDINATION				Sta- tion
Chief of Staff	Secy Air Staff	A. A. G.	A-1	A-2	A-3	A-4	A-APT	A-Inst.	Subject	Sta- tion	
						H/S					

447-38

DECLASSIFIED
~~SECRET~~

~~CONFIDENTIAL~~
DECLASSIFIED

WAR DEPARTMENT GENERAL STAFF
SUPPLY DIVISION G-4
REFERENCE SLIP

G-4/22396-88

DATE February 26, 1942.

SUBJECT: Standardization of Bombs,
Incendiary, Instructional, M1 and M2.

TO:

G-1

G-2

G-3

SPD

Chy. 64. E

ASST

JOHN

WASHINGTON BR., OCS

HQ AFHQ Air Forces

FEB 27 1942

REG RECEIVED

Handwritten initials

Referred as a matter of primary interest.

DECLASSIFIED
A. DOD ltr.
8 Jan. & 20 June 1974
By: *SP/NE.LC*; Date: *5/10/77*

LeR. LUTAS,
Brigadier General,
Executive.

H. A. MALIN,
Lt. Colonel, General Staff,
Assistant Executive.

OUT-G-4 FEB 26 1942

DECLASSIFIED

~~CONFIDENTIAL~~

am 471.6 (211)

DECLASSIFIED
DOD Hqs.
E.O. 12958, 28 June 1974
By *JHE/LC* Date *3/4/77*

CONFIDENTIAL

MAR 21 1942

2nd Ind.

War Department, Headquarters, Army Air Forces, Washington, D. C.;
To: Commanding General, Service of Supply.

1. Commr.

For the Commanding General:

Incl. - Copy of reference
subcommittee report Dec. 15,
1941.
Subcommittee report Jan. 22,
1942.
Letter, Office Chief of Chem-
ical Warfare Service 2/17/42.

Frederick L. Anderson, Jr.,
Lt. Colonel, Air Corps,
Deputy Director,
Subcommittee.

471.6 (211)

Dispatched
MAR 23 1942
AAG

Hq. ARMY AIR
MAR 21 1942
AAG Received

HEADQUARTERS		ARMY AIR FORCES				COORDINATION				
Chief of Staff	Deputy Air Staff A.A.G.	A-1	A-2	A-3	A-4	A-APP	A-Inv.	Budget	Statistics	

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471.6 (211)

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DOB Itm.
1, 2, & 30 June 1974
By: D/H/LO; Date: 3/16/77

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1st Ind.

War Department, Office of the Under Secretary, Washington, D. C.,
February 21, 1942. To: The Assistant Chief of Staff, G-4, Washington, D. C.

1. The following items are cleared for procurement as to type:

Bomb, Incendiary, Instructional, M1

Bomb, Incendiary, Instructional, M2

2. The Chemical Warfare Service is charged with the procurement of these items.

By direction of the Under Secretary of War:

/s/Byron A. Falk

BYRON A. FALK,
Colonel, Signal Corps,
Chief, Standards Division.

2 Incls: n/c

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DOD ltr.

8 JAN 20 1994
By SP/ELC; Date 3/26/77

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2nd Ind.

War Department, Headquarters, Army Air Force, Washington, D. C.,
To: Commanding General, Supplies of Services.

1. Noted and concurred in. Paragraph 4 should be approved by the
Adjutant General and forwarded to the Chemical Warfare Service.

By command of Lieutenant General ARNOLD:

Incl. - Copy of reference
subcommittee report Dec. 13,
1941.
subcommittee report Jan. 22,
1942.
Letter, Office Chief of Chem-
ical Warfare Service 2/17/42.

Frederick L. Anderson, Jr.,
Lt. Colonel, Air Corps,
Deputy Director,
Bombardment.

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1 Jan. & 20 June 1974
By: SP-1/C; Date: 3/14/77

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WAR DEPARTMENT
OFFICE CHIEF CHEMICAL WARFARE SERVICE
WASHINGTON, D.C.

CWS 471.6/29 Conf.

February 17, 1942

Subject: Military Requirement for, Military Characteristics for and Standardisation of Bombs, Incendiary, Instructional, M1 and M2;

To: The Adjutant General.
Through: The Under Secretary of War.

1. There is forwarded enclosed one copy of an approved subcommittee report of the Chemical Warfare Technical Committee dated December 13, 1941, recommending the approval of a military requirement for, military characteristics for, and the standardisation of instructional incendiary bomb (It will be noted the nomenclature differs from that recommended. It is considered the term "practice" may be misleading.).

2. There is forwarded enclosed also a copy of an approved subcommittee report of the Chemical Warfare Technical Committee dated January 22, 1942, in which is recommended the standardisation of another type instructional incendiary bomb for use when the previous type which consists of magnesium cannot be obtained.

3. In accordance with the recommendations of the Chemical Warfare Technical Committee, Item No. 427 of December 16, 1941, and Item No. 446 of February 10, 1942, it is requested that the action outlined below be approved.

4. It is recommended that:

a. A military requirement be established for an instrumental type incendiary bomb.

b. The following military characteristics for such an item be approved.

- (1) For use in instruction relating to incendiary bombs and fighting incendiary fires.
- (2) Simple in design.
- (3) Approximate weight, two (2) pounds.
- (4) Ignition to be by means of a fuse lighter.
- (5) Bomb body to be of either magnesium or steel tubing with appropriate fillings.

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CWS 471.6/29 Conf.

-2-

February 17, 1942

c. Two items considered to meet the proposed military military characteristics be designated as

Bomb, Incendiary, Instructional, M1

and

Bomb, Incendiary, Instructional, M2

and be classified as

Required types
Adopted types
Standard articles.

d. The above two items be classed as current supply, critical items.

e. The Chemical Warfare Service be charged with the procurement, storage and issue of these items.

f. The basis of issue for these items be approved as follows: (This basis of issue will apply only to the M2 type when the M1 type cannot be obtained.)

250 per Air Force per quarter
500 per month to each Civilian Defense School*
100 per quarter to each Corps Area and Foreign Department.
25 per quarter per Post, Camp and Station.
(* on a reimbursement basis)

For the Chief of the Chemical Warfare Service.

/s/M. E. Barker
M. E. BARKER
Colonel, C.W.S.
Assistant.

2 Incl. - Copy of reference
subcommittee report Dec. 13, 1941
subcommittee report Jan. 22, 1942.

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DECLASSIFIED
DOD Inv.
20 June 1974
ISAF:LC: Data 3/14/77

WAR DEPARTMENT
OFFICE CHIEF CHEMICAL WARFARE SERVICE
WASHINGTON, D.C.

Item No. 427
C.W.T.C. Minutes

CWS 300.9/51

December 13, 1941

Subject: Subcommittee Report - Standardisation of Practice Incendiary Bomb - Military Requirement and Military Characteristics.

To: The Chairman, The Chemical Warfare Technical Committee.

1. References

- a. Item No. 360, C.W.T.C. Minutes, July 22, 1941.
- b. Letter, CWS 300.9/51, this office, November 24, 1941, subject: "Practice Incendiary Unit", and indorsement thereto.
- c. Memorandum, Chief, Incendiaries Branch, this office, December 5, 1941, subject: "Practice Incendiary Bomb", to Technical Service, this office.
- d. C.W.S. Specification No. 196-131-58 - Bomb, Incendiary, Magnesium, Training, EI, December 12, 1941.

2. Discussion

a. By reference a. Edgewood Arsenal was requested to design and prepare drawings and specifications for a simple type incendiary munition of from 2 to 3 pounds weight. It was considered that a definite military requirement exists for such an item to be used in demonstrations and instructions relating to incendiary bombs and fighting incendiary fires. It was proposed that this instruction type bomb be simple in construction and capable of being made from either magnesium filled with thermit or flare mixture as a starter, or the body be made of thin cylindrical steel tubing filled with a fast burning mixture of thermit (80%) and flare mixture (20%). The method of ignition was to be by means of a pull-through igniter attached to a 30-second delay fuse. Further provisions provided the inclusion of a small explosive charge in about ten per cent of the bombs.

b. In reference b. and c. are shown the recommendations for the standardization of a bomb of this type which has been developed and is considered adequate and satisfactory for the purpose intended. Briefly described, it is nine inches in length, weighs approximately two pounds (reference d.). It is of the magnesium type mentioned above and conforms somewhat to the design of foreign munitions of this type in order to more nearly familiarize the trainee with conditions that he will actually confront him in action.

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CWS 300.9/51

-2-

December 13, 1941

B. Recommendations:

a. It is recommended by the subcommittee that:

- (1) A military requirement be established for an instruction type incendiary bomb.
- (2) Proposed military characteristics for the item as follows, be approved:-
 - (a) For use in instruction relating to incendiary bombs and fighting incendiary fire.
 - (b) Simple in design.
 - (c) Approximate weight, 2 pounds.
 - (d) Ignition to be by means of pull wire igniter.
 - (e) Bomb body to be of either magnesium or steel tubing with appropriate fillings.
- (3) The item described in 2 b. considered to meet the proposed military characteristics, be classified as

Required type
Adopted type
Standard/article

a
and be designated

Bomb, Incendiary, Practice, M1.

- (4) The basis of issue for this item be as follows (for instruction purposes)

250 per Air Force
500 per month to each Civilian Defense School
100 per quarter to each Corps Area Headquarters.

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CWS 300.9/51

-3-

December 13, 1941

J. E. Zanetti, Colonel, C.W.S.
Chief, Incendiaries Branch

A.M. Heitge, Colonel, C.W.S.6
Chief, Fiscal and Planning Div.

S. R. Stribling, Lt. Col., O.D.

W. C. Kabrich, Lt. Col., C.W.S.
Technical Director, E.A.

H. W. Rowan, Lt. Col., C.W.S.
Chief, Procurement-Planning Div.

H. W. Hufferd, Lt. Col., C.W.S.
Chief, Research & Development Div.

C. S. Shadle, Lt. Col., C.W.S.
Chief, Troops Division

J. G. Moore, Major, A.C.

J. N. Dick, 1st Lt., C.W.S.
Chief, Civilian Defense Division

-3-

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DECLASSIFIED
DATE 10/20/84
BY SP-1/MLC/Date 3/24/77

1. Name of the article: Bomb, Incendiary, Fraction, M1

2. Classification desired: Required type, adopted type, standard article

3. The article is A new type

4. If to replace or supplement an adopted type, the recommendation as to reclassification of replaced or supplemented type is: Not applicable

5. It is recommended that:

a. The procurement, storage, and issue of the item be charged to The Chemical Warfare Service

b. The proposed item be classed as urgent supply, critical, essential item

c. The following basis of issue apply: 250 per Air Force; 500 per Army to each Civilian Defense School; 100 per quarter to each Corps Area Headquarters.

d. The maintenance percentages be as follows:

(Monthly basis) Not applicable

(1) For the Zone of Interior — — — — — %

(2) For the Theater of Operations — — — — — %

6. This correspondence is to be submitted through the Under Secretary of War for clearance of the item for procurement.

a. The item is for procurement in Immediately

b. The materials used (are, amount) procurable from commercial sources: _____

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ABSTRACT

No funds have been estimated or appropriated for procurement of Bombs, Incendiary, Instructional, M1. To meet the proposed basis of issue for this item for one year will require approximately \$108, 600 based on the estimated cost of \$1.00 per bomb.

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DOD Inra.
6 Jan. & 20 June 1974
By: *[Signature]* LC: Dava *3/10/97*

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Item No. 446
C.W.T.C. Minutes

WAR DEPARTMENT
OFFICE CHIEF CHEMICAL WARFARE SERVICE
Washington, D. C.

January 22, 1942

Subject: Subcommittee Report - Standardization of Bomb, Incendiary, Instructional, M2.

To: The Chairman, Chemical Warfare Technical Committee.

1. References:

- a. Item No. 427, C.W.T.C. Minutes of Dec. 16, 1941.
- b. C.W.S. Spec. No. 196-131-66.
- c. C.W.S. Drawing No. C 14-5-136.

2. Discussion

a. In reference a. it is considered that a military requirement exists for an incendiary bomb possessing the following military characteristics:

- (1) For use in instruction relating to incendiary bombs and fighting incendiary fires.
- (2) Simple in design.
- (3) Approximate weight, two (2) pounds.
- (4) Ignition to be by means of a fuse lighter.
- (5) Bomb body to be of either magnesium or steel tubing with appropriate fillings.

b. Further by reference a. is shown the proposal to standardize an incendiary bomb of this type, the body of which is of magnesium. Magnesium has been designated as strategic and critical, and therefore will be difficult if not impossible to obtain for the purpose of making an instructional bomb. It is therefore considered necessary to standardize another type of bomb to be used in its place. The proposed bomb to be made of steel tubing with a therm-8 filling and first fire starter, is considered to be a satisfactory substitute or supplement for the M1 instructional incendiary bomb (magnesium type).

c. The proposed bomb consists of a steel cylinder 9 inches long, approximately 1- $\frac{1}{2}$ inches in diameter, with therm-8 filling and first fire starter

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mixture and has a total weight of 2-1/4 pounds. At one end, the cap is drilled with one 1/5-inch hole and three 3/8-inch vent holes. # 30 second delayed action fuse is inserted in the 1/5-inch hole and sealed in with shellac varnish. The vent holes are sealed with adhesive tape. Ignition of the fuse is accomplished with a fuse lighter.

3. Recommendations

a. It is recommended by the subcommittee that:

- (1) The item described in 2b., considered to meet the military characteristics, be classified as

and be designated

Bomb, Incendiary, Instructional, M2.

- (2) The basis of issue for this item be as follows: (for instruction)

250 per Air Force per quarter
 500 per month to each Civilian Defense School
 100 per quarter to each Corps Area and Foreign Department.
 25 per quarter per Post, Camp and Station.

(* on a reimbursement basis)

(This basis of issue is the same as for the Bomb, Incendiary, Instructional, M1, and will apply only when the M1 type cannot be procured.)

A. M. Heritage, Colonel, C.W.S.
Chief, Fiscal and Planning Div.

J. E. Zanetti, Colonel, C.W.S.
Chief, Incendiaries Branch

Geo. J. B. Fisher, Colonel, C.W.S.
Chief, Civil Defense Division

W. C. Kabrich, Lt. Col., C.W.S.
Technical Director, Edgewood Arsenal

R. W. Bufford, Lt. Col., C.W.S.
Chief, Research & Development Div.

C. S. Shadle, Lt. Col., C.W.S.
Chief, Troops Division.

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-3-

January 22, 1942.

S. R. Stribling, Lt. Col., D.D.

H. W. Rowan, Lt. Col. C.W.S.
Chief, Procurement-F

N. H. Roberts, Captain, C.W.S.
Secretary, C.W. Equipment Board

I. S. Taylor, First Lt., C.W.S.
Secretary, C.W. Tech. Committee.

~~CONFIDENTIAL~~

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BY DOD Itra
JUN 20 1994
BY AV/LC Date: 3/15/97

COMPUTER

- 1. Name of the article: Emb. Incendiary. Instructional. M2
- 2. Classification desired: Required type, adopted type, standard article
- 3. The article is to supplement a proposed type provided the proposed type cannot be procured.
- 4. If to replace or supplement an adopted type, the recommendation as to reclassification of replaced or supplemented type is: Not applicable.

- 5. It is recommended that:
 - a. The procurement, storage, and issue of the item be charged to Chemical Warfare Service
 - b. The proposed item be classed as current supply, critical, essential item.
 - c. The following basis of issue apply: 250 per six boxes per quarter
500 per month to each Civilian Defense School. 100 per quarter to
South Coast Area and Foreign Dist., 25 per quarter per Post, Camp and Station.
 - d. The maintenance percentages be as follows:
 - (Monthly basis) Not applicable.
 - (1) For the Zone of Interior 5
 - (2) For the Theater of Operations 5

- 6. This correspondence is to be submitted through the Under Secretary of War for clearance of the item for procurement.
 - a. The item is for procurement in Immediately
 - b. The materials used (are, amount) procurable from commercial sources: _____

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- 6. Procurement of the item (is, is not) considered to interfere with the procurement of other items. _____
- 7. The materials will be procured from Commercial sources
- 8. _____
- 9. Unit cost based on latest procurement, \$ 1.00
- 10. Estimated cost in quantity procurement, \$ _____
- 11. Strategic materials found in the item: None
- 12. This proposed action (has, ~~has not~~) been concurred in by the interested branches as shown on the attached subcommittee report. _____
- 13. The item (does, ~~does not~~) possess the ~~XXXXXX~~ proposed military characteristics: _____
- 14. Modification of related equipment (is, is not) necessary before issue of the item can be accomplished. _____
- 15. The item is to be for: Immediate procurement and issue.
- 16. _____
- 17. The action recommended (with, will not) require the procurement of an additional item. _____
- 18. The action recommended (with, will not) increase cost because a new item (with, will not) have been adopted. _____

Item No. 448
G.W.F.O. Minutes

Incl. 1

- 2 -

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7003 Mra.

1 Jan 1978
JMP Date 3/24/77

SECRET
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AAF/A-4
HCB/soc
Wrtn. 2/26/42

SUBJECT: Ordnance, Requisition No. 022-804-42.

End Wrapper Ind.

War Department, Headquarters Army Air Forces, Washington, D. C.
MAR 3 1942 To: Commanding General, Field Forces, Army War College, Washington, D. C.

1. Forwarded as a matter pertaining to your jurisdiction.
2. In this connection, your attention is invited to paragraph 2a of letter AG 471(1-21-42)HFC-D-M dated February 6, 1942, Subject: Ammunition for Training Individuals and Units of the Army of the United States.
3. The Augmentation Program referred to as the basis for this requisition is not now contemplated for 1942.

Incl: FOR THE CHIEF OF THE ARMY AIR FORCES
Req. #O.O., 2 C.A.
241/31. (2n dupl.).

JOHN B. COOLEY
Lt. Colonel, A. G. D.
Assistant Air Adjutant General

471.6 (210)

Dispatched
MAR 3 1942
AAG

HEADQUARTERS ARMY AIR FORCES - COORDINATION									
Chief of Staff	Chief of Staff	A. A. G.	A-1	A-2	A-3	A-4	A-WFO	A-INS.	Sub-division
						HCS MCS TTC			

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SECRET

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WAR DEPARTMENT
Q. M. C. Form No. 400
Revised Apr. 5, 1921

REQUISITION NO. 0. O., 2 C.A. 241/31
~~DECLASSIFIED~~

Ordinance Officer, 2nd Corps Area,
To: 40 Church Street, New York, N.Y., U.S.A. No. of Sheets 1 Sheet No. 1

Requisition No. 922-36-42 Date February 4, 1942 Period For immediate use.

SHIP TO Ordnance Property Officer, Waller Field, AND FIELD, Trinidad, B. W. I.
OTHER THAN MAIL, c/o POST OFFICE, New York POST OFFICE, 40 Church Street, New York, N.Y., U.S.A.

REQUISITIONED BY (show Signature, Rank, Organization, Destination. If different from "SHIP TO" include address):

APPROVED BY:

WALLACE D. CONNOR,
1st Lt., Ord. Dept.,
Ordnance Supply Officer.

MARSHALL W. DEBY:
1st Col., Ord. Dept.,
Ordnance Officer.

STOCK NO.	ARTICLES	UNIT	ON HAND AND DUE	CONSUMED	REQUIRED	APPROVED
	BOMB, practice, 100-lb., WMA2, less spotting charge.	ea.	1,716	3,002	13,500	
	CHARGE, spotting, agently, M1 M1, practice bomb, 100-lb., WMA2 (black powder).	ea.	2,360	3,002	13,500	
	NOTE: Training ammunition for Calendar Year 1942 for Trinidad Sector not previously requisitioned in accordance with AR 775-10 for units in letter, No. 600, Subject: "Report on Implementation of the Army's Second Aviation Objective", dated April 22, 1941, and letter TAG, Subject: "Implementation of the Army's Second Aviation Objective", file number AG 500 (4-18-41) M-F-M, dated April 22, 1941.					
	NOTE: The above items are necessary and of prime importance in the training of aviation bombardiers for units in the Trinidad Sector.					

MAG/174
Dec 26 1941

INSTRUCTIONS FOR PREPARATION OF REQUISITION

Space "TO."—To show the approving office to which requisition is submitted.

Space "PERIOD."—Show period for which the supplies are required.

Space "SHIP TO."—Full shipping address to be given. Where mail address is different from shipping address the former should also be shown, e. g., "Q. M., Fairfield Air Depot, Osborn, Ohio. Mail address, Fairfield." Except for established camps, posts, or stations, street or building address should be shown, e. g., "C. O. 328th Inf., National Guard, 456 Republic Bldg., Grand Haven, Mich." Where the property is to be invoiced to an organization, etc., different from that to which it is to be shipped, the required information will be shown.

Space "STOCK NO."—Show stock number listed in Federal Stock Catalogue.

Space "ARTICLES."—Include sizes required. Show purpose numbers applicable to an article or group immediately above the article or group concerned.

Space "ON HAND AND DUE."—Show the quantity on hand plus the quantity approved on previous requisitions and not yet received.

Space "CONSUMED."—Show quantity consumed during the previous period.

Space "REQUIRED."—To be the quantity asked for by the requisitioner.

Space "APPROVED."—To be the quantity approved by the approving officer.

This form may be used in lieu of Q. M. C. Forms Nos. 402, 409, and 410 by appropriate modification. IN THE SPACE BELOW SHOW BASIS FOR REQUISITION, i. e., Strength of Command, Number of Animals, Number of Animal-Drawn and Motorized Vehicles, Armament, or such other data as may be required by instructions issued by approving authorities.

THIS SPACE FOR ACTION OF APPROVING OFFICER

17-5025

RECEIVED
MAY 19 6 19 54
2ND CORPS AREA
ORDNANCE OFFICE
FORWARDED

DECLASSIFIED
NOD Itra.
8 Jan. & 20 June 1994
By: TMLC; Date: 3/2/77

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471-CDC-D
1st Wrapper Ind.

GENERAL HEADQUARTERS, U. S. ARMY, Army War College, Washington, D.C.,
February 18, 1942. TO: The Adjutant General, Washington, D. C.

It is recommended that attached requisition be approved for shipment of 5000 each Bombs and Charges.

For the COMMANDING GENERAL:

/stamped/ J. W. RAMSEY
Lt. Col., A.G.D.,
Assistant Adjutant General

1 Incl.,
Req. #Q.D., 2 C.A.
241/31. (In quin.).

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DOD Inv.
8 Feb. & 20 June 1974
By: SP4/ELC: Dab. 3/2/77

R E C E I P T

DATE _____

SUBJECT: Ordnance, Requisition No. 922-204-42.

- 1. Received from Headquarters Army Air Forces 2nd
 Wrapper Indorsement with inclosures: Requisition #000., 2 G.A.
 241/31. (In dupl.).

Officer Rank

Office

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Qu 66 471.6 (219)

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WAR DEPARTMENT General Staff
SUPPLY DIVISION G-4
Reference only

G-4/22396-105

DATE February 25, 1942.

SUBJECT: Standardization of Cluster

Adapter for 4 lb. Incendiary Bomb.

TO:

G-1

G-2

G-3

WPD

Chief

ASST

CDR

WALTON BR., OCS

Eq. Army All Forces

RECEIVED

Referred as a matter of primary interest.

DECLASSIFIED
DOD IAW
8 Jan. & 20 June 1974
By: JAC/CLC; Date: 3/10/77

LeR. LUTAS,
Brigadier General,
Executive.

H. A. MALIN,
Lt. Colonel, General Staff,
Assistant Executive.

OUT-G-4 FEB 25 1942

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DOD Hqs.
1 Jan & 20 June 1974
By *IAE/C*: Date *3/16/77*

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2nd Ind.

War Department, Headquarters, Army Air Forces, Washington, D. C.,
To: Commanding General, Services of Supplies.

1. Censur.

For the Commanding General:

Incl. Copy of reference
subcommittee report.
Two photos.

FREDRICK L. ANDERSON, JR.,
Lt. Colonel, Air Corps,
Deputy Director,
Bombardment.

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Hq. Army A

MAR 21 1942
AAG Received

Dispatched
MAR 23 1942
AAG

HEADQUARTERS ARMY AIR FORCES - COORDINATION											
Chief of Staff	Secy of Staff	A.A.G.	A-1	A-2	A-3	A-4	A-MPH	A-Invp.	Budget	Sta-tistics	

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471.6 (209)

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DECLASSIFIED
DOD Item
1 Jan. & 10 June 1974
By ~~DAE/OT~~ Date ~~5/21/77~~

1st Ind.

War Department, Office of the Under Secretary, Washington, D. C.
February 21, 1942. To: The Assistant Chief of Staff, G-4, Washington, D. C.

1. The following item is cleared for procurement as to type:

Adapter, Cluster, 100 lb. (Incendiary Bomb) AN-M3

2. The Chemical Warfare Service is charged with the procurement of this item.

By direction of the Under Secretary of War:

/s/Byron A. Falk

BYRON A. FALK,
Colonel, Signal Corps,
Chief, Standards Division.

2 Incls: n/c

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EOD 18ra
8 Jan 20 June 1974
By: JAC/TC; Date: 3/10/77

WAR DEPARTMENT
OFFICE CHIEF CHEMICAL WARFARE SERVICE
WASHINGTON, D.C.

CWS 471.6/66 Conf.

February 16, 1942

Subject: Standardization of Cluster Adapter for 41 lb. Incendiary Bomb.

To: The Adjutant General.
Through: The Under Secretary of War.

1. There is forwarded enclosed one copy of an approved subcommittee report of the Chemical Warfare Technical Committee, dated January 26, 1942, subject: same as above.
2. In accordance with the recommendations of the Chemical Warfare Technical Committee, Item No. 448, February 10, 1942, it is requested that the action outlined below be approved.
3. It is recommended that:
 - a. A military requirement be established for a 4 lb. incendiary bomb cluster adapter.
 - b. The following military characteristics be approved for a bomb cluster formed by the use of such a cluster adapter:

- (1) It shall be so designed that it fits the 100 lb. bomb rack.
- (2) Upon release from the plane, the individual bombs shall be dispersed in the most efficient manner.
- (3) The cluster shall not break up
 - (a) When subjected to reasonable rough handling.
 - (b) When subjected to a direct downward pull or vertical acceleration of 7G while suspended from a single lug.
 - (c) When subjected to a fore or aft acceleration of 3 G while suspended from a single lug.
- (4) When desired the cluster can be dropped unarmed.

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CWS 471.6/66

-2-

February 16, 1942

c. The item meeting the proposed military characteristics be designated as

Adapter, Cluster, 100 lb. (Incendiary Bomb) AN-M3 and be classified as

Required type
Adopted type
Standard article.

d. The Chemical Warfare Service be charged with the procurement, storage and issue of the item.

e. The item be classes as: Current supply, critical item.

(One cluster adapter will be required for each 3 1/2 incendiary bombs.)

For the Chief of the Chemical Warfare Service.

/s/ M. E. Barker

M. E. BARKER
Colonel, C.W.S.
Assistant.

2 Incl. - Copy of reference
subcommittee report.
Two photos.

DECLASSIFIED

DECLASSIFIED

DDP Hqs.

3 Jan 6 20 June 1994

By: *17/MLC*; Date: *3/4/77*

~~CONFIDENTIAL~~

WAR DEPARTMENT
Office, Chief Chemical Warfare Service
Washington, D. C.

January 26, 1942.

Subject: Subcommittee Report - Standardization of Cluster Adapter
for 4 lb. Incendiary Bomb.

To: The Chairman, Chemical Warfare Technical Committee.

1. References.

- a. Memorandum for file, dated January 12, 1942,
Subject: "Functioning of the Adapter, Cluster,
100 lb. M2 with AN-M54 Incendiary Bombs", by
Major R. E. Talmadge, CWS.
- b. CWS Drawing No. C14-23-84, dated January 8, 1942.
- c. CWS Drawing No. C14-23-65, dated January 8, 1942.
- d. Inter-office Memo, CWS 534.8/162 Conf. from Chief,
Incendiaries Branch to Chief, Tech. Service, subject, "Cluster Adapter
For Incendiary Bombs, AN-M3 (in which reference is made to the
adoption of this item as standard by the ANB Standardization Committee
on January 19, 1941.)"

2. Discussion.

a. In reference a. the test of the proposed M3 cluster adapter is described. The report states that the "adapter, as tested this date, functioned perfectly and should be adopted as standard for the 4 lb. incendiary bomb". This is the third type of cluster adapter for 4 lb. incendiary bombs, which has been developed for this purpose. The other two types have been found undesirable for various reasons.

b. The bomb cluster (reference c) formed by the use of the adapter (reference b) referred to above, consists of thirty-four (34) 4 lb. incendiary bombs, arranged in two tiers of seventeen each and held in position by the cluster adapter.

The cluster adapter consists of two cluster bars, two end plates, four strapping bands, and one arming wire assembly. The cluster bar is a steel strip originally five inches wide, the center three inches of which has been stamped in to the shape of half a hexagon. To the cluster bar which is fixed at the top of the cluster is welded the suspension plate which has three slots holding three suspension lugs. The lugs, unless held out by cotter pins, slide through the slots into the recessed portion of the cluster bar. This arrangement permits the

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Subcommittee Report - Standardization
of Cluster Adapter for 4 lb. Incendiary
Bombs.

January 26, 1942

use of this adapter with either the army bomb suspension, which requires two suspension lugs, or the navy bomb suspension, which requires only one suspension lug at the center of the suspension plate.

The bombs are held in place by the two cluster bars, the two end plates, and the four strapping bands. These bands are of $3/4" \times 0.020"$ steel and are held together by a strap buckle which is kept closed by a brass arming wire which passes over the upper plate of the buckle and through the two holes in each side of the buckle. When the cluster is released, the pull wire is extracted, the buckle separates into two pieces and the cluster falls apart.

g. The advantages of the latest type cluster adapter, M3 over previous models are:

- (1) Adaptability to both Army, Navy, and British plane bomb suspensions.
- (2) Ease of manufacture.
- (3) Availability of materials from which it is made.
- (4) Cheapness.
- (5) Greater positiveness of action.

g. Based on the recommendations in paragraph 2 g. above, and for the reasons given in paragraph 2 g., it is considered desirable that the M3 cluster adapter be adopted as standard.

3. Recommendations.

a. It is recommended by the subcommittee that:

- (1) A military requirement be established for a 4 lb. incendiary bomb cluster adapter.
- (2) The military characteristics of the bomb cluster formed by the use of this adapter be approved as follows:
 - (a) It shall be so designed that it fits the 100 lb. bomb rack.

-3-

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**Subcommittee Report - Standardization
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January 26, 1943

- (b) Upon release from the plane, the individual bombs shall be dispersed in the most efficient manner.
- (c) The cluster shall not break up
 - (1) When subjected to reasonably rough handling.
 - (2) When subjected to a direct downward pull or vertical acceleration of 7 G while suspended from a single lug.
 - (3) When subjected to a fore or aft acceleration of 3 G while suspended from a single lug.
- (d) When desired the cluster can be dropped unarmed.
- (3) The 4 lb. incendiary bomb cluster, meeting the proposed military characteristics above, and covered by reference (b) be classified as

Required type
Adopted type
Standard article

and be designated as

Adapter, Cluster, 100 lb. (Incendiary Bomb) AN-M3.

A. M. Heritage, Colonel, C.W.S.
Chief, Fiscal & Planning Division

J. E. Zanetti, Colonel, C.W.S.
Chief, Incendiaries Branch

S. R. Stribling, Lt. Col., O.D.

V. G. Kabrich, Lt. Col. C.W.S.
Technical Director, Edgewood Arsenal

E. W. Rowan, Lt. Col., C.W.S.
Chief, Procurement Planning Div.

R. W. Ruffard, Lt. Col., C.W.S.
Chief, Research & Development Div.

C. S. Shadle, Lt. Col., C.W.S.
Chief, Troops Division.

John G. Moore, Lt. Col., A. C.

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J. A. Snackenburg, Commander, U.S.N.

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Subcommittee Report - Standardization
of Cluster Adapter for 4 lb. Incendiary
Bombs.

January 26, 1942

J. M. Roberts, Capt., G.V.S.
Secretary, CW Equipment Board

I. S. Taylor, First Lt., G.V.S.
Secretary, CW Technical Committee

Date FEB 10 1942
Cleared for procurement. Pro-
curement responsibility charged
to Chemical Warfare Service.

S.A. YALK, Lt. Col., S.C.
C. W. S. V.

APPROVED BY ORDER OF THE CHIEF
OF THE CHEMICAL WARFARE SERVICE.

M. E. BARKER

Colonel, G.V.S., FEB 10 1942
Chief, Technical Service

APPROVED BY CHEMICAL WARFARE
TECHNICAL COMMITTEE
FEB 10 1942

I. S. TAYLOR
1st Lt. G.V.S.
Secretary.

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- 1. Name of the article: Adaptor, GUNTYPE 100 lb. (Incendiary Bomb) AN-M2
- 2. Classification desired: Required type, Adopted type, Standard Article
- 3. The article is a new type

- 4. If to replace or supplement an adopted type, the recommendation as to reclassification of replaced or supplemented type is: Not applicable

- 5. It is recommended that:
 - a. The procurement, storage, and issue of the item be charged to Chemical Warfare Service

- b. The proposed item be classed as current supply, critical item

- a. The following basis of issue apply: Not applicable

- a. The maintenance percentages be as follows:

(Monthly basis) Not applicable

(1) For the Zone of Interior 5

(2) For the Theater of Operations 5

- 6. This correspondence is to be submitted through the Under Secretary of War for clearance of the item for procurement.

- a. The item is for procurement in immediately

- b. The materials used (are, amount) procureable from commercial sources:

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- a. Procurement of the item (is, is not) considered to interfere with the procurement of other items. _____
- b. The materials will be procured from industry
- c. _____
- d. Unit cost based on latest procurement, \$ _____
- e. Estimated cost in quantity procurement, \$ Not to exceed \$2.00 each
- f. Strategic materials found in the item:
None
- 7. This proposed action (has, ~~has not~~) been concurred in by the interested branches as shown on the attached subcommittee report. _____
- 8. The item (does, ~~does not~~) possess the proposed military characteristics: _____
- 9. Modification of related equipment (is, is not) necessary before issue of the item can be accomplished. _____
- 10. The item is to be for: immediate procurement and use
- 11. The action recommended (will, will not) require the procurement of an additional item. See addendum
- 12. The action recommended (will, will not) increase cost because a new item (will, will not) have been adopted. See addendum

Item No. 448
C.V.T.C. Minutes

Incl. 3

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DOD ltr.
8 Jan. & 20 June 1994
By: [Signature] Date: 7/2/77

~~SECRET~~
WAR DEPARTMENT
U. S. MILITARY MISSION TO CHINA
WASHINGTON

February 19, 1942.

MEMORANDUM FOR THE CHIEF OF THE ARMY AIR FORCES:
(Attention: A-4 Division)

Subject: Chinese Bomb Stocks

For your information, there is attached a copy of report recently received from the Mission in China with reference to stocks of Chinese bombs on hand at various locations and the dimensions of the bombs.

S. G. Brown

S. G. BROWN
Colonel, Infantry
Chief, Home Office
U. S. Military Mission to China

Enclosure:
Copy of
Report.

Inclosures photostated by

A-4

Copies to: 1-AWPD

- 1-Col Basall*
- 1-Col Halverson*
- 1-Cnl Compland*
- 1-A-4 files*
- 1-Cnl [unclear]*

~~SECRET~~

Rec'd 4/16/6
(25)

Rec'd 4/16/6 *(25)*

AWPD-7-1000

LIST SHOWING STORAGE OF AMERICAN BOMBS (COMPLETE)
Chuncking, China, dated Dec. 12, 1941.

#1

	Li-Chow	Tsun-Yi	Liang-Shan	Wang-Shan	Ching-Chan	Kwei-Ying	Hong-Yang	Chan-Hsien	Chi-Chiang	Chan-Yuan	Chiu-Chow	Kwei-Lin	Lu-Tsui	Kwei-Lin
110 lbs.	19													20
600 "	20								34					12
500 "	7						42				923			
100 "	1			810	1481	18		200		922	3250	30	555	50
50 "	172								3					
30 "	170	5210	200	6438		10462			3654	1000	10500			

LIST SHOWING STORAGE OF CHINESE BOMBS (COMPLETE)
Chungking, China, dated December 16, 1941.

Weight	Type	Cheng-Tu	Chang-Tu	Chungking	Sui-Ming	I-Ping	Chungking	Lo-Chow	Liang-Shan	Wan-Hsien	Liang-Shan	Kwei-Yang	Kwei-Yang	Hong-Yang
800	126													
800	111													
500	125						80			5			18	
250	124													
250	109						100	87					38	
100	127													
100	123	439	391	80	119				344					
100	108		196				3	45		570	76			
50	115		95				61			349				
50	116	51	725	29	120	691	1572			818				
50	106	20	101				2118			333			53	
18	105					1357	350	815		3079			796	200
14	114									998				
14	113		21			166			1,478	884	300			
14	107						89			1851		300	1209	
50	168	22					217			100				
17	162													
17	161	10	404						42					
16	164		58						101					
15	Sq.						987							
-	-						370		50	191				

LIST SHOWING STORAGE OF CHINESE BOMBS (COMPLETE)

-2-

Weight KGS	Type	Ling-Iang	Lan-Chow	Tien-Shui	Ping-Iang	Han-Cheng	Pao-Chi	An-Kang	Han-Yang	Cheng-Hsien	Lao-Ho-Kow	Si-An	Han-Chang	Kwang-Yuan	An-Kang	
800	111		2													
5	110												10			
250	109		4										20			
100	123					86	8	32		18		56				31
100	108		12								49	183	170			
50	115											59	75			
50	116					594		70		36		70	72	44		52
50	106		98				40				38		282	1037		288
18	105		245	234		556							3369	1578		
14	114				520											
14	113		2						36			36	1017			
14	107		819			552	1289									420
	161		50			130										
230	112		54	4									20			18

LIST SHOWING STORAGE OF CHINESE BOMBS (COMPLETE)

-3-

Weight	Type	Hein-Tsin	Shuang-Liu	Chung-Lai	Chiu-Chow	Fu-Cheng	Kien-Aw	Yushan	Li-Sin	Kunming	Tai-Ping-Tse	Wu-Hai	Chiu-Ciman
100	127								146				
100	123		335	100	92	89	39	4			277		14
100	108				9								
50	115				114	130	30		56				
50	116	1	299	100							132	170	80
50	106				50								
18	105				80	166			18	460		61	
14	113										488		
14	107										721	328	
17	161										192		

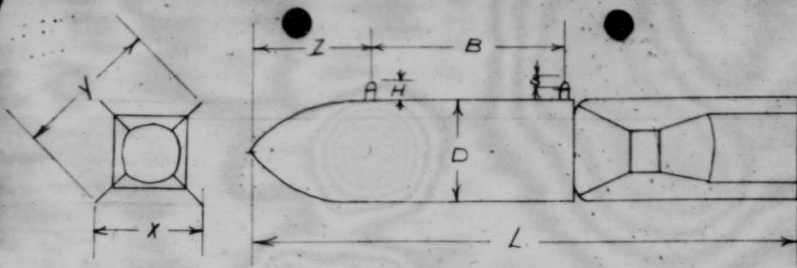
LIST SHOWING STORAGE OF CHINESE BOMBS (COMPLETE)

Weight KGS	Type	Lu-Tsai	Kwei-Lin	Liu-Chow	Kan-Chow	Ki-An	Chang-Fing	Kwang-Chang	Kan-Chow	Chi-Chiang	Chiu-Chow	Chi-Chiang
800	111											2
500	110											6
250	109											7
100	123				20		9			173		180
100	108	159	7			35						
50	115	389						36				1014
50	116	83			40					351		2776
50	106	566	99				72				582	2091
18	105	2091					226	80				11373
14	114		102									5403
14	113		406									
14	107		654							119		990
17	161			38						324		352
15	—											2275
15	—											2569
230	112	77				20					14	748

LIST SHOWING STORAGE OF CHINESE BOMBS (COMPLETE)

-5-

<u>Weight</u>	<u>Type</u>	<u>Lu-Chow</u>	<u>Liang-Shan</u>	<u>Wan-Hsien</u>	<u>Kan-Chow</u>
<u>KGS</u>					
40		78	30	348	300



CHINESE BOMBS

Type	Size	Total Length	D	Z	B	H	S	I	Y	Fuse
108 Russian	100 KGS	1260	254	227	355.6	35	7.5	177	250	Tail & Nose
109	250 KGS	1785	446	319.4	355.6	32	8			Tail & Nose
110	500 KGS	2365	458	559.4	355.6	34	11			Tail & Nose
111	800 KGS	3160	458			44.5	12			Tail & Nose
112	500 KGS	1360	350	379	355.6	34	9	345	483	Tail & Nose
115	50 KGS	997	180	217	355.6	30	6.2	178	250	Tail
116	50 KGS	965	180	183	355.6	30	6.2	178	250	Nose
113	14 KGS	695	105	} These three types are fitted with both tail and one side lug.			6.25	102	145	Nose
114	14 KGS	695	103				6.25	102	145	Nose
165	16 KGS	715	129				6.25	130	180	Nose
106	50 KGS	1084	180		355.6	30	6.25	200	284	

All measurements are in metric.

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DDP Hrs.

18 July 20 June 1974
By: [Signature] Date: 3/16/77

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AAF/A-4/246

February 26, 1942

AAF/A-4/471-48

Release of Bombs to G.H.Q. and to Columbia.

II. C-4

I. Ord.

X. TAB

II. AAF

X. SW directs

AAF/A-4
HCB/mbh

1. Confirming telephone instructions issued to your office (Major Stone) February 25, 1942 (Serial 1542) from Lt. Col. Burgess, A-4 Air Staff, it is desired that the following bombs be released to G.H.Q. for shipment as indicated:

Demolition Bombs				Destination
1000#	500#	300#	100#	
300	950	1,790	500	Panama
135	150	250	2,000	Puerto Rico
300	180		1,500	Trinidad
300		110		Newfoundland
100				Iceland
40				Bermuda
252	1,154	5,000	4,000	Eastern Theatre
Total 1427	2,314	7,250	8,000	

COORDINATION									
Chief of Staff	Secy Air Staff	A-1	A-2	A-3	A-4	A-4PN	A-4Ing.	Budget	Statistics
2. Additional DEMOLITION BOMBS to be furnished by [Signature]									
The release of 200 ea. 500# demolition bombs, 200 ea. 300# demolition bombs and 914 ea. 100# demolition bombs does not constitute an additional release but will be taken from depot stocks previously released to G.H.Q. and the Air Force Combat Command.									

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4. Confirming telephone instructions issued to your office same date and serial as above, it is desired that the following bombs be shipped as indicated:

To: U. S. Military Attache,
 Cali,
 Columbia
 144 ea. 100# Bombardier Bombs

II. To be advised of action taken above.

NOTED EPC 2/25/42
 Chief of the Air Staff

For the Chief of the Air Staff:

I. J. HENLEY, Jr.,
 Colonel, Air Corps,
 Assistant Chief of Air Staff, A-6.

MEMORANDUM FOR RECORD: Above action taken to provide bombs for G.H.Q. for distribution to ~~Central~~ Panama, Caribbean Area and Eastern Theatre and for Columbia as provided for in memorandum to the President from the Chief of the Army Air Forces.

Hq. Army Air Forces
 FEB 24 1942
 AAG RECEIVED

Dispatched
 FEB 26 1942
 AAG

PL 20 42
 AAG

HEADQUARTERS ARMY AIR FORCES						COORDINATION				
Chief of Staff	Secy of Staff	L & G	A-1	A-2	A-3	A-4	A-5	A-INS	Budget	Statistics
	WJF					MS MS				

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DOD ltr.
4 Jan. & 30 June 1974
By SP7/LCJ Date 3/14/77

March 8, 1942.

MEMORANDUM TO: Office, Chief of the Air Corps.

SUBJECT: 30-lb. M-5 Fragmentation Bomb Cluster.

1. Reference attached memorandum of February 23, 1942, subject as above, the matter has been considered by the Requirements Board. It was the consensus of opinion of the Board that provisions should be made for the five (5) second delay for the breaking of cluster and arming of fuses as a desirable safety factor. It was likewise the consensus of opinion of the Board, that cluster adapters should be fabricated for the quantity of 30 lb. M-5 Fragmentation Bombs on hand.

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Edgar F. Sorenson,
Colonel, Air Corps,
Director of Procurement.

Inclis
Encs to Hq. AAF fr.
CGAC 2/23/42 w/att:

Dispatched

MAR 8 1942

AAG

HEADQUARTERS ARMY AIR FORCES								COORDINATION			
Chief of Staff	Chief of Staff	Asst. Chief of Staff	A-1	A-2	A-3	A-4	A-5	A-6	A-7	Budget	Station

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DOD ltr.
* Feb. 6 to June 1974
by SP4 JLO; Date 3/14/77

February 23, 1942.

MEMORANDUM FOR HEADQUARTERS ARMY AIR FORCES.

SUBJECT: 30-lb M-5 Fragmentation Bomb Cluster.

1. Attached is correspondence received from the Ordnance Departments regarding the detaching of the 30-lb., M-5 fragmentation bombs in close proximity to the airplanes when released in clusters due to the quick arming of the fuse.

2. In view of directive from your office, your comments and recommendations with respect to the fabrication of cluster adapters for the 36772 available fragmentation bombs as indicated in Paragraph 4 of 1st Indorsement from the Ordnance Department to Chief of Air Corps is requested.

For the Chief of the Air Corps

/s/ F. I. Ordway, Jr.

F. I. Ordway, Jr.
Major, Air Corps,
Asst. Exec., Mat. Div.

Incl
cy ltr frs ACE to ChOrd
dated 12/18/41 w/1st Ind.

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1st Ind.

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O.O 334/8/8676
Attn: Ind'l Service, Am. Div.

War Department, Ordnance Office, Washington, D.C., February 12, 1942
To: The Chief of the Air Corps.

1. Your attention is invited to basic letter in which the Ordnance Member of the Air Corps Board calls to the attention of this office the possibility of the individual bombs from the cluster of 30-lb. M5 fragmentation bombs colliding with each other after the cluster has separated, which takes place approximately 3 1/2 seconds after release of the cluster or about 175 feet from the airplane. The Ordnance Department has given constant and careful consideration to the contents of the communication and, because of its important implications involving safety, requests the decision of the Air Corps as to the action to be taken in adhering to or modifying the recommendations contained in O.C.M. Item 17443. Please refer to this O.C.M. Item for data in connection with Proving Ground Tests.

2. In determining the delay which should be incorporated in the cluster for the 30-lb. Fragmentation Bombs equipped with the Mk XIV fuse, which arms almost immediately after separation of the cluster, the Ordnance Department was guided primarily by the following considerations:

That the bomb in question when released from horizontal bomb racks has satisfactory stability during its entire flight.

That should any collision of the bombs occur after the cluster has separated, and should such collision be of sufficient magnitude to shear the shear wire of the fuse, the danger to the releasing airplane would be minimized by the fact that the bombs would be about 175 feet below the airplane.

3. That the Ordnance Department was firmly convinced that the dangers involved, although present, were not of such nature as to preclude the testing of bombs, it authorized:

a. The testing of 10 clusters (60 loaded bombs) in which the clusters separated immediately after release from the horizontal bomb rack.

b. The testing of 10 clusters (60 loaded bombs) in which the clusters separated on the average of 5.4 seconds (4.86 - 6.15 sec.).

No premature functioning was obtained in these tests, at ground speeds up to about 180 mi/hr.

4. Since the development tests with clusters of 30lb. Fragmentation Bombs were conducted, additional tests with clusters of 20 lb M41 Fragmentation bombs which separate immediately upon release were conducted. The latter tests, in general, indicate that little, if any, difference in the dispersion of these acts of bombs may be expected between clusters which separate immediately upon release and those which separate about 5 seconds after release,

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when the clusters are released from an altitude of 2000 feet. It may, therefore, be advisable to consider the advisability of increasing the delay to separation of the clusters of 30-lb. Fragmentation bombs from about 3 1/2 to 5 seconds (drop of approximately 400 feet) so as to further minimize the possibility of any danger to the releasing airplanes, if such increase will not interfere with the tactical employment of the bombs. Also presented for consideration is the possibility of suspending the clustering of 30 lb. Fragmentation Bombs, in view of the limited number available (36772 as of 11-10-41).

5. An early reply will be appreciated.

For the Chief of Ordnance

/s/ L. J. Dillon
L. J. Dillon
Col., O/Dept.
Exec., Asst.

THE AIR CORPS BOARD
EGLIN FIELD, FLA.

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DOB Hrs.
8 Jan. & 20 June 1974
By *[Signature]* LC; Date *3/18/77*

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18 December 1941

SUBJECT: Adapter, Cluster, for Bomb, Fragmentation, 30-lb., M5.

TO: The Chief of Ordnance, Washington, D.C.
(Attention: Lt. Colonel S.R. Stribling, O.D.,
Ammunition Division, Industrial Service)

1. Reference is made to paragraphs 2 f and 3 g of Ordnance Committee Item 17443 covering the standardization of the Cluster Adapter for the 30lb., M5, Fragmentation Bomb. In this connection, it is noted that:

- a. The 30 lb., M5. Fragmentation Bombs are to be fused with the MK XIV Bomb Nose Fuze, which arms practically simultaneously upon withdrawal of the arming wire or removal of similar arming safety device.
- b. That an average delay between release and separation of the individual bombs in the cluster (when bombs are free to arm) will be approximately 3 seconds, permitting a drop of approximately 175 feet below the airplane when the bombs separate and become armed.

2. In the tests of the Leland Type Adapters and 20-lb Fragmentation Bombs at this station, it was noted that, when the bombs were released from the cluster (immediately after the cluster was released from the bomb rack), there was considerable oscillation and erratic flight of the individual bombs before they became stabilized on the normal trajectory, which would make it possible for individual bombs to collide in such a way that premature functioning might be obtained if the fuzes were armed.

3. This matter is called to your attention because the Air Corps Board was involved in the recommendation of approximately 3 seconds arming delay for fuzes of fragmentation bombs released in clusters or in salvos from vertical racks. The Board's recommendation of a proximately 3 seconds arming delay was not based on the belief that a 3-second drop (approximately 175 feet) would provide safety to the airplane in case of a premature functioning, but primarily on the fact that tests of vertical racks and cluster adapters showed that bombs

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released in clusters or in salvos from vertical racks that disintegrate immediately would stabilize on the normal trajectory in about 1-1/2 seconds so that there was no possibility of the bombs colliding in such a manner as to prematurely function the fuses after such a period of time.

/s/ S. P. Huff
S. P. Huff
Lt. Col., Ord. Dept.
Ord. Member, A.C. Bd.

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Att. No 471.6 (207)

DECLASSIFIED
DOD Inr.
8 Jan. & 20 June 1974
By: *SP/MLC*; Date: *3/22/77*

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AAF/A-1/227
RCC
Written 2-20-42

SECRET
OF THE
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DATE: INITIALS:

MEMORANDUM FOR THE CHIEF OF THE AIR CORPS

SUBJECT: Bands for British Bombs.

1. The following bands to accommodate British bombs to American bomb racks should be shipped by rail express to:

Port Quartermaster
Port of Embarkation
San Francisco, California

marked for "I":

1000 Bands for 1000/ Br. bombs
1500 Bands for 900/ Br. bombs
2000 Bands for 250/ Br. bombs

2. This office should be notified of the name of boat and date of departure from San Francisco.

By Command of Lieutenant General Arnold

hnh

FEB 22 1942

Dispatched
FEB 24 1942
AAG

JOHN B. COOLEY
Lt. Colonel, A. G. D.,
Assistant Air Adjutant General

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HEADQUARTERS		ARMY AIR FORCES			COORDINATION					
Chief of Staff	Sec'y Air Staff	A.A.G.	A-1	A-2	A-3	A-4	A-WPD	A-Inspr.	Budget	Scn-istics
	<i>JC</i>					<i>MLC</i>				

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air 471.6 203

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By: 800 Hqs.
On: 20 June 1974
By: [Signature] Date: 3/10/77

RECEIPT

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DATE _____

SUBJECT: Bands for British Bombs.

Received from Headquarters, Army Air Forces, memorandum,
above subject.

Officer _____ Rank _____

Office _____

HEADQUARTERS		ARMY AIR FORCES				COORDINATION				
Chief of Staff	Sec'y of Staff	A.A.G.	A-1	A-2	A-3	A-4	A-WFD	A-Insps.	Budget	Sec-tions

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Ch. 43 47/100 30

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SECRET, Above action taken to provide 200 M&A Flares for Trinidad
to be shipped by Air Express as requested in radio to G.H.Q.

HEADQUARTERS ARMY AIR FORCES - COORDINATION											
Chief of Staff	Sec'y of Staff	A.A.G.	A-1	A-2	A-3	A-4	A-WPD	A-Inspr.	Budget	Statistics	
	DPC					MP2 MVB					

AAF-39

SECRET

Dec 15 47 6 302

DECLASSIFIED
DOD IAW

8 Jan & 20 June 1974
By DPL/CI, Date 3/15/77

~~SECRET~~

RECEIPT

DATE _____

SUBJECT: Release of M&A Flares to G.H.Q. for Shipment to Trinidad.

Received from Headquarters Army Air Forces, Disposition Form
above subject.

Officer _____

_____ Office

~~SECRET~~

Am 06 471.6 (20)

DECLASSIFIED
DOD ITR
8 Jan. & 20 June 1984
BY SP4/ELC/DMS 3/16/77

~~SECRET~~
DECLASSIFIED

337

1st Ind.

O.O. 400.325/28-Air Corps (S)
Attn: Amm.Sup.Div., F.S.
AAF/A-4/238

Tiner/ds

War Department, Ordnance Office, Washington, D. C., March 4, 1942.
To: Assistant Chief of the Air Staff, A-4, HQ Army Air Forces,
Washington, D. C.

- 1. The instructions in basic letter have been complied with.

For the Chief of Ordnance:

James W. Freeman
JAMES W. FREEMAN,
Lt. Colonel, Ord. Dept.,
Assistant.

*File
Schubert
A-4/238*

4716
②

DECLASSIFIED
SECRET

ANR/A-4/238

OFFICE
CHIEF OF ORDNANCE

MAR 5 13 14 PM 1942

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DECLASSIFIED

DOD ltr.

8 Jan. & 20 June 1974

DECLASS. DATE: 2/2/77

SECRET
DECLASSIFIED

1st Ind.

Tinor/da

O.C. 400.325/25-Air Corps (C)

ASST: Am. Sup. Div., P.S.

AAF/A-4/203

War Department, Ordnance Office, Washington, D. C., March 4, 1943.

To: Assistant Chief of the Air Staff, A-4, HQ Army Air Forces,
Washington, D. C.

1. The instructions in basic letter have been complied with.

For the Chief of Ordnance:



JAMES V. FURMAN,
Lt. Colonel, Ord. Dept.,
Assistant.

DECLASSIFIED

SECRET

AAF/A-4/412

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DECLASSIFIED

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JUN 10 1942



DECLASSIFIED
SECRET

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DOD ltr.
8 Jul 8 20 June 1974
DRLC: Data 3/10/77

~~SECRET~~

RAF/A-4/23Y

WAR DEPARTMENT
HEADQUARTERS OF THE ARMY AIR FORCES
WASHINGTON

O. O. WAR DEPT.
314
400.322-728
FEB 23 1942
air corp (S)

February 22, 1942.

MEMORANDUM FOR THE CHIEF OF ORDNANCE:

Subject: Special Shipment of Bombs.

1. It is desired that fifty 500-lb., M43 demolition bombs loaded and with fuzes as indicated be shipped to arrive at Benicia Arsenal, San Francisco, California not later than March 12, 1942:

Loading: 50 - 50 TNT and Amatol
Nose Fuze: M-103
Tail Fuze: .025 Second delay

2. Each package in the shipment should be clearly marked "For Project Dubol". The shipment should be kept intact at Benicia, subject to the order of Lieutenant Colonel James H. Doolittle Air Corps, who will provide disposition instructions.

3. The foregoing confirms telephonic instructions of the Assistant Chief of Air Staff, A-4 (Col. Schneider) to your office (Colonel Hall, Colonel Rice and Colonel Stribling).

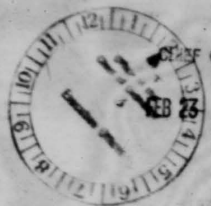
For the Chief of the Air Staff:

Max T. Schneider
MAX T. SCHNEIDER
Col. Air Corps
for T. J. HANLEY, JR.,
Colonel, Air Corps,
Assistant Chief of the Air Staff, A-4.

DECLASSIFIED

Form 4971-6 (A)

297



OFFICE
OF ORDNANCE
FEB 23 3 33 PM 1942
IN



131

DECLASSIFIED
EOD Mrs.
8 Jan. & 20 June 1974
By: JMH/DC Date: 3/16/77

DECLASSIFIED

~~SECRET~~

AAF/A-4, 4238
MFS/mhh

February 22, 1942.

MEMORANDUM FOR THE CHIEF OF ORDNANCE:

Subject: Special Shipment of Bombs.

1. It is desired that fifty 500-lb., M43 demolition bombs loaded and with fuses as indicated be shipped to arrive at Benicia Arsenal, San Francisco, California not later than March 12, 1942:

Loading: 50 - 50 TNT and Amstel
Nose Fuse: W-108
Tail Fuse: .025 Second delay

2. Each package in the shipment should be clearly marked "For Project Doolittle". The shipment should be kept intact at Benicia, subject to the order of Lieutenant Colonel James H. Doolittle, Air Corps, who will provide disposition instructions.

3. The foregoing confirms telephonic instructions of the Assistant Chief of Air Staff, A-6 (Col. Schneider) to your office (Colonel Hall, Colonel Rice and Colonel Strubling).

For the Chief of the Air Staff:

T. J. HANLEY, JR.,
Colonel, Air Corps,
Assistant Chief of the Air Staff, A-4.

471.6 (201)

HEADQUARTERS		ARMY AIR FORCES				COORDINATION				
Chief of Staff	Sec'y of Staff	A.A.G.	A-1	A-2	A-3	A-4	A-WPD	A-Inspr.	Budget	Statistics

~~SECRET~~

AAF-39

Doc Ref 471.6 (201)

SECRET

DECLASSIFIED
DOD ltr.
1 Jan. & 20 June 1974
BY SP/MP Date 3/14/77

RECEIPT

DATE _____

SUBJECT: Special Shipment of Bombs.

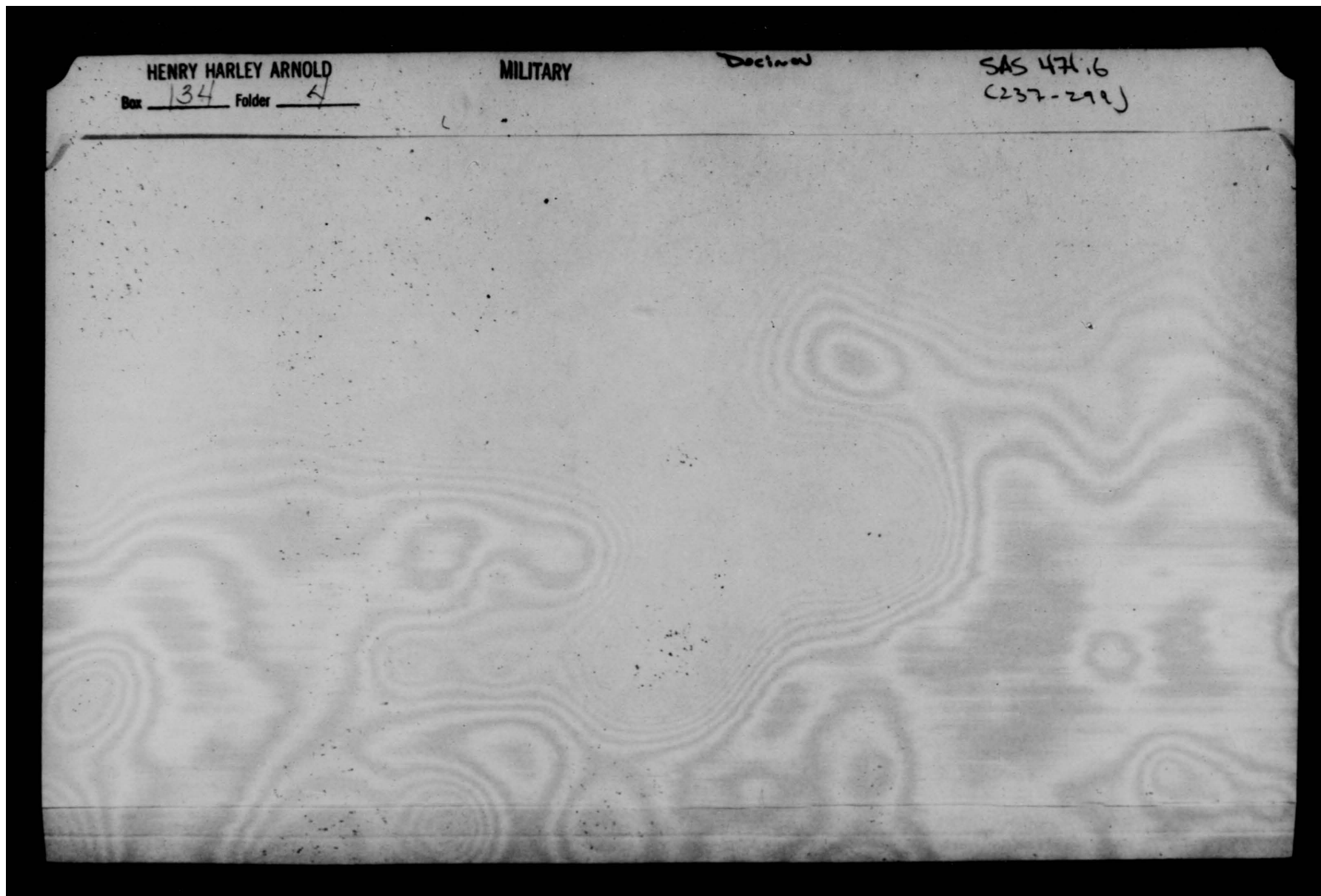
1. Received from the Headquarters, Army Air Forces,
one memorandum, above subject.

OFFICER RANK

DATE OFFICE

SECRET

(in 471.6 201)



HENRY HARLEY ARNOLD

MILITARY

Doctinal

SAS 471.6
(237-299)

Box 134 Folder 4

HEADQUARTERS ARMY AIR FORCES
 DECLASSIFIED
 ROUTINE AND RECORD SHEET

DECLASSIFIED
 DOD Form
 8 Jan. & 20 June 1974
 (Rev. 1-10-74) Date: 3/2/77

TALLY NO.	
FILE NO.	AAF 471

SUBJECT: Supply of Special Purpose Tail Fuses to Australia.

TO: Chief of the Air Staff
 DATE: MAR 11 1943

FROM: Base Services
 COMMENT NO. 1
 RBS-9/ORE:mg/72345

1. Reference is made to message Q 4563 of March 9, 1943, from Brisbane.
2. The supply of special purpose (4 and 11 second delay) tail fuses has been, and still is, extremely critical. Quantity production has not yet been reached in the M12, M13, and M14 series. Each accepted lot is being shipped directly from the manufacturing plant to destination. Distribution of available quantities is coordinated with AFREB in each instance.
3. Records in this office indicate the following supply has been made to Australia:

Type	Quantity	Date Shipped	How Shipped
M106A2 (4 sec)	200	8/21/42	Air
M106A2 (4 sec)	100	9/24/42	Air
M106A2 (4 sec)	400	10/23/42	Air
M13 (4 sec)	175	11/12/42	Air
M14 (4 sec)	250	11/16/42	Air
M106A1 (11 sec)	150	11/26/42	Air
M106A1 (11 sec)	1,000	12/ 1/42	Water
M106A1 (11 sec)	2,000	12/ 3/42	Water
M106A1 (11 sec)	2,000	12/ 8/42	Water
M106A1 (11 sec)	4,650	12/19/42	Water
M13 (4 sec)	200	12/24/42	Water
M14 (4 sec)	200	12/24/42	Water
M14 (4 sec)	150	1/ 5/43	Water
M13 (11 sec)	1,000	2/12/43	Air (1)
plus 4 sec. P.D.'s	500	2/12/43	Air (1)
M13 (11 sec)	1,050	3/ 9/43	Air (2)
plus 4 sec. P.D.'s	525	3/ 9/43	Air (2)

- (1) Cleared Hamilton Field by 3/6/43. No report of arrival yet.
- (2) Scheduled to leave Newark, N.J. by air 3/7/43 en route to Los Angeles for reshipment to Hamilton Field. No report on its arrival at Hamilton Field as yet. Due to the large backlog of air freight to the South Pacific Area and Southwest Pacific Area, it is very difficult to obtain priority air shipment to these areas.

File
 BK 3/15/43

W
 L. P. WHITTEN
 Brig. Gen., U.S.A.

TO: Air Adjutant General
 FROM: Deputy Chief of the Air Staff

DATE 13 March 43
 COMMENT NO. 2
 MAL/mdg/5265

For files.

DECLASSIFIED
 MILLARD A. LIBBY,
 1. Lt. Colonel, U.S.A.

mar.

668 471.6 299
 2-1109 A.P.

SECRET

MAR 12 43 AM



RECEIVED
Air Adjutant General

[Faint, mostly illegible typed text, possibly a routing slip or list of names and initials]

[Faint, mostly illegible typed text, possibly a memo or report body]

SECRET

HEADQUARTERS ARMY AIR FORCES

ROUTING AND RECORD SHEET

~~CONFIDENTIAL~~
DECLASSIFIED

TALLY NO.	
FILE NO.	

SUBJECT: Glide Bombs.

TO: The Air Adjutant General

FROM: The Assistant Chief of the Air Staff, A-4.

DATE March 26, 1943

COMMENT NO. 6

ERR/nmh/3131

No further action is necessary. Attached is a copy of the indorsement to the memorandum from the Commanding General, Materiel Command.

nmh

RICHARD H. BALLARD
Colonel, G. S. C.

nmh

1. Incl. *no copy of memo*
Added - 1st Ind. (cy) to
CG,MC dtd 3-26-43, abv.
subj.

TO: Director of Military Requirements

FROM: Air Adjutant General

DATE: Mar. 27, 1943

Comment No. 7

JEC:JB 5789

To note and return.

Incls n-c

JEC

JOHN W. COOLEY,
Colonel, A.G.D.
Asst. Air A. G.

TO: Air Adjutant General

FROM: ACAS/Operations, Commitments and Requirements;
Requirements Division.

DATE: April 1, 1943

Lt.Col. Boushey -73809

Comment No. 8

FR:amc 6328 - 72448

Noted.

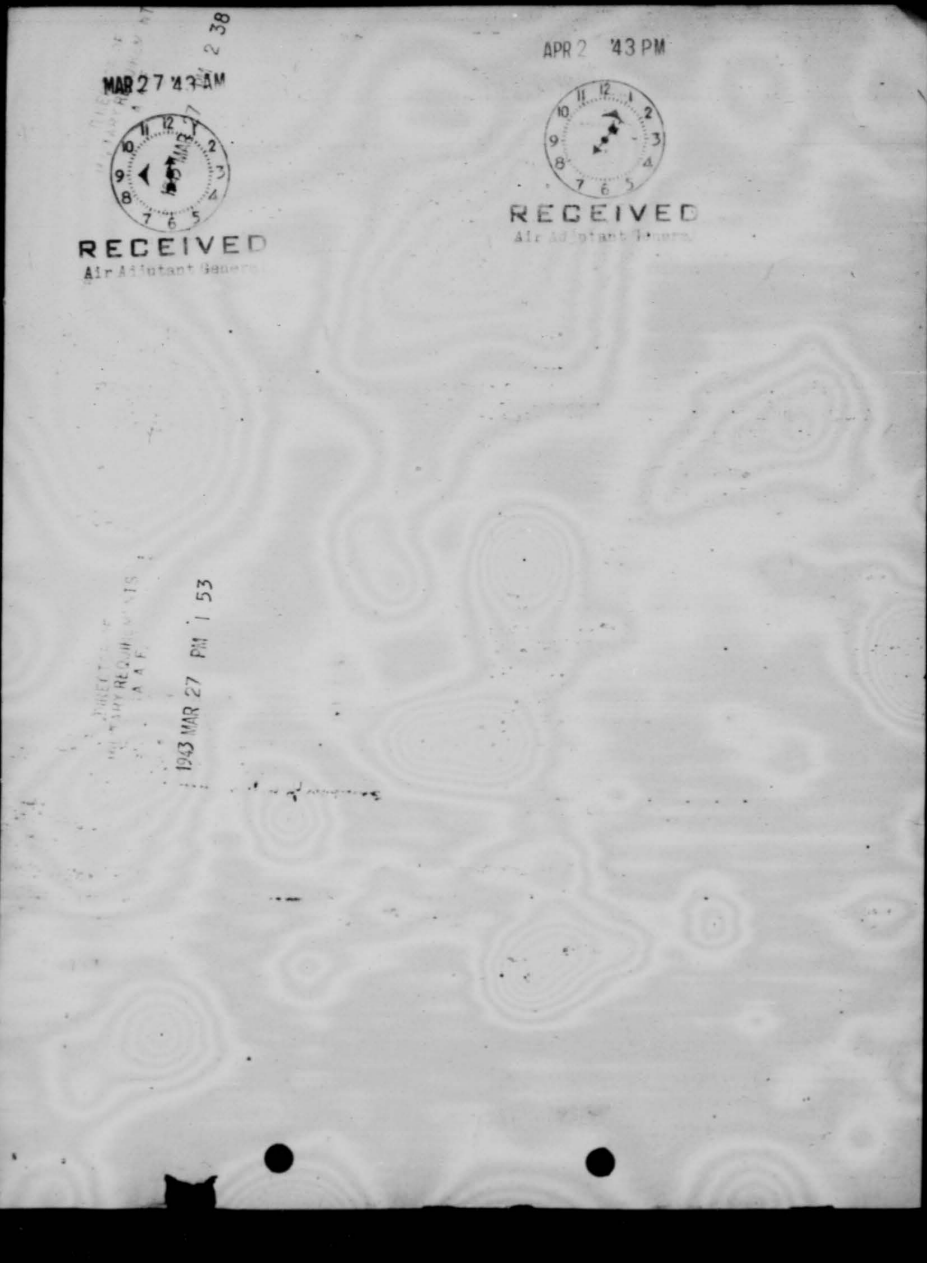
Incl-n/c

for

MERVIN E. GROSS,
Colonel, Air Corps.

4/2/43 file gpc

~~CONFIDENTIAL~~



MAR 27 11:38 AM



RECEIVED
Air Adjutant General

APR 2 4:33 PM



RECEIVED
Air Adjutant General

DIRECTOR OF
MILITARY REQUIREMENTS
U.S. AIR FORCE

1943 MAR 27 PM 1 53

DECLASSIFIED
500 Mem.
8 Jan & 20 June 1975
By: [redacted] IC; Date: [redacted]

HEADQUARTERS ~~CONFIDENTIAL~~ CLASSIFIED
ROUTING AND RECORD SHEET

TALLY NO.	1302
FILE NO.	1802

SUBJECT: Glide Bombs

TO: Asst. Chief of Air Staff, A-4
 FROM: Air Adjutant General
 DATE: March 10, 1943
 COMMENT NO. 1
 WDG: JB 5791

For remark and recommendation.

JCC
 JOHN B. COOLEY,
 Colonel, A.G.D.,
 Asst. Air Adj. Gen.

1 Incl.-
Memo fr Materiel Cmd.
dtd 3-8-43

To: The Commanding General, Materiel Command THRU
 The Director of Military Requirements.
 From: The Assistant Chief of the Air Staff, A-4.
 March 11, 1943
 Comment No. 2
 FR:mr/mbh/3151

1. Reference the inclosed memorandum from the Materiel Command dated March 8, 1943 on the above subject.
2. Project approved by Commanding General, Army Air Forces and having passed through critical development period should be continued. Production schedules as established, namely 2000 units per month, should be maintained at this level for the present.
3. Activities with these bombs are now being conducted in theaters of operation and close liaison must be maintained to check results. Reports of these operations when they become available will clearly determine the question of future production.

R.H.B.
 RICHARD H. BALLARD
 Colonel, G. S. C.

Incl. n/c
 Materiel Command THRU Bombardment
 Military Requirements

March 14, 1943
 FR:mf 6328

For comments and recommendations.

M.E.G.
 MERVIN E. GROSS
 Colonel, Air Corps

Incl: n/c

DECLASSIFIED

~~CONFIDENTIAL~~ 3-1109 A.F.

MAR 15 43 PM



OFFICE OF
DIRECTOR OF

DIRECTOR OF
MILITARY REQUIREMENTS
A. A. F.
1943 MAR 12 AM 10 35

DIRECTOR OF
MILITARY REQUIREMENTS
A. A. F.

1943 MAR 12 AM 11 20

~~CONFIDENTIAL~~ UNCLASSIFIED

HEADQUARTERS ARMY AIR FORCES
ROUTING AND RECORD SHEET

1468

TALLY NO.	MAT 922
FILE NO.	

SUBJECT: Glide Bombs

TO: Military Requirements

DATE March 16, 1943

FROM: Bombardment

COMMENT NO. 4
20/jem/5692

1. The Materiel Command has been contacted, and it was ascertained that the production rate on the present contract for 4300 units will be completed about May 1st. The production rate was reduced to 1000 units a month, in order to prolong the manufacture so as to hold the manufacturing facilities.

2. It is pointed out that the directive from A-4 is not complete enough to allow the Materiel Command to continue manufacture. It will be necessary to state exactly how many units are desired so that a contract can be placed. It is requested that A-4 advise at the time a statement of definite quantity is made whether the present rate of 1000 units a month is satisfactory, or whether production should be raised to 2000 units a month.

3. The Eighth Air Force has been advised that approximately 230 freight carloads of glide bomb materials, not including the 2000 lb. bombs which are already in the U.K., are awaiting shipment. Request for shipping schedule and priority was made.

4. It appears that due to delays beyond control in shipment of both personnel and materials that the answer expected in par. 3, comment 2 is being deferred more than anticipated originally.

[Signature]
E. J. BURMAN
Brig. Gen., U.S.A.

Incl:
n/c

TO: Asst. Chief Air Staff, A-4.

DATE: MARCH 22, 1943
Comment No. 5
FR:asc 6328 - 72448

FROM: Military Requirements

For your comments re Comment #4, above.

Incl. - n/c

[Signature]
MERVIN E. GROSS,
Colonel, Air Corps.

air 03 471.6 (258)

THIS PAGE IS DECLASSIFIED IAW EO 13526

DIRECTOR OF
MILITARY REQUIREMENTS
A.A.F.

1943 MAR 24 AM 11 52

DIRECTOR OF
MILITARY REQUIREMENTS
A.A.F.

1943 MAR 18 AM 9 52

DIRECTOR OF
MILITARY REQUIREMENTS
A.A.F.

1943 MAR 18 PM 2 06

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DECLASSIFIED
DOD ltr
9 Jan & 20 June 1974
By: [unclear] IC: Data [unclear]

ARMY AIR FORCES
Headquarters of the Materiel Command
Washington

DECLASSIFIED
CONFIDENTIAL

March 8, 1943

MEMORANDUM FOR: Deputy Chief of Air Staff
Room 5E-1031
Pentagon Building
Washington, D. C.

SUBJECT: Glide Bombs.

1. In accordance with directive as contained in memorandum for the Commanding General, Materiel Command, dated October 8, 1942, subject: "Glide Bombs", immediate action was taken to initiate procurement of 4300 wings, controls and gyros. These procurements were expedited and considerable pressure placed upon manufacturers in order to meet the March 1st date as indicated in the above mentioned directive. The facilities chosen were directed to reach a production rate of 2,000 per month and to anticipate a possible rate of 4,000 per month.

2. The Aeronca Company, which is manufacturing the wings with the aid of subcontractors, has now reached the 2,000 per month rate and will, in the very near future, have completed the total order of 4300. All mill work will have been completed before the middle of this month and unless these facilities are given additional contracts the source of supply of plywood, as well as the milling companies, will have to close down for lack of work or take up other lines of manufacture. This is particularly serious if additional procurement is to be made because our source of plywood will be lost and the jigs and fixtures now used for milling will be torn down and destroyed.

3. It is, therefore, most urgent that we obtain a decision regarding possible additional production immediately. Actually, this answer should have been available to us sometime ago in order that the flow would not be retarded. We have repeatedly asked the Director of Bombardment, who has been set up as the monitor of this project, for an answer, but they have stated that until definite programs are established by your office, they could not anticipate the future of this item of equipment.

S. E. MEYERS
Brig. General, U. S. A.

DECLASSIFIED

~~CONFIDENTIAL~~

air 054771.C (298)

~~CONFIDENTIAL~~
DECLASSIFIED

AFADS
EHR/hmh
3-26-43

Subject: Glide Bombs.

1st Ind.

War Department, Headquarters Army Air Forces, Washington, D. C. March 26, 1943.
To: The Commanding General, Materiel Command.

1. Necessary instructions with reference to the maintenance of facilities for the manufacture of glide bombs have been forwarded to your Headquarters in the Routing and Record Sheet, Comment No. 6, dated March 25 from the Director of Bombardment, subj: "Future Plans for Glide Bombs."

2. It is understood that this recommendation will insure the maintenance of facilities pending a definite statement of requirements.

By command of General ANHOLD:

RICHARD H. BALLARD
Colonel, G. S. C.
Assistant Chief of the Air Staff, A-4

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~~CONFIDENTIAL~~

Decl.

air 28 471.2 298

DECLASSIFIED
DDO 100
8 Jan. 4 30 June 1994
Spec. SEC. LO; Date 3/27

~~CONFIDENTIAL~~
DECLASSIFIED

9/1/43
P12

TO: Director of Military Requirements
FROM: Air Adjutant General

DATE: Mar. 27, 1943
Command No. 7
SEC: 25 5709

To note and return.

Incls 2-c

JOHN B. GOOLEY,
Colonel, A.G.C.
Asst. Air A. G.

Dispatched
MAR 27 1943
AAG

File
ei 3/28/43

OFFICE SYMBOL	1	2	3	4	5	6
RECEIVED BY						
APPROVED OFFICER						
GENERAL OFFICER						
COMMUNICATIONS						

~~CONFIDENTIAL~~

25 471-6 (328)

DECLASSIFIED
DOD ltr.
8 Jan. & 20 June 1974
By: JPLC: Date: 3/19/77

DECLASSIFIED
CONFIDENTIAL

Slide Bomb.

March 26, 1945

The Air Adjutant General
The Assistant Chief of the Air Staff, A-4.

HRB/hmh/3131

No further action is necessary. Attached is a copy of the indorsement to the memorandum from the Commanding General, Materiel Command.

RICHARD H. BALLARD
Colonel, U. S. G.

1. Incl. w/ copy of memo
Added - 1st Ind. (cy) to
CG, MC dtd 2-26-45, abv.
subj.

DECLASSIFIED
CONFIDENTIAL

see at 4/16 (200)

DECLASSIFIED
By DOD ltr.
8 Jan. & 20 June 1974
By JMW/LC; Date 3/27/77

~~CONFIDENTIAL~~
DECLASSIFIED

Wide Bombs

Asst. Chief of Air Staff, A-4

March 10, 1943

Air Adjutant General

WDO:JB 5791 ¹

For remark and recommendation.

JOHN B. COCKEY,
Colonel, A.C.D.,
Asst. Air Adj. Gen.

1 Incl.-
Memo fr Material Cnd.
dtd 3-8-43

Dispatched
MAR 10 1943
RHM

WDO:JB 5791
211

*File
OK
8/11/43*

OFFICE SYMBOL	1	2	3	4	5	6
SIGNATURE OF RESPONSIBLE OFFICER						
INTERNAL OFFICE COORDINATION						

~~CONFIDENTIAL~~

Car. ad 426.6 (292)

DECLASSIFIED

DOD Hist

8 Jan. & 20 June 1974

By: SP/ELC Date: 3/14/77

~~CONFIDENTIAL~~
DECLASSIFIED

ARMY AIR FORCES

HEADQUARTERS OF THE MATERIEL COMMAND

WASHINGTON

March 8, 1943

MEMORANDUM FOR: Deputy Chief of Staff
Room 3E-1031
Pentagon Building
Washington, D. C.

SUBJECT: Glide Bombs.

1. In accordance with directive as contained in memorandum for the Commanding General, Materiel Command, dated October 8, 1942, subject: "Glide Bombs", immediate action was taken to initiate procurement of 4300 wings, controls and gyros. These procurements were expedited and considerable pressure placed upon manufacturers in order to meet the March 1st date as indicated in the above mentioned directive. The facilities chosen were directed to reach a production rate of 2,000 per month and to anticipate a possible rate of 4,000 per month.

2. The Aeronca Company, which is manufacturing the wings with the aid of subcontractors, has now reached the 2,000 per month rate and will, in the very near future, have completed the total order of 4300. All mill work will have been completed before the middle of this month and unless these facilities are given additional contracts the source of supply of plywood, as well as the milling companies, will have to close down for lack of work or take up other lines of manufacture. This is particularly serious if additional procurement is to be made because our source of plywood will be lost and the jigs and fixtures now used for milling will be torn down and destroyed.

3. It is, therefore, most urgent that we obtain a decision regarding possible additional production immediately. Actually, this answer should have been available to us sometime ago in order that the flow would not be retarded. We have repeatedly asked the Director of Bombardment, who has been set up as the monitor of this project, for an answer, but they have stated that until definite programs are established by your office, they could not anticipate the future of this item of equipment.

B. H. MYERS
Brig. General, U. S. A.

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Aut. ac 471.6 (298)

DECLASSIFIED
DOD Ltr.
8 Jan. & 20 June 1974
By *JPL/LC*: Date *3/12/94*

DECLASSIFIED
CONFIDENTIAL

AAF 471.6

Disposal of Unexploded and Delayed Action Bombs Within the Continental United States

Air Adjutant General

HR 26194

Air Ordnance Officer

1
HR-9 HCF:aw 72342

It is requested that letter War Department, AGO, AS 471.6 (1-22-43) OB-S-C-M, February 5, 1943, subject: "Disposal of Unexploded and Delayed Action Bombs Within the Continental United States", be indorsed substantially as follows:

*1st Ind.

HEADQUARTERS ARMY AIR FORCES, ADJUTANT GENERAL'S OFFICE, WASHINGTON

- TO: Commanding Generals,
- First Air Force;
- Second Air Force;
- Third Air Force;
- Fourth Air Force;
- Air Service Command;
- Anti-Submarine Command;
- Technical Training Command;
- Flying Training Command;
- Material Command;
- Proving Ground Command;
- Troop Carrier Command;
- Air Transport Command;
- Army Air Forces School of Applied Tactics

ALL CB 471.6 (256)

1. For your information and guidance.

By command of Lieutenant General ARNOLD:

- 2 Incls.
- Incl. 1-Ltr WD, AGO, AS 471.6 (1-22-43) OB-S-C-M, Feb. 5, 1943, subject: Disposal of Unexploded and Delayed Action Bombs.

*File
sk
3/3/43*

DECLASSIFIED

1
air CB 471.6 (256)

~~CONFIDENTIAL~~

AMP 471.6

Disposal of Unexploded and Delayed Action Bombs within the Continental United States (continued)

FEB 26 1943

Air Adjutant General

Air Ordnance Officer

KRS-9 HCP:mv 7238 ¹

**Incl. 2-Ltr WD, AGO, AS 471.6
(1-22-43) OB-S-G-M,
Feb. 5, 1943, subject:
Delegation of Bomb Disposal
Duties to Commanding Officers
Of Units and Territories Outside
the Continental Limits of the
United States.**

**R. G. COUPLAND
Colonel, Ord. Dept.**

3 Incls.

**Incl. 1-Ltr WD, AGO, AS 471.6
(1-22-43) OB-S-G-M,
Feb. 5, 1943, subject:
Disposal of Unexploded and
Delayed Action Bombs Within
the Continental United States.**

**Incl. 2-Ltr WD, AGO, AS 471.6
(1-22-43) OB-S-G-M,
Feb. 5, 1943, subject:
Disposal of Unexploded
and Delayed Action Bombs.**

**Incl. 3-Ltr WD, AGO, AS 471.6
(1-22-43) OB-S-G-M,
Feb. 5, 1943, subject:
Delegation of Bomb Disposal
Duties to Commanding Officers
Of Units and Territories Outside
the Continental Limits of the
United States.**

~~CONFIDENTIAL~~
DECLASSIFIED

2 *Wicks 471.6*

(296)

~~CONFIDENTIAL~~

~~CONFIDENTIAL~~

DECLASSIFIED
DOD Inst.
8 Jan. & 20 June 1976
By: TSC/IC; Date: 3/24/77

WAR DEPARTMENT
The Adjutant General's Office
Washington

AG 471.6 (1-22-43)OB-S-C-M

VED/kls + 2B-939.

February 5, 1943.

SUBJECT: Disposal of Unexploded and Delayed Action Bombs.

TO: Chief of Ordnance,
Chief of Chemical Warfare Service.

1. Letter, this office, February 5, 1942, AG 471.6 (1-7-42)MSC-C-M, subject as above, is rescinded.

2. The revised War Department policy with regard to responsibility for the disposal of unexploded and delayed action bombs and the training in connection therewith will be as follows:

a. Defense command, service command and field force commanders will be responsible for disposal of all unexploded and delayed action bombs in accordance with War Department policies as noted in the following letters:

(1) AG 471.6 (1-22-43)OB-S-C-M, February 5, 1943, subject: Disposal of Unexploded and Delayed Action Bombs within Continental United States.

(2) AG 471.6 (1-22-43)OB-S-C-M, February 5, 1943, subject: Delegation of Bomb Disposal Duties to Commanding Officers of Units and Territories Outside the Continental Limits of the United States.

b. The Ordnance Department will be responsible for:

(1) Supervision of research in methods of disposal in coordination with appropriate technical agencies.

(2) Preparation of technical manuals and literature for distribution to the Army and Office of Civilian Defense in coordination with appropriate technical agencies.

(3) Providing advice and information on training methods and organization.

(4) Liaison for the War Department with the Navy Department on technical matters.

(5) Maintaining and operating a bomb disposal school for the training of selected personnel in disposal methods and allied subjects.

c. The Chief of Ordnance is authorized to conduct direct correspondence on technical matters with bomb disposal officers of service commands, defense commands, overseas bases, departments and theaters.

Incl #2

~~CONFIDENTIAL~~

DECLASSIFIED

~~CONFIDENTIAL~~

~~CONFIDENTIAL~~

AG 471.6 (1-22-43)OB-S-C-M

(Cont'd)


February 5, 1943.

d. The Chief of Chemical Warfare Service will be responsible for cooperation with the Ordnance Department in the training of military and civilian personnel in the identification and handling of chemical bombs.

e. The Office of Civilian Defense will be responsible for the following measures in the continental United States, exclusive of military and naval reservations and theaters of operations:

- (1) The disposal of incendiary bombs.
- (2) The extinguishing of fires.
- (3) Bomb recognition, to include the ability to distinguish between different types of bomb craters, parachute flares, or mines, etc.
- (4) The locating and reporting, to the proper agency, of unexploded bombs for disposal by military personnel.
- (5) The immediate application of safety precautions at the site of the unexploded bomb.
- (6) The selection of civilians, in numbers recommended by the various service commands, for attendance at Army-operated bomb disposal courses, provided no expense to the Army is involved.

By order of the Secretary of War:


Adjutant General.

COPIES FURNISHED:

Chief of Naval Operations;
The Commanding Generals,
Army Ground Forces;
Army Air Forces;
Services of Supply;
The Commander-in-Chief, Southwest
Pacific Area;
The Commander-in-Chief, Allied Forces;
The Commanding Generals,
Defense Commands;
Departments;
Theaters;
Service Commands;
Base Commands;
The Commanding Officers,
Base Commands;
The Inspector General;
Directors, Staff Divisions, SOS;
Chiefs of Services, SOS;
Divisions of the War Department
General Staff;
Director, Office of Civilian Defense. - 2 -

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WAR DEPARTMENT
The Adjutant General's Office
Washington

DECLASSIFIED
DOD Item
8 Jan. & 20 June 1974
By: ~~SP-1~~ LC; Date: 3/22/7

AG 471.6 (1-22-43)CE-S-C-M

VED/kls - 2B-939.

February 5, 1943.

SUBJECT: Delegation of Bomb Disposal Duties to Commanding Officers of Units and Territories Outside the Continental Limits of the United States.

TO: The Commander-in-Chief, Southwest Pacific Area;
The Commander-in-Chief, Allied Forces;
The Commanding Generals,
Alaska and Caribbean Defense Commands;
Departments;
Theaters of Operations;
Northwest Service Command;
Base Commands;
The Commanding Officers,
Base Commands.

1. Letter, this office, June 17, 1942, AG 471.6 (5-7-42)MS-E-W, subject as above, is rescinded. The War Department policy in regard to responsibilities in this matter is contained herein.

2. Reference is made to letter, this office, AG 471.6 (1-22-43)OB-S-C-M, February 5, 1943, subject: Disposal of Unexploded and Delayed Action Bombs.

3. The Ordnance Department has set up a bomb disposal school to train officers and selected enlisted men in bomb disposal methods. Bomb disposal companies, T/O 9-177 (7 OFF - 167EM), have been trained and are now being assigned to stations in accordance with War Department instructions.

4. The Ordnance Department is training Ordnance Bomb disposal officers who are qualified to advise and train key civilians in order that they may be able to properly recognize signs of unexploded bombs or other objects which may be dropped from the air. These Ordnance bomb disposal officers are also qualified to advise with regard to the establishment of proper channels for reporting unexploded bombs.

5. You are responsible for the following:

a. The disposal of all unexploded and delayed action enemy bombs within your zone of jurisdiction, to include military establishments and such civilian areas as may be found necessary in the interests of the war effort.

b. The training of such civilian defense personnel as may be within your zone of jurisdiction, and found necessary in the interests of the war effort.

Incl. #3

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~~CONFIDENTIAL~~

AF 471.6 (1-22-43)CB-S-C-M

(Cont'd)

February 5, 1943.

c. The training and operation of bomb disposal personnel and bomb disposal units assigned to your command.

d. The submission of recommendations concerning the assignment to your command of such additional bomb disposal personnel and equipment as may be considered necessary.

e. The dissemination of technical literature, information, or other jurisdictional matter as supplied to you by the Chief of Ordnance and the Adjutant General.

f. The transmission of information on new enemy bombs or other objects dropped from the air, directly to: Military Training Division, Office of the Chief of Ordnance, Pentagon Building, Washington, D. C. By "Information" is meant reports of disposal activities, photographs, bomb fragments and actual bombs and fuzes.

5. a. For your information, the responsibilities of the Ordnance Department in this matter are as follows:

(1) The supervision of research in methods of disposal, in coordination with appropriate technical agencies.

(2) The preparation, in coordination with appropriate technical agencies, of technical manuals and literature for distribution to the Army and Office of Civilian Defense.

(3) The provision of advice and information on training methods and organization for the Army and Office of Civilian Defense.

(4) The provision of advice and information to the Assistant Chief of Staff, G-1, War Department General Staff, on assignment of trained officers.

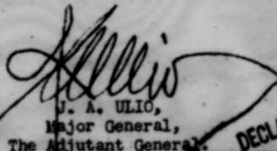
(5) The maintenance for the War Department of liaison with the Navy Department, Office of Civilian Defense and other civilian agencies.

(6) The maintenance and operation of a bomb disposal school for the training of selected personnel in disposal methods and allied subjects.

b. The Chief of Ordnance is authorized to conduct direct correspondence on technical matters with bomb disposal officers of service commands, defense commands, overseas bases, departments and theaters.

By order of the Secretary of War:

(For Copies Furnished, see Page 3).


J. A. ULIO,
Major General,
The Adjutant General.

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AG 471.6 (1-22-43)OB-S-C-M

(Cont'd)

February 5, 1943.

COPIES FURNISHED:

Chief of Naval Operations;
Commanding Generals,
Army Ground Forces;
Army Air Forces;
Services of Supply;
Eastern, Western, Central and
Southern Defense Commands;
First through Ninth Service Commands;
Military District of Washington;
The Inspector General;
Directors, Staff Divisions, Services of Supply;
Chiefs of Services, Services of Supply;
Divisions of the War Department General Staff;
Director, Office of Civilian Defense.

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DECLASSIFIED
6 Dec. & 29 June 1974
by *SP-10 LCI DAW*

HEADQUARTERS ARMY AIR FORCES

ROUTING AND RECORD SHEET

SECRET

TALLY NO.	
FILE NO.	AAF 471.6

SUBJECT: Cable AMSME AF 11, February 18, 1943

TO: Chief of Air Staff.
FROM: Air Ordnance Office

DATE
COMMENT NO. 1
JMG:vb 72837

1. Reference Cable AMSME AF 11, February 18, 1943, information substantially as follows will be sent by Director of Bombardment in reply to this cable:

- a. Impractical to modify B-24D planes in field for carrying American 4000 lb. bombs.
- b. External racks necessary, of which 200 are on order and about 10 available at the present time with delivery schedule of 1 kit per day. Impossible to carry 4000 lb. bombs internally.
- c. Modification Centers can install rack kits on replacement B-24D planes immediately. Requested Cairo replacement B-24D desired in theater with external rack kit installation.
- d. Recommended use of American AN-M56 (4200 lb.) bomb for precision bombing due to superior ballistic qualities over that obtained with British bombs. External racks not considered for British bombs, and additional modification and delay would be required.

2. Informed theater of possible low order detonation of bomb when hit from 300 yards by caliber .50 tracer, ball, or armor-piercing ammunition. 20mm more certain. Also suspicion of fuze icing over on external mounting in high altitude flights. Thirty m.p.h. loss of air speed and corresponding loss on altitude and range would result.

*SES
To note*

W. H. Coupland
R. C. COUPLAND
Colonel, Ord. Dept.
Air Ordnance Officer

*File
ci 2/24/43*

[Handwritten initials]

*File
MMA*

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112

DECLASSIFIED
DOD - Item
8 Jan. & 20 June 1974
By: ~~SP-1~~ L.C. Date: 3/19/77

~~SECRET~~
DECLASSIFIED

Operational Use of Glide Bombs.

Director of Military Requirements
Chief of the Air Staff

13 Feb. 43

5
ML/ndg/5265

The recommendation that the operational use of glide bombs be deferred until approximately May 1, 1943 is approved.

Dispatched

FEB 18 1943

AAQ

GEORGE E. STRATHEMER,
Major General, U. S. Army,
Chief of the Air Staff.

air 05 471.6 (293)

File of 4/4/43
a. 2/1/43

DECLASSIFIED

air 05 471.6 (293)

DECLASSIFIED
EOD Item
8 Feb. & 20 June 1974
By: ~~SP-1~~ Date: 3/16/77

~~SECRET~~

TO: Deputy Chief of the Air Staff
FROM: Dir. Military Requirements

DATE: Feb. 9, 1943

COMBENT NO. 15
REQrvk 3020

1. Concur in the recommendation of the Director of Bombardment that the operational use of these bombs be deferred, and that the earliest possible date at which combat use should be started is approximately May 1.

DAVENPORT JOHNSON,
Major General, U. S. Army.

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air 05 471.6

593

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DOD IAW
8 Feb. & 30 June 1974
By: [unclear] Date: 3/27/77

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DECLASSIFIED

Operational Use of Glide Bombs
General Stratemeyer
Director of Military Requirements

2/5/43

DJ:br 6770

471.6
293

1. Forwarded for your information.

DAVENPORT JOHNSON,
Major General, U. S. Army.

TO: Director of Military Requirements
FROM: Deputy Chief of the Air Staff

date: 2/7/43

COMMENT NO. 3
WER/mag/5246

Per comment to include your recommendation as to action which should be taken in view of Comment #1.


Dispatched
Feb 8 1943
AAG

T. J. HANLEY, JR.,
Brigadier General, U. S. A.,
Deputy Chief of the Air Staff.

471.6
2/8/43

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471.6 293

DECLASSIFIED DDOD ltra. 8 Jan. & 20 June 1974 By <u>SP-6/LO</u> ; Date <u>3/2/77</u>		HEADQUARTERS ARMY AIR FORCE ROUTING AND RECORD SHEET SECRET		TALLY NO FILE NO
SUBJECT: Development of an aerial torpedo			6371 TJH:nl	
ITEM NO.	FROM	TO	DATE	COMMENTS
1.	AFDAS	Material Command	12-16	<p>1. General Arnold directs that the Army Air Forces take immediate steps to develop an aerial torpedo. It is realized that some discussion has been had with the Navy on this matter and many objections have been interposed. Our development is not to be a modified Navy type. It is to be designed for dropping at a speed not less than 250 miles per hour and a range of over 2,000 yards is not required. The utmost speed is desired on this project.</p> <p style="text-align: right;">  T. J. HANLEY, JR. Brigadier General, U. S. A. Deputy Chief of the Air Staff. </p>
2.	AFAMC-SA	AFDAS	1942 12-25	<p style="text-align: right;"> <i>Supp</i> 163:EM (4862 of 71146) </p> <p>1. In view of the above directive, the Navy was contacted to determine the characteristics of torpedoes which are now in production, and to determine what development projects are now in process or contemplated. The following information was obtained:</p> <p>a. Mark 13, Mod. 1 Torpedo:</p> <p>(1) There is attached a graph showing the present speeds of release and altitudes at which this torpedo can be released. All speeds and altitudes within the shaded portion are satisfactory. It will be noted from this graph that this torpedo is suitable for release at 225 knots from a maximum altitude of 400 ft.</p> <p>b. Mark 13, Mod. 2 Torpedo:</p> <p>(1) This torpedo has been standardized in lieu of the Mark 13, Mod. 1. This torpedo has a water speed of 285 knots and it is anticipated that the actual production article will be suitable for release at approximately 280 miles per hour. However, until actual production articles are available, this point cannot be checked. In the meantime and in order to take advantage of the increased speeds, so-called Mark 13, Mod. 2 torpedoes are being produced in actual production lines now. However, this present production Mark 13, Mod. 2 is only a souped up, slightly changed Mark 13, Mod. 1 and, therefore, the same speeds of release and altitudes govern. The Navy states that the real production article is anticipated sometime in</p> <p style="text-align: right;"> <i>4862 of 71146</i> <i>497.6</i> <i>285</i> </p>
<p>1/2 20/74 Heo</p> <p style="text-align: center;">SECRET</p> <p style="text-align: right;">a-o-b 471.6 (22) 3-109 AF</p>				

EXECUTIVE OFFICE RECEIVED

1942 DEC 17 AM 11 06

MATERIEL COMMAND
ARMY AIR FORCES
WAR DEPT., WASH., D.C.

HEADQUARTERS ARMY AIR FORCE
ROUTING AND RECORD SHEET
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TALLY NO.	
FILE NO.	

SUBJECT: Development of an aerial torpedo.

IGB:EM (4262 or 71146)


ITEM NO.	FROM	TO	DATE	COMMENTS																											
2.	AFAMC- cont. SA	AFDAS	1942 12-23	<p>March, after which additional dropping trials will be made and definite limitations established.</p> <p><u>2. Modification of the Mark 13, Mod. B1</u></p> <p>The Navy also has under development a new type torpedo which employs the same basic principles as the present torpedo but is being designed with the following characteristics:</p> <ol style="list-style-type: none"> (1) 380 knot speed of release at 600 ft. altitude. (2) 500 knot arming speed, that is, the present safety wire, as applied to Mark 13, Mods. 1 and 2 torpedoes, will not be necessary to insure against air arming. (3) Arming time in water travel 180 yards. (4) Both impact and magnetic method of detonation. (5) A water range of approximately 3000 yards. (6) Speed a minimum of 45 knots. (7) Maximum diving depth of 80 feet. (8) A minimum of 600 pounds explosive. <p>2. The production rate of the Mark 13 Torpedo, that is, all aircraft torpedoes, has been and is as indicated in the chart below:</p> <table style="margin-left: 40px;"> <tr><td>October</td><td>-</td><td>253 (actual)</td></tr> <tr><td>November</td><td>-</td><td>260 (actual)</td></tr> <tr><td>December</td><td>-</td><td>337</td></tr> <tr><td>January 1943</td><td>-</td><td>223</td></tr> <tr><td>February</td><td>-</td><td>308</td></tr> <tr><td>March</td><td>-</td><td>434</td></tr> <tr><td>April</td><td>-</td><td>620</td></tr> <tr><td>May</td><td>-</td><td>755</td></tr> <tr><td>June</td><td>-</td><td>870</td></tr> </table>	October	-	253 (actual)	November	-	260 (actual)	December	-	337	January 1943	-	223	February	-	308	March	-	434	April	-	620	May	-	755	June	-	870
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HEADQUARTERS ARMY AIR FORCE
ROUTING AND RECORD SHEET

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TALLY NO	
FILE NO	

SUBJECT: Development of an aerial torpedo.				IGB:LM (4962 or 71146)
ITEM NO.	FROM	TO	DATE	COMMENTS
2.	AFMAG-ent, SA	AFDAS	1942 12-23	<p>3. The British Air Commission was also contacted to determine what their present and future prospects were with respect to torpedoes and the following information has been obtained:</p> <p>They have developed a torpedo which they hope to be able to release at dropping speeds of 200 knots at a height of 400 feet. These torpedoes in tests have actually been dropped at 225 knots and 300 foot altitude with success. They envisage a range of 2500 yards and a water speed of 80 knots. They have an engine in this torpedo now which is good for 40 knots. When the war head is filled with Torpex, it has a weight of 600 lbs. of explosive.</p> <p>4. In view of the above, information is requested as to whether or not the Army Air Forces, through the Ordnance Department who has been designated as the agency responsible for the procurement, maintenance and supply of aircraft torpedoes by memorandum for the Chief of Ordnance under date of January 16, 1942, subject: "Aircraft Torpedoes" and signed by the Assistant Chief of Staff A-4, should undertake the further development of aerial torpedoes within the characteristics indicated in first entry.</p> <p style="text-align: right;">  John T. Murtha, Jr. Colonel, Air Corps Chief, Armaments Section Brig. General, U.S.A. Assistant Chief of Staff (R) </p> <p>Incl.: Graph.</p>

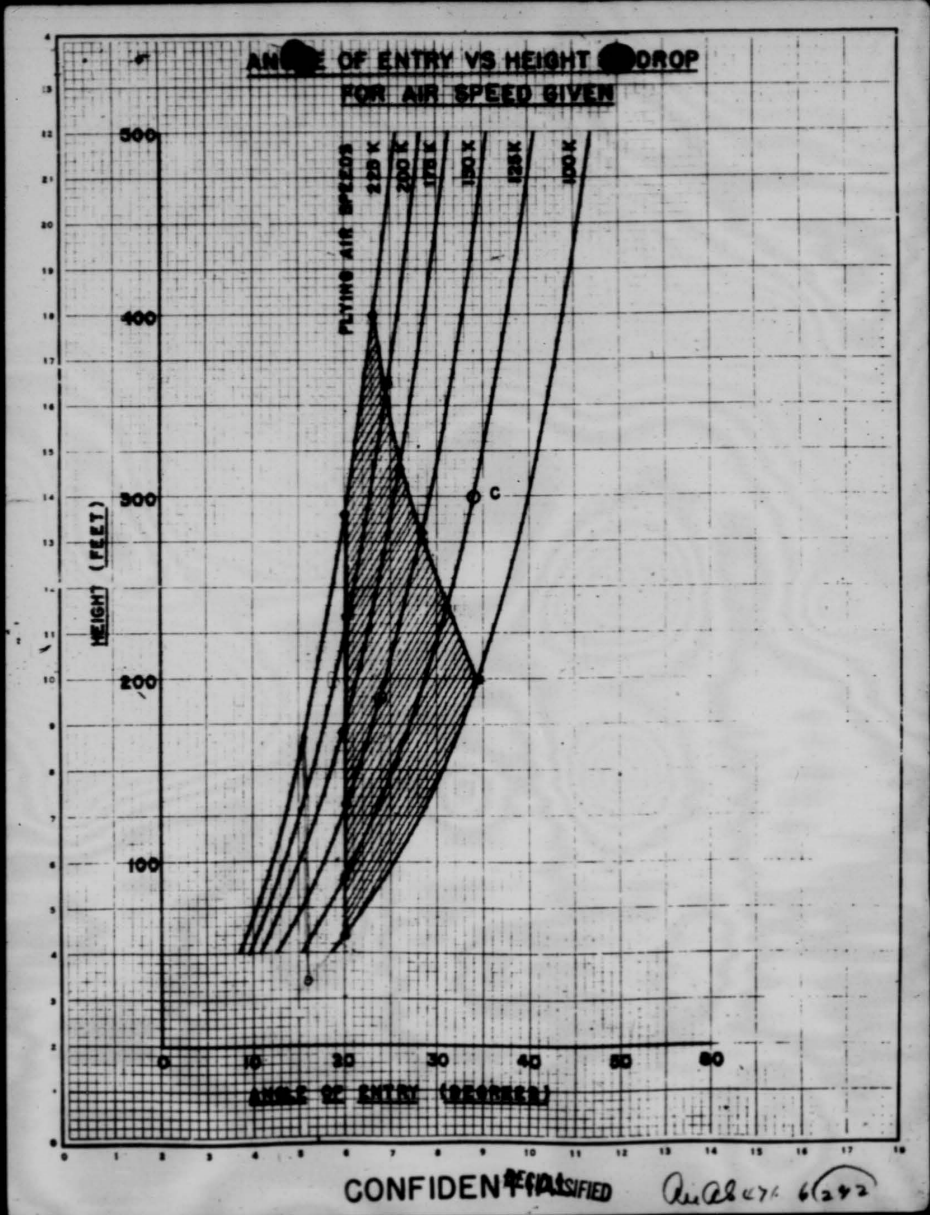
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Air Assistant General

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 DOD Hqs.
 8 Jan. & 20 June 1974
 BY: SP-1G; Date: 3/10/77

HEADQUARTERS ARMY AIR FORCE
 ROUTING AND RECORD SHEET

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File No. AAG 4210

Note -- A line will be drawn across sheet after each comment.

Tally No. AAF _____

SUBJECT: Aerial Torpedoes and Skip Bombing.

NO.	FROM	TO	DATE	COMMENTS
1.	General Arnold	Director Military Requirements	1942 12/1	<p>The more I think of the present problem facing our Air Force with regard to destruction of enemy shipping, and in fact their problem of destruction of our own shipping, I am convinced that the Nation which develops aerial torpedoes and skip bombing to the maximum extent will have a distinct advantage. Time and time again we have had wonderful opportunities to use either torpedoes or skip bombing and we haven't used them. Time and time again the Germans and Japs have had the same opportunity, but did not take advantage of it. I must admit the Japs have used torpedoes more often than either the Germans or ourselves. Their aerial torpedo attacks have generally borne fruit.</p> <p>We have instituted aerial torpedo schools and means whereby we secure additional information relative to the technique of skip bombing, but we haven't taken either one of them seriously.</p> <p>From my point of view, an aerial torpedo or skip bombing attack has a 90% chance of being successful, while a high altitude or medium altitude bombing attack has as a maximum about a 10% chance of being successful on surface ships.</p> <p>With the above in mind, will you delve into this matter and let me have your reactions?</p> <p style="text-align: right;"><i>W. H. R.</i></p>
2.	General Arnold		12/28	<p style="text-align: right;">23:ml 6458</p> <p>1. There certainly is no doubt about the effectiveness of properly executed minimum altitude-attack bombs or torpedoes; but the comparative novelty and obviously greater risk of skip bombing, along with many difficulties in the development of suitably rugged delay fuses, have caused a decided hesitation on the part of various commanders to use this technique. The use of torpedoes has</p>

(Do not use reverse side)

F-071. AF. Rev. 10-1-41

- 1 -

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471.6 (258)

DIRECTOR OF
MILITARY REQUIREMENTS
A. A. F.

1942 DEC 2 PM 2 57



DEC 2 1942

HEADQUARTERS ARMY AIR FORCES
ROUTING AND RECORD SHEET

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File No. _____

Tally No. AAF _____

SUBJECT: Aerial Torpedoes and Skip Bombing.

NO.	FROM	TO	DATE	COMMENTS	23:ml	6456
2. (Cont'd)		General Arnold	1942 12/26	<p>been similarly retarded by a general lack of field knowledge and training as well as by considerable misinformation on the subject.</p> <p>2. When it is feasible to use minimum altitude tactics, it is believed that correctly executed skip bombing or torpedo attacks have greater chances of accomplishing the desired results against maneuvering surface vessels than medium and high altitude level attacks. However, there are certain conditions where minimum altitude attacks are preferable and other conditions which either completely preclude such tactics, or make it excessively expensive. Both types of bombing are believed to have their proper places, but it is not thought that a generalised comparison can be made without danger of creating the erroneous impression that one type of attack is always preferable or that one type of airplane can be efficiently substituted for another.</p> <p>3. There is a definite requirement for attacks at ranges which are beyond the present capabilities of aircraft sufficiently maneuverable and comparatively expendable, to justify the chances which must be taken at minimum altitudes. Since heavy bombers, properly employed, can generally defend adequately from fighter attacks, a certain number can make several high or medium altitude attacks, at either long or short ranges, to obtain the same aggregate assurance of success which minimum altitude attacks by the same airplanes might attain in one mission but possibly with anti-aircraft losses so excessive that subsequent attacks are prevented.</p> <p>4. It is believed that, as the supply of airplanes, bombs and torpedoes approaches more closely the type distribution actually needed, with improvement in the bombardment knowledge and experience level of all commanders up through theater commanders, there will be a marked improvement in the selection of bombing methods to the end that the most economical means will generally be employed. In any event, the true merits of the bombing of all types can be demonstrated only</p>		

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F-4071, AF. Rev. 8/18/41

Page No. - 2 -
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HEADQUARTERS ARMY AIR FORCES
ROUTING AND RECORD SHEET

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File No. _____

Tally No. AAF _____

SUBJECT: Aerial Torpedoes and Skip Bombing.

NO.	FROM	TO	DATE	COMMENTS
2. (Cont'd)	General Arnold		1942 12/28	<p>when the various field commanders realize fully the capabilities as well as the limitations of their air arms of various types.</p> <p>5. The fuse problem which has definitely discouraged minimum altitude bombing has been solved to the extent that a reasonably effective fuse is now being supplied but not yet in quantity. Eglin Field has conducted many experiments which have resulted in the partial solution and further improvement is expected. Torpedo and training and the distribution of information have been accelerated. In general, interest has been aroused by results reported occasionally, and it is believed that the employment trend is now in the right direction. Although startling improvement cannot be expected immediately, it is believed that results will now gradually approach those which are known to be possible from correct employment of properly trained bombing units of all types.</p>

25:ml 6458

DEC 26 42 PM



RECEIVED
Air Adjutant General

E.L.M.
E. L. MURPHY
Brig. General, U.S.A.

4E 134

Gen. H. Dandson Sunday
Read this & see me tomorrow morning-

4.C.O. *General*

noted 4.C.O.

HHA
[initials]

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FORM 1, AF. Rev. 8/16/41

DECLASSIFIED
DOD Inv.
8 Jan. & 20 June 1974
By: [Signature] LC: Date 3/17/77

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6371
TJH:nl

Development of an aerial torpedo

1. AFDAS Material 12-16
Command

1. General Arnold directs that the Army Air Forces take immediate steps to develop an aerial torpedo. It is realized that some discussion has been had with the Navy on this matter and many objections have been interposed. Our development is not to be a modified Navy type. It is to be designed for dropping at a speed not less than 250 miles per hour and a range of over 2,000 yards is not required. The utmost speed is desired on this project.

Dispatched
DEC 16 1942
AAG

File
6

[Redacted], JR.
Brigadier General, U. S. A.
Deputy Chief of the Air Staff.

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Mr. Will
air 471.6 (292)

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Controllable Bomb Program

3373
GSE/hd

3 AFGAS Director 1962
of 12-11
Military
Requirements
Attn:
Dir. of
Bombardment

1. Your attention is invited to General Arnold's comment #2 which directs that immediate action toward operation of an ample supply of glide bombs be taken. He disapproves action on the production of power-driven bombs, as materials for these bombs would interfere with combat airplane production.

Dispatched

DEC 11 1942

AGG

Incls n/o

GEORGE E. STRATHMYER,
Major General, U.S.A.,
Chief of the Air Staff.

41 21 471.6 590

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air 45 471.6 590

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A DOD Inv.
3 Jan. & 20 June 1974
By: SP4/MLC; Date: 3/14/77

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Controllable Bomb Program.

20/jem 72485

1. AFMFB AFGAS 1942
Thru 12/5
AFDMR

1. The glide bomb program has been initiated by AFAEP, in memorandum dated October 8, 1942, to Commanding General, Materiel Command. This directorate is monitoring the project, in accordance with instructions.

2. However, the directive referred to above covers only the glide bomb and television intelligence. Information is requested on the decision on other forms of controlled bombs. AFAEP in the study "Program for the Employment of Controllable Bombs", recommends in item 4, page 12:

"That pending successful test of Interstate power-driven bombs to be tested by the U. S. Navy, production orders be placed for 500 power-driven bombs of the 2000 lb. type with a range of at least 1000 miles, and 1700 miles if obtainable."

3. It is believed that the power-driven bomb with suitable intelligence controls represents one of the best possibilities in controlled missiles. If approval is given to AFAEP's recommendations, directive to Materiel Command will be prepared, initiating procurement of the necessary powered structures.

E. L. EUBANK
Brig. Gen., U.S.A.

Cc-AFAEP

2 General GAS 12-11
Arnold

Approved for immediate action toward operation of ample glide bombs only.

s/s HRA

CC-AFDNR

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DIRECTOR OF
MILITARY REQUIREMENTS
A. A. F.

1942 DEC 5 PM 5 28

DIRECTOR OF
MILITARY REQUIREMENTS
A. A. F.

1942 DEC 8 PM 2 27

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8 Jan. & 20 June 1974
BY: SHELIC; Date 3/18/77

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2. AFMAG AFMAG-5A 1942
11/17

ALM/rj 2266

For preparation of reply.

Dispatched

NOV 17 1942

AGY

Incl,
n/c

ALVIN L. WENMYER, JR.
1st. Lieut., A. G. D.
Ass't Air Adjutant General

201 205 471.6 (286)

OFFICE SYMBOL	1	2	3	4	5	6
SIGNATURE OF RESPONSIBLE OFFICER	<i>[Signature]</i>					
INTERNAL OFFICE COORDINATION	<i>[Signature]</i>					

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MDAC-442-WF-2-17-45-60M

~~CONFIDENTIAL~~

INTER-OFFICE MEMORANDUM

WAR DEPARTMENT, AIR CORPS
OFFICE, CHIEF, MATERIEL DIVISION
WASHINGTON

DECLASSIFIED
A. BOB IRL
8 Feb. & 20 June 1974
By: *[Signature]* Date: *3/21/77*

Automatic Bomb Control for Use in A8-11 Airplane - Invention of Mr. D. L. Winters, 5674 Belvedere Avenue, Los Angeles, California.

TO:

AO3:evb 4922 or 71148

1. AFANGSHEJHEH: 1942
APWAG 11/16

1. The subject invention has been reviewed by the Materiel Center, Wright Field, Dayton, Ohio, and their recommendations are forwarded for your office to make necessary reply to Mr. Winters. The descriptive data furnished do not indicate an idea of sufficient merit to warrant further consideration.

2. In view of the fact that the text submitted indicates that the ballistics of free falling bodies in air have not been considered, it is suggested that the inventor be advised to conduct further study on the subject.

Incl.
ltr. fr. D.L. Winters
dated 9/42 w/incl.

D. V. CHILMAN
Brig. General, U.S.A.
Asst. Chief of Staff (M)

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CO 721

DECLASSIFIED
DOD Itra
8 Jan. & 20 June 1974
By: S/MFLC: Date: 3/8/77

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WAR DEPARTMENT
HEADQUARTERS ARMY AIR FORCES
WASHINGTON

AFRDB
20/3am
11/24/42
R.4309
Ex. 72485

DEC 4 1942

MEMORANDUM FOR ASSISTANT CHIEF OF STAFF, G-4,
WAR DEPARTMENT GENERAL STAFF.

SUBJECT: Controlled Missiles.

1. Reference is made to the attached memorandum from Assistant Chief of Staff, G-4, in which is requested a list of controlled missiles desirable for use, and the order of the priority of development.
2. It is requested that first priority be assigned to the procurement of component parts and to the service testing of the uncontrolled, stabilized glide bomb.
3. It is requested that first priority be given concurrently to the development and production of radar and television systems of intelligence. These two systems could be adapted to either the glide bomb or the power bomb.
4. It is desired that a priority, secondary to the first priority requested in paragraph 2 above, be assigned to the development and production of the air frame for powered bombs. It is believed that the development of this powered structure should be expedited to the maximum extent that is possible without interfering with the proposed use of the uncontrolled, stabilized glide bomb. The powered structure should meet the minimum requirements of carrying a 2000 lb. bomb load a minimum of 1000 miles at a speed of approximately 200 miles per hour.
5. It is recommended that further definition of priority assignment in controlled missile projects be delegated to a Steering Committee on Controllable Missiles, on which the Army, Navy and N.E.R.C. would be represented.

582 9168 50MP

George E. Stratmeyer,
Major General, U. S. A.
Chief of the Air Staff.

Dispatched
DEC 4 1942

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DOD ltr.
8 Jan. & 20 June 1974
By: *SP/CLC*; Date: *3/24/77*

Controlled Missiles

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3375
OES:al

1. AFCS Director 11-11
of
Military
Require-
ments.

1. It is desired that you comply with a request made in the enclosed memorandum from the Assistant Chief of Staff, G-4. This reply will be prepared for my signature and will be returned to this office by November 18th, if this is possible; if not, as expeditiously as it can be done.

GEORGE E. STRATEMYER
Major General, U.S.A.
Chief of the Air Staff

4716
285

Incls: Memo to CG,AAF from Gen Moses, HQ-9-42
Summary report on controlled missiles
dated 9-17-42. Annex report on controlled
Missiles.

Dispatched
NOV 12 1942

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Ans. H. [unclear]
all 20 4716 285

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DDOJ 11/26/74
9 Dec 80 Form 1074
By: [Signature] Date: 10/27

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Glide Bombs

47116
279

WHH:JT 5246

3 AFCS AFANC 1942
10-24

R & R.

1. Inviting your attention to Item #2 of attached

2. Your remark concerning a staff officer becoming involved in detailed engineering designs is definitely sound; however, this was a special case since the Plans Division had been instructed by this office to prepare a letter to General Spantz on this subject.

3. It is therefore directed that the request contained in paragraph 5, Item #2 be complied with.

File
or

Incls.
n/c

GEORGE E. SHANNON
Major General, U. S. Army
Chief of the Air Staff

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47116 279

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DOD Item
8 Jan. & 20 June 1976
By: SP1/ELC; Date: 3/14/77

Slide Bomb

WH:JT 5246

1 APR 1942 1942
10-19

For comment and return to this office.

Dispatched
MCI 20 1942
AAN

1 Encl.
Hans 10-16-42 fr Gen
Scholz w/ 1 Encl.

WILLIAM E. HALL
Colonel, U. S. C.

9/1/47
445

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air 24 474.6 279

DECLASSIFIED
DOD Hqs.
8 Jan. & 20 June 1984
By: SP-1C; Date: 3/2/87

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Stabilized Bombing Development and Skip Bombing Project.

LSK:fjw 6371

1. AFDM AFARP 1942
Colonel 10/14
R. P.
Williams

1. Please note the inclosed reply from General Andrews to the data you prepared for transmission to him.

2. If any further data on this subject are now available for General Andrews, it will be appreciated if they be assembled and a letter of transmittal be prepared for my signature or General Arnold's signature.

3. General Andrews' reference to a demonstration in December should be handled substantially as follows—Please give us two weeks warning and we will be delighted to have demonstrated for you all phases of the bombing and other projects now under way at Eglin Field.

4. No action will be taken at this time to prepare Eglin Field for any special demonstration for General Andrews.

4711.6 (278)

L. S. KUTER,
Brigadier General, U.S.A.,
Deputy Chief of Air Staff.

Incl:
Ltr fra Gen. Andrews
to Gen. Kuter dated 10/10
re above subj.

Copy to Director of Military Requirements.

Dispatched

OCT 15 1942
AAG

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(u) 42 4711.6 (378) Mr. Gray

SECRET
DECLASSIFIED

HEADQUARTERS CARIBBEAN DEFENSE COMMAND

Office of the Commanding General /dt

Quarry Heights, Canal Zone

October 10, 1942.

AIR MAIL

Brigadier General Laurence S. Kuter, U.S.A.,
Deputy Chief of the Air Staff,
Headquarters of the Army Air Forces,
Washington, D. C.

Dear Kuter:

Thanks for your letter of September 8th,
received this date, and inclosing notes on stabil-
ized glide bombing development.

I am extremely interested in both this
and the skip bombing project. I hope to make a visit
to Miami during the early part of December, and if
there is anything interesting going on at Eglin Field
in connection with either of these tests, I would like
to see it. Please let me have a schedule of proposed
tests during the next couple of months, if you have one
available.

Sincerely,

F. M. Andrews,
Lieutenant General, U. S. Army.

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P
Y

DECLASSIFIED
DOD IAW
1974
SECRET S.L.C. DATE 3/21/77

DECLASSIFIED				HEADQUARTERS AIR FORCES	
1. DOD Item				ROUTING AND RECORD SHEET	
2. Date: 20 June 1974				TALLY NO	2358
By: [Signature]				FILE NO	
SUBJECT: Extract from General Kenney's Letter					
ITEM NO.	FROM	TO	DATE	COMMENTS	
1	AFCAS	AFADS AFAMC	1942 10-11	<p>WEH:JT 5246</p> <p>1. Following is an extract of a letter from General Kenney to General Arnold which is furnished for your information and whatever action is indicated:</p> <p>"I would like to get about ten thousand parachute-type fragmentation bombs for this work. I understand three thousand are on the way here now but this is only enough for six missions for the one squadron of A-20's which I have. If the A-20 pays dividends on this type of work without unreasonable losses I will start cabling you for more A-20's in about another week. At present, however, I am withholding judgment until I see how this scheme works out."</p> <p><i>WMA</i></p> <p>WILLIAM E. HALL Colonel, G. S. C.</p>	
2.	AFADS	AFCAS thru AFAMC	10-13	<p>AFADS/RCC/hmh/71173</p> <p>1. Reference the quotation from General Kenney's letter in the preceding, you are advised that no parachute type fragmentation bombs have been sent to General Kenney's theater. The quantities indicated as being on the way are the stabilized 20-lb. fragmentation bomb without parachute. Parachute type bombs will be forwarded to General Kenney as soon as available.</p> <p><i>Richard H. Ballard</i></p> <p>RICHARD H. BALLARD Colonel, G. S. C. Executive</p>	
3.	AFAMC-5A	AFASO	1942 10-22	<p>Noted.</p> <p><i>W.H. Jones</i></p> <p>W. H. JONES Col., Air Corps Asst. Chief, Armament Sect. E. W. Gindlaw Colonel, Air Corps Assistant Chief of Staff (E)</p> <p>IGB:IM (4262 or 71146)</p> <p><i>W.H. Jones</i></p> <p>SECRET</p> <p>By Authority of The Commanding General Material Command, AAF</p> <p>DECLASSIFIED</p>	
1613		Date	10/14	905- [Signature] 447-6 (276)	
				3-1100 A.F.	

RECEIVED
EXECUTIVE
OFFICE

1942 OCT 13 PM 2 18

ARMY AIR FORCES
WAR DEPT., WASH., D.C.

RECEIVED
HQ AIR SERVICE COMMAND
1942 OCT 24 PM 5 05

HEADQUARTERS ~~SECRET~~ AIR FORCES
ROUTING AND RECORD SHEET

TALLY NO.	
FILE NO.	

SUBJECT: Extract from General Kenney's Letter

ITEM NO.	FROM	TO	DATE	COMMENTS
4.	AFASC Hq. Army Air 23 1942 AAU Received	AFGAS	1942 10/27	1. Noted. for OOS H.J.F. Miller, Major General, U.S. Army
5	APCAS Hq. Army Air Forces OCT 29 1942 HAS RECEIVED	FILES	1942 10-29	WILLIAM E. HALL Colonel, G. S. C. File 10/30/42 ci

QMcM/ehs 6148

WEH:JT 5246

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3-1109 A.F.

DECLASSIFIED
DOD IIR.
25, 20 June 1974
BY SP-1/ELC; Date 3/10/77

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Fuses.

GRS:mc 3575

- 1. Chief of Air Staff, A-4. Asst. Chief of Air Staff, A-4. 1942 10-7

Reference the enclosed memorandum on fuses, that I submitted to General Arnold this date as a result of the information furnished to me by you, it is desired that General Kenny, General Brereton and General H. F. Harmon be advised by cable that these fuses have been shipped by air, if this has not already been done.

Incl: Informal Memo for Gen. Arnold from Gen. Stratmeyer, dtd 10-6-42, w/attached memo for Gen. Stratmeyer from Gen. Hamby, 10-6-42, subj., Bomb fuses. (Secret)

Dispatched

OCT 7 1942

AAG

File

GEORGE E. STRATMEYER,
Major General, U. S. A.,
Chief of the Air Staff.

441.61274

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~~SECRET~~

Mr. Hamby
441.61274

DECLASSIFIED

DOD ltr.

8 Jan. & 20 June 1974 (Glide Bombs)
By: *SL/C*; Date: *3/14/77*

DECLASSIFIED

MAL/hk 5265

7. AFGAS AFAP 9/26

1. Your recommendations stated in Item # 3, above, are approved.
2. For necessary action.

471.6
273

MMR

MILLARD A. LIBBY
Lt. Colonel, A.C.

Incl: n/c

Dispatched
SEP 27 1942
AAG

*File
ei 9/27/42*

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Air CB 471.6 (273)

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DECLASSIFIED
DOD Use
8 Jan. & 20 June 1974
By SAF L.C. Date 3/8/77

Glide Bombs.

RHW-mlf 5833

3.
(con)

AFAMP AFACG 9/20
Thru:
AFMS
AFCAS

(4) That a supply of external wing racks and shackles sufficient for four groups of B-17 airplanes be procured without delay for shipment to the U.K.

b. That these recommendations be referred back to AFAMP for necessary action.

O. A. ANDERSON,
Colonel, G.S.C.

Incls: n/c

MAL/hk 5265

4. AFCAS AFACT 9/24
and
AFADS
(in turn)

1. For recommendations.
2. Please expedite return of these papers to this office.

Dispatched
SEP 24 1942
AAG

Incl: n/c

MILLARD A. LIBBY
Lt. Colonel, A.C.

471.6
274

*Return to Airals
R 3E-989*

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See also 471.6 (273)

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DECLASSIFIED
DOD ltra.
Jan. & 20 June 1974
By: NYC/LC; Date: 3/14/77

Glide Bombs.

3. AFAPF AFACG 9/20
(con) Thru: AFDS
AFCS

g. Gyroscopes will be robbed from essential use in aircraft if the glide bomb program commences in December.

g. The use of mass glide bombing at a rate of 500 a month will not have a conclusive effect on Germany's war effort.

g. Such use may, and probably will divulge to the enemy important engineering advances of the past 15 months, advances essential to precision glide bombing. The cost to the enemy when he does discover these accomplishments should be high, since he may adapt them to his own precision bombing problem.

g. Precision glide bombing should be possible in the U.K. in the spring of 1943.

g. The standard type precision bombing is normally preferable to mass glide bombing.

6. Recommendations.

g. That the glide bomb program be reconsidered in the light of the engineering information now available, and the following revisions be approved:

(1) That the Materiel Command initiate procurement without delay of glide bombs less gyroscopes; deliveries to be at an initial rate of 500 a month, and reaching 2000 a month by March 1943.

(2) That every effort be made to accelerate the successful development and standardization of the gyre control system of the Hammond Instrument Company, with a view to production of complete glide bombs without diversion of gyres from aircraft.

(3) That directional gyres not be diverted/ at this time from aircraft for glide bombs .

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A DOD ltr.
Jan. & 29 June 1974
By: SP4/PLC Date: 5/19/77

Glide Bombs

3. AFANP APACG
(con) Thsuu
AFDAS
AFCAS

of glide bomb operations.

3. Bombs needed.

a. One group can be expected to consume 500 glide bombs in seven missions a month, and 1000 a month if fourteen missions are flown at operating strength.

4. An acute shortage exists in gyro instruments, without which the glide bombs are not usable. If the single group glide bomb program is initiated in December the following airplanes will be robbed of directional gyros during the period December to April inclusive:

a. At rate of 500 bombs a month:

1500 Trainers, AT-6C, 13, 14, 15, 16 and BT-13A.
46 Light bombers, A-24, 30.

b. At rate of 1000 bombs a month:

644 Fighters, P-39.
323 Light bombers, A-24, 28, 30, 35-A
2525 Trainers, AT-6C, 13, 14, 15, 16, 17A, 17B,
19 and BT-13A
178 Transports, C-53, 60, 62, 69, 76.

The above allows for no spares and is in addition to those airplanes that will be short directional gyros irrespective of glide bomb production.

5. Conclusions.

a. Modification of existing B-17 airplanes to carry glide bombs, with attendant delay in shipment of groups to the U.K., or loss of use of B-17's in the U.K. from precision bombing, is not advisable.

b. Aircraft suitable for glide bombing will be in the U.K. by early 1943 from production properly factory modified.

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DECLASSIFIED
DOD ltra.
8 Jan. & 20 June 1974
By SP/MLC; Date 3/2/77

3. AFAPK AFACG 9/20
Thru:
AFDAS
AFGAS

RFW-mlf 5833

1. The CG, AAF verbally directed the preparation of one group of B-17 airplanes for glide bomb operation in the U.K. during December 1942.

2. Airplanes needed.

a. To effect this action 35 B-17 airplanes must be prepared to carry and release the glide bombs. No such airplanes are now in the U.K.

b. To prepare B-17's for the glide bomb operation by December would require either:

(1) Modification of B-17's now in the U.K. This would reduce the number of B-17 airplanes available for precision bombing attacks during the modification process.

(2) Modification of B-17's now in the U.S. being prepared for shipment to the U.K. with groups committed to early departure. Delaying these units is not recommended.

c. Replacement airplanes shipped to the U.K. in November and subsequently probably will be factory prepared for glide bomb operations except for racks and shackles. Efforts to procure racks and shackles have been initiated by the Materiel Command. These airplanes could be so allotted in the 8th Air Force as to provide a group for glide bombing.

d. One B-17 group slated for January shipment should have factory equipped aircraft completely capable

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DOD Ltr.
Jan. & 29 June 1974
By JY/MBC; Date 3/10/77

AFKES
Serial
Writ: 6-15-42
No. 4533-9-41
Ext. 72024

September 16, 1942

MEMORANDUM FOR: CAPTAIN JOHN L. MCGHEE, U. S. N.,
Naval Aide to the President.

SUBJECT: High Level Bombing in Western Europe as
Compared with High Level Bombing in the
Southwest Pacific.

1. The high level bombing conducted during the past few weeks has been better in Western Europe than in the Southwest Pacific for the following reasons:

a. The targets in the Southwest Pacific were smaller than those in Europe. This, combined with the fact that the Pacific targets were in many instances floating, increased the difficulties in securing hits to a considerable extent.

b. The strategic offensive such as exists in Europe permits the bombardment commander to select his target and time of attack, enabling him to take advantage of all variable conditions such as weather, etc. The strategic defensive such as exists in the Pacific does not permit the bombardment commander to do this.

c. High level bombing effectiveness varies directly with the above. The status of training of units and crews dispatched to both theatres has been practically equal.

H. H. ARNOLD
Lieutenant General, U. S. Army
Commanding General, Army Air Forces

Dispatched
SEP 16 1942
AAG

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Adm. S.
A-3 AS
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A. & C.
F. C.

Handwritten: 4/16 272

Handwritten: 4/16 272

DECLASSIFIED
DOD ltr.
8 Jan. & 20 June 1974
By: JMLC: Date: 3/2/77

DECLASSIFIED HOUSE
WASHINGTON

14 September 1942

MEMORANDUM FOR

LT. GENERAL HENRY H. ARNOLD, U.S.A.
Chief of the Army Air Forces
Room 201^B - Munitions Building
Washington, D. C.

The President remarked a night or so ago that from reading the despatches and the intelligence reports he was distinctly of the impression that the high level bombing conducted in Western Europe was superior to that being conducted in the Southwest Pacific.

He asked that I inquire of you if you shared this impression and if so, if you could assign a reason for this apparent difference in results.

Very respectfully,

/s/ J. L. McCrea

JOHN L. McCREA
Captain, U.S. Navy
Naval Aide to the President

(Room 2078
Navy Department)

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DECLASSIFIED
 DOD Nos.
 8 Jan. & 20 June 1994
 By: SP1/LO; Date: 3/4/77

HEADQUARTERS ARMY AIR FORCES
 ROUTING AND RECORD SHEET


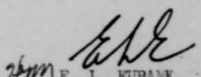
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File No. _____
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Note -- A line will be drawn across sheet after each comment.

SUBJECT: High Level Bombing in Western Europe as Compared with High Level Bombing in Southwest Pacific.

NO.	FROM	TO	DATE	COMMENTS
1	General Arnold	Director of Bombardment	1942 9/14	Note the attached from the White House and prepare reply for my signature. 
	Incl. Memo. for Gen. Arnold, from Capt. J. L. McCrea, re above subject.		9/14/42,	
2.	AFRDB	General Arnold	9/15	1. Attached hereto is memorandum for your signature. Incl. n/c  E. L. EUBANK, Brig. Gen., U. S. A.
				26-lee 72936

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(Do not use reverse side)

F-0271, AF. Rev. 8/14/61

Page No. _____

air as 4716 (272)



DECLASSIFIED SECRET DECLASSIFIED

SEP 11 1947

Dear George:

As you are aware, the possibilities of the profitable use of minimum altitude (skip) bombing against surface vessels have been under investigation and test for some time.

I am inviting your special attention to the cables sent your command on this subject, (copies attached); and an inclosing copies of training circulars, Nos. 46 and 50, covering this method of attack. The favorable results achieved so far in tests indicate that bombing from minimum altitude may be preferable to torpedo attack.

With reference to your cable No. 1214 of June 26 requisitioning fuses referred to in W.D. No. 2404, dispatched June 22, I am advised that approximately 600 lbs. of 4 and 11 second delay fuses, consigned to you on ticket No. 106,128-43, bill of lading 6,307,127, are probably being held at the docks on the West Coast awaiting bottoms for shipment by boat. I am investigating this and, if they have not already been shipped, will take steps to expedite delivery by air.

Sincerely yours,

(Sgt.) Strat

GEORGE E. STRATHEMER,
Major General, U. S. A.
Chief of the Air Staff

Dispatched by Oper. Comms
Oct 11 1947
AAG

Major Gen. C. G. Kenney
A.F.O. No. 509
c/o Postmaster
San Francisco, California

471.6
271

file
at 9/11/47
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8 Jan 18 20 June 1974
LC; Date 2/11/77
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DOD ltra.
8 Jan. & 20 June 1974
By: *SP/ELC*; Date: *3/14/77*

SEP 11 1942

Miff
Dear General Harmon:

As you recall the possibilities of the profitable use of minimum altitude (skip) bombing against surface vessels have been under investigation and test for some time. As a matter of fact, your Assistant G-3, Colonel Everest, witnessed the demonstration at Eglin Field.

I am inviting your special attention to the cable sent your command on the subject, copy attached, and an inclosing copies of Training Circulars Nos. 46 and 50 covering the method of attack. The favorable results achieved so far in tests indicate that bombing from minimum altitude may be preferable to torpedo attack.

Regarding the furnishing of the most suitable fuses for this type of attack, we are taking steps to secure a supply of four and eleven second fuses for air shipment to your theatre.

With kind personal regards,

Sincerely yours,

(Snd.) *Strat*

Dispatched by *Officer Courier*
SEP 11 1942
AAG

GEORGE E. STRATENSYKER,
Major General, U. S. A.,
Chief of the Air Staff.

Major General M. F. Harmon,
A.P.O. 502,
c/o Postmaster,
San Francisco, Calif.

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Doc 48 471.6 (27) B

~~SECRET~~

Status of Incendiary Bomb Program.

September 8, 1942

AFDAS
LSE:pcp 6871

1 AFDAS AFDR 1942
9/8

1. In accordance with our conversation late on September 7, 1942, the inclosed papers are returned with the request that they be discussed with Colonel Alden Waite, G.V.S. before the subject matter is presented to the Commanding General.

Incls.
Memo to Gen. Fairchild from
Col. Anderson 9/6 w/ incl.
Report by Lt. Fix, above subj.

L. S. Kuter,
Brig. General, U.S.A.

471.6 (270)

dispatched
SEP 8 1942
LHG

File

~~SECRET~~

Mrs. Barry
Qu 234766 (270)

~~CONFIDENTIAL~~
DECLASSIFIED

Bombing Tests Against Water-borne Targets

AFCAS AFMAG 1942
9-8

For dispatch.

WER:JT 5265

2 Incls.
n/s

WILLIAM R. HALL
Colonel, A. C.

Dispatched

SEP 8 1942
AAG

file

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269

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DECLASSIFIED

in 471.6 269

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DECLASSIFIED

SEP 8 1942

Lieutenant General Frank H. Andrews
Caribbean Defense Command
Quarry Heights, Canal Zone

Dear General Andrews:

In accordance with the request contained in your letter of August 25th, to General Arnold regarding the glide bomb tests at Valparaiso, I am enclosing some notes concerning the project to date.

We should bear in mind that while the bombs as tested are not precision weapons, their current status is merely the first step in a development program that eventually should lead to precision bombing. For this subsequent phase, various devices are now in progress of experimental engineering, with promising results.

The purely stabilized version of the glide bomb, as demonstrated at Eglin Field, should produce a weapon usable against area targets such as large crowded industrial establishments or concentrations of shipping in large wharf and dock areas. Since, within the range of vision, the bomb may be released at a distance from the objective of one mile for each thousand feet of altitude, it offers some measure of protection from anti-aircraft artillery fire.

The current version is not a weapon for attacking individual surface vessels, especially those in motion. However, as the program develops this adaptability may be achieved.

With kindest regards,

Sincerely,

Dispatched
SEP 8 1942
AAG

L. S. KUTER
Brigadier General, U. S. Army
Deputy Chief of the Air Staff

1 Incl.
"Notes on Stabilized
Glide Bomb Development"

DECLASSIFIED
DOD ltr.
8 Jan. & 20 June 1974
By LC: Date 3/11/77
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DECLASSIFIED

in 03471.6 (269)

7/12
Combs
group

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Carlisle

Slide Bombs

August 22, 1942.

Major General Carl Spantz,
Commanding General 8th Air Force,
London, England.
By Officer Courier.

DECLASSIFIED
DOD ITR
5 Jan & 20 June 1974
By *DM/IC*; Date *3/14/77*

Dear Tracy:

1. Consideration is being given to the use of the new stabilised glide bombs in your theatre. The objective is to ascertain the extent of profitable application of this version of the special weapon program. At the same time, it is desired to initiate the use of this weapon in sufficient quantity to secure effective results while the surprise element remains. Tentatively, therefore, it is planned to equip one of your B-17 groups for such operations.
2. The Materiel Center has developed a glide bomb that will glide roughly one mile for each thousand feet of release altitude. Essentially the bomb is nothing more than a 2000 pound standard demolition bomb to which is attached a wooden wing. The overall span is twelve feet. Stabilised flight is achieved by gyro mechanisms electrically operated similar to automatic pilots.
3. This week these bombs were demonstrated at Eglin Field in mass releases from B-17 formations. Each airplane carried two winged bombs from external wing shackles. Although the mechanisms are not completely foolproof, it appears that by October these bombs can go into production. Briefly about 70% of these released flew straight courses and struck in formation. This percentage can be improved. Obviously the weapon is an area bomb. Fairly consistent results have been achieved in placing these bombs in equilateral triangle, one mile on each side from 5000 feet, and it is felt that a pattern can be placed in an area the size of Dayton, Ohio from 25,000 feet or even higher.
4. The carrying wing mechanism and the bomb itself offers added drag to the B-17 airplane, reducing its cruising speed about 20 MPH. Without the bomb, the carrying mechanism cuts the cruising speed about 10 MPH. More exact data is being secured.
5. The carrying structure can be attached or removed from the wing by local crews. These operations require about 30 minutes.

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Carlisle
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6. Bombs are sighted using the normal bomb sight, using a preset angle.

7. Internal racks may be used when the glide bombs are carried, but the total load is reduced by the additional drag of the external structures. Further testing will provide more specific data on this point.

8. Advantages visualized for the weapon are:

- a. Security of release at a distance from defenses.
- b. Flat trajectory, which increases the percentage of hits against building areas over that expected in normal horizontal area bombing.
- c. A very large ship on impact, up to a mile on land, which produces a travel likely to reach some obstacle in its path. In water the ship is about one third mile. The bomb bounces up to 40 or 50 feet in its first ship.

9. The flat trajectory and skip leads to the belief that harbor installations with docks and boats at rest might be destructively attacked with these bombs.

10. Disadvantages are:

- a. Somewhat reduced explosive effect due to lack of earth tamping on impact.
- b. Absence of high precision.
- c. Reduction in range, speed and maximum load.
- d. Absence of penetration into horizontal surfaces.

11. Specifically the plan is as follows:

- a. To ship a practice quantity of these bombs to your theatre by early November.
- b. To provide at the same time a small group of technicians to assist in assembling and testing the equipment, and to train your group in their use.
- c. To provide during November 1-17 aircraft capable of externally mounting the bombs.
- d. To provide sufficient bombs for the operation of one group commencing in December.
- e. To provide a continuing quantity of these bombs for such expanded employment as is justified by initial operations.

12. It is desired that you study your employment of this weapon to determine the targets against which it will most profitably be used initially during December, the quantity of bombs needed for

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that month, and, insofar as possible, your estimate of the extent of its continuing use if successful in initial attacks. This letter is necessary in order to plan production in advance.

Yours truly,

H. H. ANHOLD
Lieutenant General, U.S. ARMY,
Commanding General, Army Air Forces.

Incl.
R & R from Gen. Kester.

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for
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file

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DOD Itra.
8 Jan. & 20 June 1974
By *[Signature]* LC: Date *3/19/77*

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1. *[illegible]*
2. *[illegible]*

Requirement for Glide Bombs.

AFDAS
LSK:ome

1. AFDAS AFABI 1942
8-22

1. The decision as to the military requirement for glide bombs, numbers and types required, must be based on probable objectives.

2. The 2,000 pound glide bomb reaches the end of its trajectory at a low angle of impact (15 to 20 degrees) and at a speed of about 350 feet per second.

3. Assuming that this bomb can be delivered with sufficient accuracy to fall within a city the size of Dayton, Ohio, from 30,000 feet altitude, it is desired that your Division undertake a broad study as to the necessity for such a weapon and the quantities desired. Since this bomb skips a considerable distance over water and skids somewhat farther over land, it can be assumed that the bomb will not detonate until it comes to rest in or at the foot of an obstacle. In attacks on cities, therefore, it can be assumed safely that the bomb will not detonate in parks or open areas, and also that it will not penetrate horizontal surfaces before detonation. In this manner it will avoid digging holes in parks and at the same time will not permit destruction of subways, water systems, power distribution systems and other sub-surface objectives.

Handwritten: 9/11/44
L.S.K.

4. It is suggested that a hostile city (Berlin, if sufficient data is at hand) be given a cursory examination to determine the general desirability of the glide bomb for attacks on cities.

5. It is believed that this bomb has not yet been sufficiently perfected to permit a study as to its usefulness for precision employment.

6. It is suggested that you contact the Director of Bombardment (Colonel F. L. Anderson) and the Plans Division (Colonel R. P. Williams) in connection with this study.

L.S.K.
AFDAS

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7. *[illegible]*
8. *[illegible]*

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Test of Glide Bombs.

AFROM
300mm

2. AFROM **AFDAS** **1942**
(Continued) **THRU** **8/15**
 AFROM

b. Seven arrived Aug. 14th.

2. Air Service Command advises that special crews of workmen selected to expedite installation at attachment assemblies, etc., were ready when airplanes arrived, and that every effort is being made to complete work as soon as possible. They estimate that:

a. 3 airplanes will be completed Aug. 16 at 1300.

b. 6 airplanes will be completed Aug. 17 at 1200.

ASG will advise AFROM of any change in above. AFROM will forward such information to your office.

3. AFROM has been requested to take action to insure that each airplane is dispatched to Eglin Field soon after it is ready.

4. The Commanding General, AFROM, Eglin Field, advises that glide bombs are on hand at Eglin Field and ready to be installed when airplanes arrive.

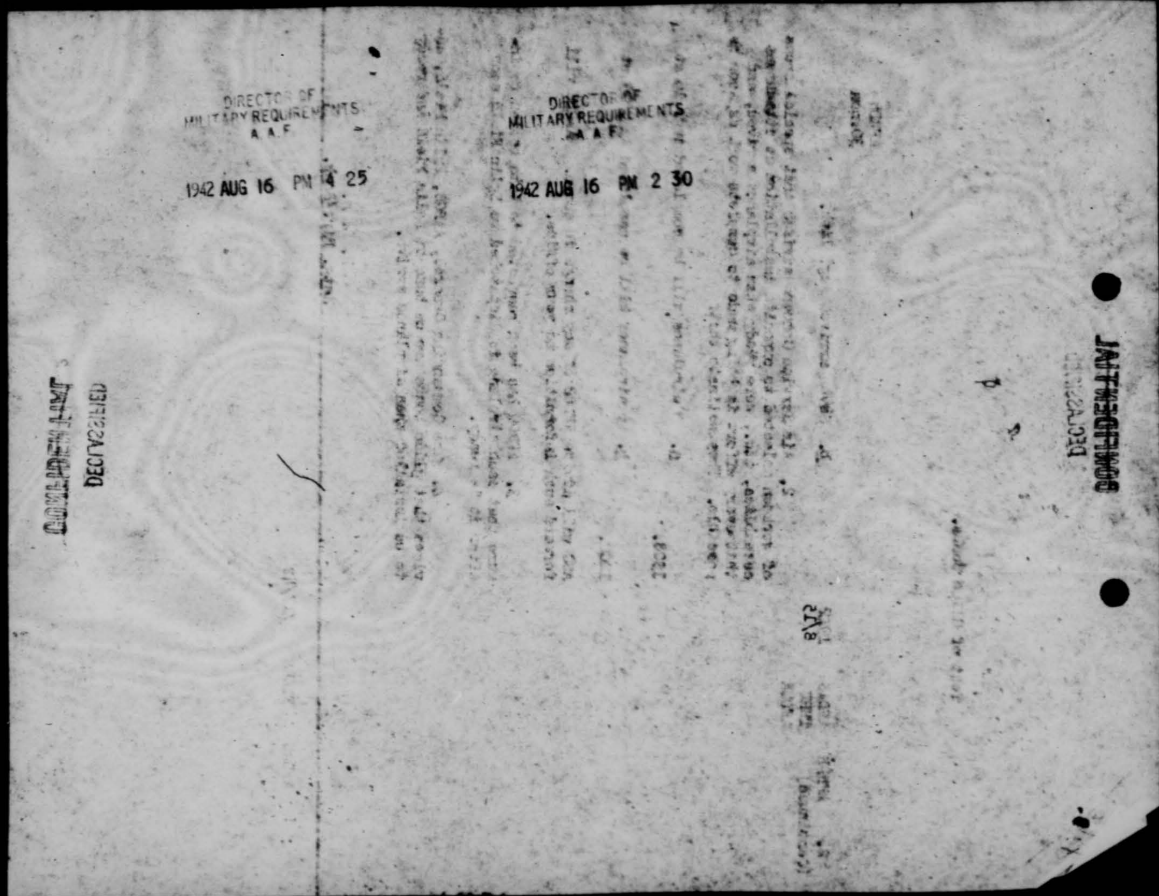
F. L. A.
Actg. Dir./Bomb.

AFDAS FILES 8/17/42

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DECLASSIFIED
A. DOD ltra.
3 Feb. & 20 June 1974
By: SP7/LC; Date: 3/14/97

Test of Glide Bombs.

AFDAS
L.S.K.:GMS

1. AFDAS AFRDB 1942
8/10

1. Confirming oral decisions this date in conversation between this office and your Directorate (Colonel F. L. Anderson and Major J. B. Montgomery), the test of glide bombs will be conducted at Eglin Field on August 17th and 18th, 1942.

2. Nine airplanes with double combat crews (less gunners) will be moved from the Second Air Force to the Middletown Air Depot, to arrive thereat no later than August 15th, 1942. These airplanes will be prepared to carry the glide bombs in such time as to permit them to arrive at Eglin Field, Valparaiso, Florida, on August 16, 1942.

3. These tests are to be completed to permit the nine airplanes from the Second Air Force to depart from Eglin Field by dark on August 18, 1942.

4. General Arnold desires that General Gids be present to witness these tests.

5. It is desired that your Directorate take the necessary action to handle all details on this project. If further changes in the schedule are made, it is desired that all offices to which copies of this RAR are distributed be notified of these changes.

Copies to:
Gen. Arnold
Gen. Stratemeyer
AFDMS
AFACT
AFDTS

L.S.K.
AFDAS

2. AFRDB AFDAS 8/15
THRU
AFDMS

AFDMS
301mm

1. Due to bad weather conditions, arrival of B-17E's at MAD was delayed as follows:

a. Two arrived Aug. 13th (on schedule)

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DECLASSIFIED
DOD ITR.
6 Jan. & 20 June 1974
By: *SP/IC*; Date: *3/2/77*

TESTS OF CONTROLLABLE GLIDE BOMBS

RWB/hk

3. CAS EMR 8/6

1. Noted. Further advice as to the preparation for these tests will be made through this office.

Incl: n/c

H.C.W.F.
S/S

Aug 14 - 1200 Col. Watson reported 2 planes at MAD
3 - in way
4 - no word received.
If all arrive today will be finished night of
16th. Above information given RDB

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DECLASSIFIED
DOD Hqs.
8 Jan. & 20 June 1976
By: S/PLC; Date: 3/10/77

Tests of Controllable Glide Bombs.

AFRDB
30/rw

1. General General 1942
General Arnold 8/1

1. The C.G., Materiel Command, has been directed to complete all preliminary work in connection with the large scale tests of glide bombs by Aug. 15, 1942. It is felt that, in consideration of the work necessary to be accomplished, no shorter period of time can be required. Attached for your information is a copy of directive to Materiel Command.

2. Aug. 18 is tentatively set as the date on which tests will be conducted. Your approval of this date is requested.

3. You will be kept advised of the status of preparations being made to comply with your directive.

H. S. F.,
Dir. Mil. Req.

Incl: Cy of ltr to
CG., AFAMC, dtd
8/1/42.

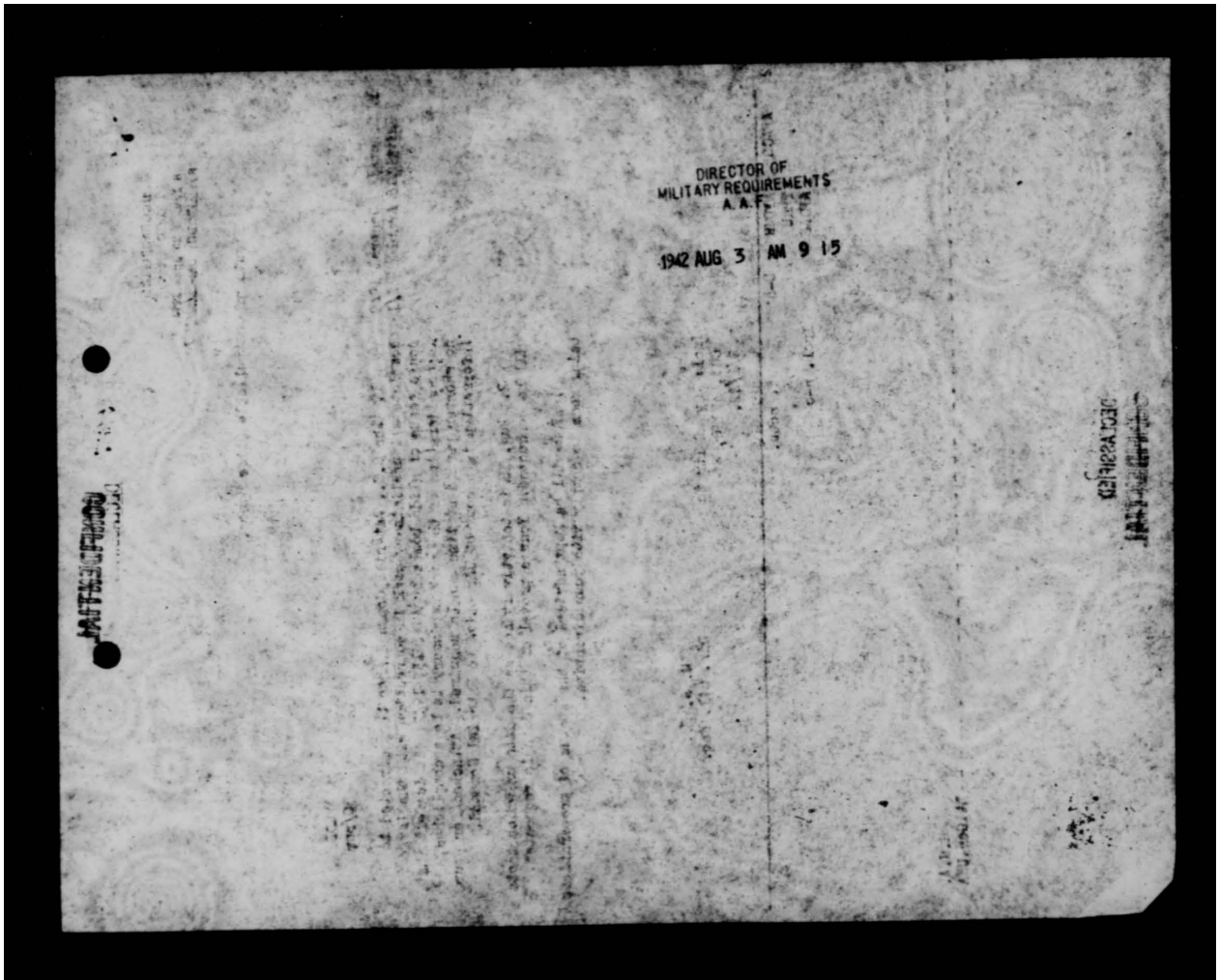
2 AFACG AFMIR 8-4 To note.
THRU
AFCAS c Incl. n-c

H.H.A.
-LA. Gen.-USA

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Ans AS 471.6 (263)

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AFRDB
30/rem
Wrtm 8/7/42
Rm 4326
Ext 71578

DECLASSIFIED
DOD ltr.
8 Jan. & 20 June 1976
By: *SP8* LC: Date *3/6/74*

SUBJECT: Tests of Glide Bombs.

TO : Commanding General,
Air Service Command,
Washington, D. C.

1. August 18, 1942 is designated as date on which tests of glide bombs will be conducted at Eglin Field. Ten B-17 airplanes will participate. Special preparations in connection with attaching of glide bombs to B-17 type airplanes are necessary before tests can be conducted. Work on fabrication of necessary attachment assemblies has been in progress at Material Center for the past few days. Material Command recommends that installation of attachment assemblies be made on B-17 airplanes at Middletown Air Depot.

2. Nine B-17 airplanes are scheduled to arrive at Middletown Air Depot on August 15, 1942. It is desired that you cooperate with the Material Command in making available personnel and facilities of Middletown Air Depot to expedite work required in a period of not more than twenty-four hours after arrival of the airplanes. Airplanes will be dispatched to Eglin Field on August 16.

Aug 18 (ASC)?

3. If installations can not be accomplished during the period of twenty-four hours on August 15 and 16, it is desired that this Headquarters be notified immediately stating reasons.

By command of Lieutenant General AFHOLD:

L. S. Kuter
Brig. Gen. U. S. A.
Deputy Chief of Air Staff

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~~CONFIDENTIAL~~

May Montgomery sent this out by special messenger on 8-7-42

DECLASSIFIED

Test of Glide Bombs.

AFDAS
LSK:cmc

1. AFDAS APRDB 1942
8/10

1. Confirming oral decisions this date in conversation between this office and your Directorate (Colonel F. L. Anderson and Major J. B. Montgomery), the test of glide bombs will be conducted at Eglin Field on August 17th and 18th, 1942.

2. Nine airplanes with double combat crews (less gunners) will be moved from the Second Air Force to the Middletown Air Depot, to arrive thereat no later than August 15th, 1942. These airplanes will be prepared to carry the glide bombs in such time as to permit them to arrive at Eglin Field, Valparaiso, Florida, on August 16, 1942.

3. These tests are to be completed to permit the nine airplanes from the Second Air Force to depart from Eglin Field by dark on August 18, 1942.

4. General Arnold desires that General Olds be present to witness these tests.

5. It is desired that your Directorate take the necessary action to handle all details on this project. If further changes in the schedule are made, it is desired that all offices to which copies of this R&R are distributed be notified of those changes.

Copies to:
Gen. Arnold
Gen. Stratemeier
AFDMR
AFACT
AFDTS

L.S.K.
AFDAS

Col. Blueler

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HEADQUARTERS U.S. AIR FORCE
ROUTING AND RECORD SHEET

DOD ltr.
8 Jan. & 20 June 1974
By: *ME/LC; Data 3/26/77*

File No. _____

Note -- A line will be drawn across sheet after each comment.

Tally No. AAP _____

SUBJECT: Test of Glide Bombs.

NO.	FROM	TO	DATE	COMMENTS	AFRDB 30:mem
2. (Continued)	AFRDB	AFDAS THRU AFROM <i>MEY</i>	1942 8/15	<p>b. Seven arrived Aug. 14th.</p> <p>2. Air Service Command advises that special crews of workmen selected to expedite installation at attachment assemblies, etc., were ready when airplanes arrived, and that every effort is being made to complete work as soon as possible. They estimate that:</p> <p>a. 3 airplanes will be completed Aug. 16 at 1300.</p> <p>b. 6 airplanes will be completed Aug. 17 at 1200.</p> <p>ASC will advise AFRDB of any change in above. AFRDB will forward such information to your office.</p> <p>3. AFROM has been requested to take action to insure that each airplane is dispatched to Eglin Field soon after it is ready.</p> <p>4. The Commanding General, AFPGC, Eglin Field, advises that glide bombs are on hand at Eglin Field and ready to be installed when airplanes arrive.</p> <p><i>5. General adds will be present to witness their test</i></p> <p><i>for PFE L. A. Actg. Dir./Bomb.</i></p>	
3	AFDAS	FILES <i>2073</i>	8/17/42	<p><i>File of 1/10/42</i></p> <p><i>File</i></p>	

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Rev. 471.6 (266) B

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DIRECTOR OF
MILITARY REQUIREMENTS
A A F.

1942 AUG 16 PM 4 25

DIRECTOR OF
MILITARY REQUIREMENTS
A A F.

1942 AUG 16 PM 2 30

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HEADQUARTERS ARMY AIR FORCES
ROUTING AND RECORD SHEET

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File No. _____
Tally No. AAF _____

Note. -- A line will be drawn across sheet after each comment.

SUBJECT: Test of Glide Bombs.

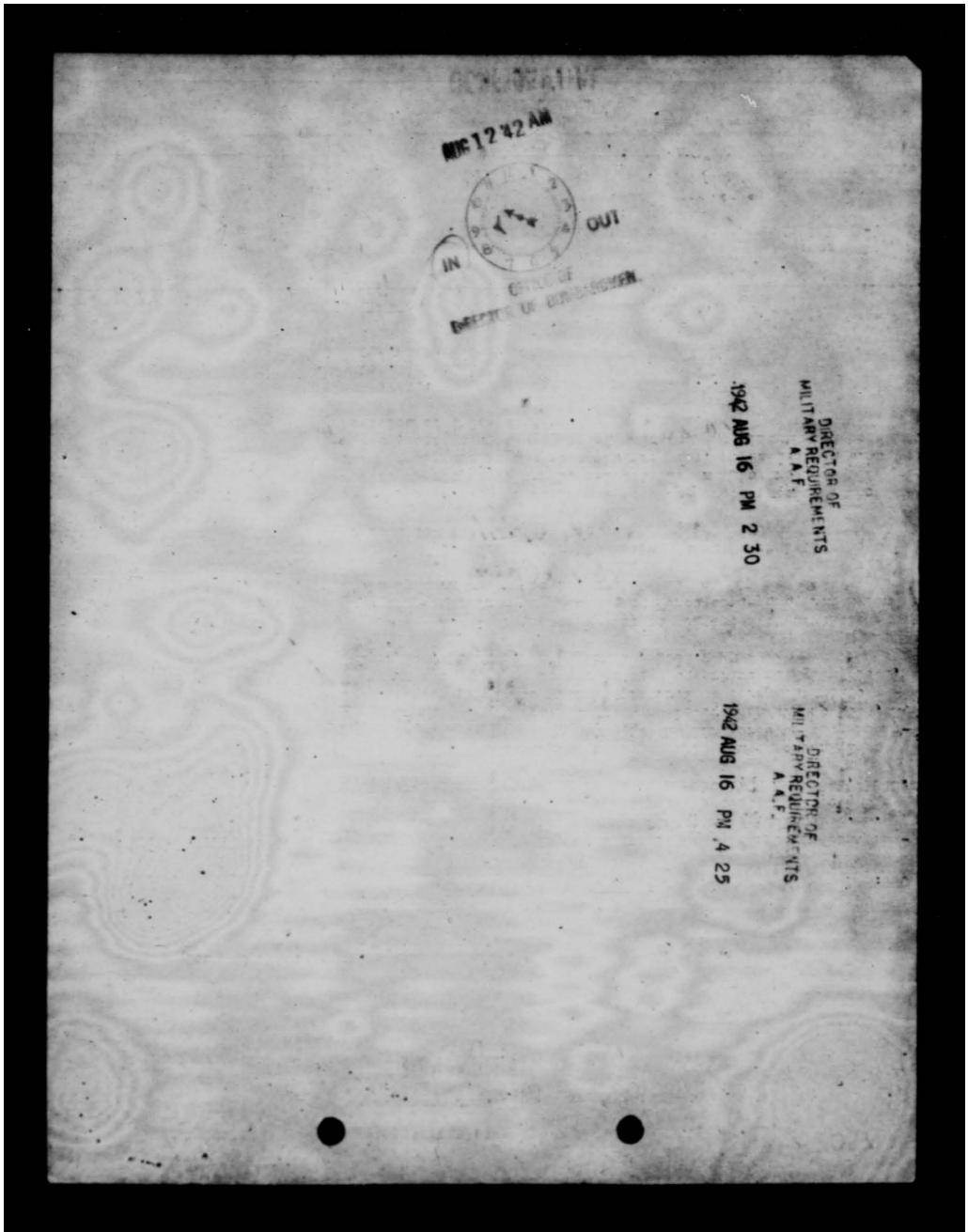
NO.	FROM	TO	DATE	COMMENTS
1.	AFDAS	AFRDB	1942 8/10	<p>1. Confirming oral decisions this date in conversation between this office and your Directorate (Colonel F. L. Anderson and Major J. B. Montgomery), the test of glide bombs will be conducted at Eglin Field on August 17th and 18th, 1942.</p> <p>2. Nine airplanes with double combat crews (less gunners) will be moved from the Second Air Force to the Middletown Air Depot, to arrive thereat no later than August 15th, 1942. These airplanes will be prepared to carry the glide bombs in such time as to permit them to arrive at Eglin Field, Valparaiso, Florida, on August 16, 1942.</p> <p>3. These tests are to be completed to permit the nine airplanes from the Second Air Force to depart from Eglin Field by dark on August 18, 1942.</p> <p>4. General Arnold desires that General Olds be present to witness these tests.</p> <p>5. It is desired that your Directorate take the necessary action to handle all details on this project. If further changes in the schedule are made, it is desired that all offices to which copies of this R&R are distributed be notified of those changes.</p> <p style="text-align: right;"><i>[Signature]</i> S.S.K. AFDAS</p> <p>Copies to: Gen. Arnold Gen. Stratemeyer AFDNR AFACT AFDTS</p>
2.	AFRDB	AFDAS AFDNR <i>me</i>	8/15	<p style="text-align: right;">AFRDB 30:mem</p> <p>1. Due to bad weather conditions, arrival of B-17E's at MAD was delayed as follows:</p> <p style="padding-left: 40px;">a. Two arrived Aug. 13th (on schedule)</p>

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E-4071, AF, Rev. 8/14/41

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Aug 23 4 11 6 (266) B



WAR DEPARTMENT
HEADQUARTERS, U. S. ARMY

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AFROB
30/ram
Wrtm 2/11/42
Rm 4326
Ext 71578

DECLASSIFIED
1000 hrs.
8 12 12 20 June 1974
AFROB, Date 3/4/77

AUG 12 1942

SUBJECT: Tests of Glide Bombs.

TO : Commanding General,
Material Command,
Washington, D. C.

1. Reference is made to letter from Commanding General, Materiel Command, to Commanding General, Army Air Forces, Subject: "Tests of Glide Bombs", dated August 10, 1942.

2. In consideration of the amount of work involved in installation of attachment assemblies, it is desired to inform you that the period of time allotted for this work has been extended. Nine B-17 airplanes are scheduled to arrive at Middletown Air Depot on August 13, 1942. It is desired that you cooperate with the Air Service Command in expediting installation of attachment assemblies in such time as will permit airplanes to be dispatched to Eglin Field on August 16, 1942.

3. In the event that this work can not be completed in the specified time, it is desired that this Headquarters be notified immediately stating reasons for delay.

By command of Lieutenant General ANFIELD:

Dispatched
AUG 12 1942
AAG

JOHN B. COOLEY
Lt. Colonel, A. S. D.,
Assistant Air Adjutant General

*File
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WAR DEPARTMENT
HEADQUARTERS, ARMY AIR FORCES
WASHINGTON, D. C.

AFMOS
30/rsm
Wrtm 8/11/42
Rm 4326
Ext 71578

DECLASSIFIED
DOD Rm.
8 Jan. & 20 June 1974
BY: SMC/LC: Date 3/12/77

DECLASSIFIED

12 1942

SUBJECT: Tests of Glide Bombs.

TO : Commanding General,
Air Service Command,
Washington, D. C.

1. Reference is made to letter of this Headquarters, Subject: "Tests of Glide Bombs", dated August 7, 1942.

2. Material Command reports that installation of attachment assemblies on nine B-17 airplanes can not be made in time specified in paragraph 2 of subject letter. It is desired to inform you that the period allotted for this work has been extended. Nine B-17 airplanes with double combat crews, less gunners, are scheduled to arrive at Middletown Air Depot on August 13, 1942. It is desired that you take the necessary action to have this work completed if possible by August 16, 1942, on which date planes are scheduled to depart for Eglin Field, Florida.

3. The Commanding Officer, Middletown Air Depot, should be advised of arrival of these airplanes so that he can be prepared to accommodate approximately seventy-two officers and thirty-six enlisted men for the period, August 13 to 16, 1942.

4. In the event that work can not be completed in sufficient time to permit airplanes to depart for Eglin Field on August 16, it is desired that this Headquarters be notified immediately.

By command of Lieutenant General ARNOLD:

Dispatched
AUG 12 1942
AAG

JOHN E. COOLEY
Lt. Colonel, A. S. B.
Assistant Air Adjutant General

*File
8/12/42*

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AFKOB
30/ram
Wrtm 8/7/42
Rm 4326
Ext 71578

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DOD IAW

8 Jan. & 20 June 1974
R/S: SAC, LC; Date: 3/22/77

CONFIDENTIAL

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8/7/42

SUBJECT: Tests of Glide Bombs.

TO : Commanding General,
Material Command,
Washington, D. C.

1. August 15, 1942 is designated as date on which tests of glide bombs will be conducted at Eglin Field. Ten B-17 airplanes will participate, including B-17E No. 41-2590 now assigned to Proving Ground Command. Nine B-17E's will arrive at Middletown Air Depot on August 15, 1942, for the purpose of accomplishing the necessary preliminary work in connection with the installation of the attachment assemblies.

2. It is desired that preparation be made to permit accomplishment of this work on all nine airplanes in a period of not more than twenty-four hours after arrival of airplanes so that these airplanes can be dispatched for Eglin Field not later than August 16.

3. If, for reasons known to you, installations can not be accomplished during the period of twenty-four hours on August 15 and 16, it is desired that this Headquarters be notified immediately stating reasons.

By command of Lieutenant General ANGELO:

L. S. Kuter
Brig. Gen. U. S. A.
Deputy Chief of Air Staff

File

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*May Montgomery sent
this out by special
messenger on 8-7-42
Civ 471.6 (266)*

#23/1041

SECRET
HEADQUARTERS, UNITED STATES AIR FORCES
ROUTING AND RECORD SHEET

DECLASSIFIED
DOD Hqs.
8 Jan. & 20 June 1974
By: SP1/C; Date: 3/16/77

File No. _____
Tally No. AAF _____

Note -- A line will be drawn across sheet after each comment.

SUBJECT: Chemical Warfare Munitions.

NO.	FROM	TO	DATE	COMMENTS	EBB/eIn																		
1.	AFADS Air Forces AUG 8 1942 AAG Received	AFACG	1942 8/8	<p>1. As a result of conference between representatives of A-4, Military Requirements, and Chemical Warfare Service, the following instructions concerning incendiaries have been sent to the Chemical Warfare Service.</p> <p>a. Standardize the 6 lb. base ejection thickened gasoline bomb.</p> <p>b. Retain the 4 lb. and 2 lb. magnesium bombs as a standard. Continue development on the 2 lb. magnesium bomb until satisfactory performance is obtained, setting up requirements at that time.</p> <p>c. Continue production of the standard 100 lb. thickened gasoline bomb and develop a 250 lb. bomb of this type.</p> <p>d. Procure during 1942 and 1943 the following quantities of incendiaries:</p> <table style="margin-left: 40px;"> <thead> <tr> <th></th> <th style="text-align: center;">1942</th> <th style="text-align: center;">1943</th> </tr> </thead> <tbody> <tr> <td>6 lb. Base Ejection Bomb Clusters (500 lb. clusters)</td> <td style="text-align: right;">15,625</td> <td style="text-align: right;">125,000</td> </tr> <tr> <td>(100 lb. clusters)</td> <td style="text-align: right;">46,875</td> <td style="text-align: right;">375,000</td> </tr> <tr> <td>100 lb. Thickened Gasoline Incendiary Bombs</td> <td style="text-align: right;">75,000</td> <td style="text-align: right;">600,000</td> </tr> <tr> <td>4 lb. Magnesium Incendiary Clusters or equivalent number of 2 lb. clusters (500 lb. clusters)</td> <td style="text-align: right;">6,250</td> <td style="text-align: right;">50,000</td> </tr> <tr> <td>(100 lb. clusters)</td> <td style="text-align: right;">18,750</td> <td style="text-align: right;">150,000</td> </tr> </tbody> </table> <p>2. The effect of the requirements set up in d above will be to reduce the AAF magnesium requirements for incendiary bombs approximately 50,500,000 lbs.</p>		1942	1943	6 lb. Base Ejection Bomb Clusters (500 lb. clusters)	15,625	125,000	(100 lb. clusters)	46,875	375,000	100 lb. Thickened Gasoline Incendiary Bombs	75,000	600,000	4 lb. Magnesium Incendiary Clusters or equivalent number of 2 lb. clusters (500 lb. clusters)	6,250	50,000	(100 lb. clusters)	18,750	150,000	
	1942	1943																					
6 lb. Base Ejection Bomb Clusters (500 lb. clusters)	15,625	125,000																					
(100 lb. clusters)	46,875	375,000																					
100 lb. Thickened Gasoline Incendiary Bombs	75,000	600,000																					
4 lb. Magnesium Incendiary Clusters or equivalent number of 2 lb. clusters (500 lb. clusters)	6,250	50,000																					
(100 lb. clusters)	18,750	150,000																					

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HEADQUARTERS ARMY AIR FORCES
ROUTING AND RECORD SHEET

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SUBJECT: Chemical Warfare Munitions.

NO.	FROM	TO	DATE	COMMENTS	WEH:JT
2.	AFDAS	File	1942 8-10	Noted. WMA V. E. H. S/AS	
					<p style="writing-mode: vertical-rl; transform: rotate(180deg);"> <i>Div. 02 471.6 (265)</i> </p>

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W-4071, AF, Rev. 8/10/41

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Div. 02 471.6 (265)

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DD Form 1

1 May 50 20 June 1974

Original Date: 2/27/77

Bombs for the Middle East

1 AFMAG AFADS 1942 Attention is invited to marginal inquiry by General
(Att: Gen 7-29 on basic memorandum.
Hawley)

W.W.D.
Col., A
Air A.G.

Dispatched
JUL 29 1942
AAG

1 Incl.
Ltr fr AFADS
to CG AAF 7-23-42

A-1AS
A-2AS
Asst. S.
A-3AS
A-4AS
Plan/AS
Ins/AS
Int. Sec.
Adm. Sec.
Ins.
Cr. Sup.
Gen. Sec.
War O&M
Int. Tr.
Tech. S.
Comp.
Weather
Traffic
Photo. M&C
Tech. Insp.
Pub. Rel.
Dir. Pers.
Int. Pers.
Cr. Pers.
Surg.
I. Advoc.
Budget
Fincl.
Sign. Con.
Adj. Gen.
Op. Pl.
Stat. Pl.
Log. Pl.
Mat. C.
A. S. C.
P. C.

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DECLASSIFIED

AFADS 11-49
RBR/hmh
7-23-62

DECLASSIFIED
A. DOD Hqs.
9 Jan 60 June 1974
By: [Signature] Date: 3/27/77

July 23, 1942

146

MEMORANDUM FOR LIEUTENANT GENERAL ARNOLD:

Subject: Bombs for the Middle East.

1. In accordance with radio received from Maxwell, June 29, 1942, the following bombs were available in the Middle East.

a. American Bombs -- 3,000 - 500^g General Purpose

b. British Bombs -- Supply of British General Purpose Bombs of all sizes up to and including 1000 lb. are available for nine months operation of the following British units.

- 23 squadrons fighter bombers
- 29 squadrons light bombers
- 29 squadrons medium bombers
- 3 squadrons heavy bombers.

2. A five month level of bombs for the American groups en route to the Middle East was shipped to the Port as shown in (a) below, but as a result of lack of ship space much of this supply left at the Port and only the quantities listed in (b) below are actually en route.

	(a) Available in Port	(b) Actually Loaded
2000 ^g	48	48
1000 ^g	2,080	None
500 ^g	3,240	None
500 ^g *	4,500	None
300 ^g	7,980	5,275
100 ^g	8,474	7,625

* Allocated to the British.

A-1/AS
A-2/AS
Intel. S.
A-3/AS
A-4/AS
Plans/AS
Insp/AS
Mil. Rec
A. Def.
Bomb.
Gr. Sup.
Base S.
War O&M
Ins. Tr.
Tech. S.
Comm.
Weather
Traffic
Photo. M&C
Tech. Insp.
Pub. Rel.
Dir. Pers.
Mil. Pers.
Civ. Pers.
Serg.
J&Voc.
Budget
Fiscal
Mgmt. Cos.
Adj. Gen.
Org. Pl.
Stat. Pl.
Leg. Pl.
Nat. C.
A. S. C.
P. C.

Hq. Army Air Forces
JUL 23 1942
AAG Received

DECLASSIFIED

W-6934, AF

DECLASSIFIED

3. Effort is being made to obtain immediate shipment of the balance of the bombs now at the Fort.

T. J. HANEY, Jr.,
Brigadier General, U. S. A.,
Assistant Chief of the Air Staff,

A-1/AS
A-2/AS
Intcl. S.
A-3/AS
A-4/AS
Plans/AS
Insp/AS
Nil. Sec
Sec. R.
Cont.
Gr. Sup.
Base S.
War O&M
TRM. Tr.
Tech. S.
Comm.
Weather
Traffic
Photo. M&C
Tech. Insp.
Pub. Rel.
Dir. Pers.
Nil. Pers.
Div. Pers.
Surg.
J&M&C.
Budget
Fiscal
Mgmt. Coa.
Adj. Gen.
Org. Pl.
Stat. Pl.
Leg. Pl.
Nat. C.
I. S. C.
F. C.

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11-6924, AF
On 03 471.6 (262)

DECLASSIFIED
DOD Mem.
1 Jan. & 30 June 1976
By *SP-1 GJ* Date *3/24/77*

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~~SECRET~~

Subject: General Arnold's comments on the bombing demonstration at Valparaiso, July 10th. (cont.)

A-1/AS
A-2/AS
Intd. S.
A-3/AS
A-4/AS
Plan/AS
Imp/AS
Mil. Req.
A. Def.
Bank.
Gr. Sup.
Base S.
War O&M
Ind. Tr.
Tech. S.
Comm.
Weather
Traffic
Photo. SAC
WH. Insp.
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Dir. Pers.
Int. Pers.
Civ. Pers.
Serg.
J. Advoc.
Budget
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A. & C.
F. C.

1716
976
093

2. AFQAS AFREM 1942
7-22

It is desired that this office be notified of item hereon when preparations have been made for test mentioned in paragraph 1 c of attached memorandum for General Enter.

W.R.H.
S/AS

Incls a/s

Dispatched
JUL 22 1942
AAG

File
For AAG File
7/22/42

~~SECRET~~

Dis AD 471.6 260

Gen. Arnold added in ink: The glide bomb look good- very good- In fact I have given instructions that we load up ten B-17s with two each and determine the pattern that we can expect. H.N.A.

DECLASSIFIED
DOD Item
8 Jan. & 20 June 1974
BY: [unclear] Date 3/18/77

~~CONFIDENTIAL~~
DECLASSIFIED

July 18, 1942

Lieutenant General Frank N. Andrews,
Caribbean Defense Command,
Quarry Heights, Canal Zone.

Dear Andy:

With reference to your request, just before leaving Washington, for a line on the glide bombing and skip bombing tests, we sent a confidential cable to you on July 3, 1942 briefly outlining the results of water bombing obtained so far; together with a further brief of the tactics and technique of this method of bombing, giving altitude, fuses, bomb-sights, etc. Doubtless this was handed to you upon your return to Quarry Heights.

We have not yet distributed any information on the glide bombing tests, these still being in an experimental stage. However, I have instructed that the results of these tests be compiled and forwarded to you. There is inclosed, however, a preliminary copy of a confidential memorandum on air attack, which is now in process of publication, to be distributed generally in the near future. This will furnish you, in more detail, the glide and skip bombing tactics and technique.

Again let me say we were glad to have had you with us here, and are following up the remainder of the matters you mentioned. I shall keep you posted as to results from time to time.

Sincerely yours,

*File 471.6
ci 7/1/42*

*Based on a memo from
the Director of Mil. Requirements*

H. H. ARNOLD,
Lieutenant General, U. S. Army
Commanding General, Army Air Forces.

RECORDED
JUL 18 1942 1 Incl.

DISTRIBUTION			ARMY AIR FORCES				COORDINATION			
Chief of Staff	Sec'y Air Staff	W/I Incl. A. A. G.	A-1	A-2	A-3	A-4	A-4PD	A-4Insp.	Budget	Statistics

DECLASSIFIED

ci 471.6 (259)

4225

HEADQUARTERS CARIBBEAN DEFENSE COMMAND
OFFICE OF THE COMMANDING GENERAL
QUARRY HEIGHTS, CANAL ZONE PMA/t

Washington, D. C.,
July 11, 1942.

Dear Nap:

I plan to get off tomorrow morning. In the event that I don't see you before I leave I would again like to remind you that I need a large troop transport of the C-54 class as soon as you can spare one; also a good plane for over-water flying for Lieutenant Miller to use at Belize, British Honduras, in his work in connection with anti-submarine activities.

I would appreciate it too if you would have someone write me concerning the results of the glide bombing and skip bombing tests at Valparaiso.

Thanks for your many kindnesses while I have been here and tell Bee that I enjoyed seeing her and thank her particularly for the nice party.

Best of luck.

Sincerely,

Arnold

Lieutenant General Henry H. Arnold, U.S.A.,
Commanding Army Air Forces,
Washington, D. C.

*Gen Fairchild
Please already
instructions on this
check*

*Fairchild
will you*

MM

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DIRECTOR OF
MILITARY REQUIREMENTS
A. A. F.

1942 JUL 13 AM 9 46

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HEADQUARTERS ARMY AIR FORCES
ROUTING AND RECORD SHEET

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DOD Hqs.
8 Jan. & 20 June 1974
By: JMA/C; Date: 3/16/77

Note -- A line will be drawn across sheet after each comment.

File No. _____
Tally No. AAF _____

SUBJECT: Glide Bombing and Skip Bombing Tests.

NO.	FROM	TO	DATE	COMMENTS	AFMGR/MSP/br
1.	General Fairchild	General Arnold	1942 7/14	<p>1. Reference General Andrews' request to you for information concerning results of glide bombing and skip bombing tests at Valparaiso, confidential cable was sent to Commanding General, Caribbean Defense Command, July 3, outlining results of water bombing tests together with an outline of the tactics and technique of this method of bombing giving altitudes, fuses, bomb sights, etc.</p> <p>2. Information on the results of the glide bombing tests have not yet been distributed since they are in an experimental state as yet. Results of the tests to date will be compiled and forwarded to General Andrews at once.</p> <p>3. A confidential memorandum on tactics and technique (covering the glide and skip bombing tactics and technique in much greater detail) is now in process of publication and will be distributed generally as soon as printed. Preliminary copy attached.</p> <p>Ltr to Gen Arnold & Incl. Memo No. 1, Subj: Tactics and Technique of Air Attack</p>	<p><i>MWF</i> M. S. F. Dir. Mil. Req.</p>
				<p><i>Noted note sent to Andrews</i> <i>[Signature]</i></p>	

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P-0071.00. Rev. 8/10/61

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DIRECTOR OF
MILITARY REQUIREMENTS
A. F.

1942 JUL 16 AM 10 56

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 By SP10/IC: Date 3/14/77

HEADQUARTERS ARMY AIR FORCES
 ROUTING AND RECORD SHEET

1197

Note -- A line will be drawn across after each comment.

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File No. _____

Tally No. AAF _____

SUBJECT: American Bombs for American Airplanes

NO.	FROM	TO	DATE	COMMENTS	WJF/3mm
1	AFGAS	AFADS	1942 6/24	For comment or concurrence. 1 Incl. Memo for GAS fr AFADS, above subj, dated 6/23	WJF W.J.F. Secy/ A.S.
2.	AFADS	AFGAS	1942 6/26	Incl. n/c <i>AK</i>	AFADS RCC/mhh 1. This Division concurs, and efforts are being made to supply American munitions for American airplanes in all theatres. <i>Rbb</i> <i>for</i> MFS C/A-4.
					<i>File</i> <i>Cpl. Hays</i> <i>6/30/42</i>

471.6 (257)

Hq. Army Air Forces
 JUN 27 1942
 JUN 28
 AAG Received
 GAS Received

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D-4074.07. Rev. 8/14/41

Page No. _____

471.6 (257)

DECLASSIFIED
DOD ltr.
4 Jan. & 20 June 1974
By: JHELC; Date: 3/8/77

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WAR DEPARTMENT
HEADQUARTERS OF THE ARMY AIR FORCES
WASHINGTON

JUN 23 1942

MEMORANDUM FOR CHIEF OF THE AIR STAFF:
Thru Director, Military Requirements.

SUBJECT: American Bombs for American Airplanes.

1. Reference cablegram from ACCRA (from FAYID) to the Commanding General, Army Air Forces, no number, dated June 15, 1942. Halverson reports many hits on battleships in recent action against an element of the Italian Fleet. No definite claims of damage are made for hits on the LITTORI or CAVOUR. Bombs used were stated to be mostly 500 pound British SAP with twelve (second) delay fuses. Only two 1000 pound GP bombs are listed.
2. The cost and time involved in producing our heavy bombardment airplane plus its trained crew is such as to render it unacceptable that such a weapon carry inferior munitions. The only return from bombing missions is the destruction which results from the munitions released which hit their targets.
3. Destructive action comes from the quality and quantity of explosives contained in the munitions used. This effect is influenced very materially by the fusing used. The two most important features involved in fusing are to secure detonation of demolition bombs from the tail because of the very great directional effect involved, and to secure such detonation before the bomb case has time to break in case it encounters an impenetrable object.
4. Our standard bomb loading is 50/50 TNT and amatol. Shortage of TNT has caused the loading of some of our bombs with 35/65 TNT and amatol in that order. The effectiveness of the latter bomb is admittedly reduced from the standard by about 25%. The British use a 20/80 mixture of TNT and amatol. It is apparent that a still further decrease in effectiveness is the result of using this mixture although positive figures are not available.
5. British bombs are generally made of cast steel with heavy walls and consequent reduction in the quantity of explosive carried. The British 1000 pound GP bomb carries approximately

- 1 -

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Memorandum for Chief of the Air Staff:
Thru Director, Military Requirements.

Subject: American Bombs for American Airplanes.

half the explosive that ours does. The British 500 pound SAP bomb carries 90 to 95 pounds of explosive whereas our 500 pound SAP carries 155 pounds and our 500 pound GP bomb carries 266 pounds. Our 500 pound GP bomb thus carries almost exactly three times as much explosive as the 500 pound British SAP.

6. It is a basic principle in the conduct of bombing that bomb sizes should be adequate to cause destruction of the target attacked. Against heavy cruisers and battleships appropriate bombs are 1000 and 2000 pound size respectively. With our standard fillings of 50/50 TNT/amatol and fused to secure detonation from the tail by .025 second delay detonators very destructive effects may be expected against vessels of the types mentioned. The results to be expected from 500 pound British SAP bombs loaded with inferior loadings and fused with twelve second delay fuses are hopelessly meager. The results as far as known of the Halverson participation in the Mediterranean attack bear this out. The destructive results which should be expected of a mission of that character were reduced to a negligible percentage.

RECOMMENDATION: It is urgently recommended that supply plans contemplate and shipping provide that American bombs of the best quality and in all suitable sizes accompany other supplies for the complete support of the operations of American units. Provision for the carrying of British bombs should be made but such bombs should only be used in case of emergencies where it has been impossible to provide proper distribution of our own types.

ARMY AIR FORCES
24 1942

Edgar P. Sorenson
E. P. Sorenson
Colonel, Army Air Forces
Director of Bombardment

*Provision for carrying
British bombs is being made.
Concern in Recommendation.
M.E.B.
for M.I.S.F.
Dir. of Mil. Req.*

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DIRECTOR OF
MILITARY REQUIREMENTS
A A F.

1942 JUN 23 PM 2 49

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DOD ltr.

8 Jan. & 20 June 1974

By: *[Signature]* LC: Date: *3/12/77*

HEADQUARTERS ARMY AIR FORCES
ROUTING AND RECORD SHEET

~~CONFIDENTIAL~~

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File No. _____

Tally No. AAF _____

Note -- A line will be drawn across sheet after each comment.

SUBJECT: Report of Light Incendiary Bombs and Magnesium Bombs

Office, C. G., A.A.F.
JUN 16 1942

NO.	FROM	TO	DATE	COMMENTS
1.	AFAMC-5	Gen. Arnold, Chief, A.A.F.	1942 6/13	<p>1. Reference Routing and Record Sheet from General Arnold to General Fairchild, dated April 18, 1942, above subject, the following information is submitted:</p> <p>a. The Commanding General, Service of Supply, was instructed in April to cease production of thermate incendiary bombs and to procure as a substitute standard for the magnesium bombs, the thickened gasoline incendiary type.</p> <p>b. On April 21, 1942, the five-pound thickened gasoline base ejection incendiary bombs were dropped from an airplane for the first time in tests to determine flight characteristics and bomb functioning at Eggewood Arsenal. The bombs functioned satisfactorily on these tests.</p> <p>c. Action has been taken to initiate procurement for 50,000 oil filled incendiary bombs of the five-pound type. Farm buildings have been made available on the Jefferson Proving Ground reservation in Indiana and have been reserved for conductance of tests on this type bomb. 1,200 thickened gasoline incendiary bombs are being prepared on a rush order for this test. The N.D.R.C., Standard Oil Company, and Chemical Warfare Service have not established conclusively whether this type bomb should be a five-pound bomb or a seven pound size. The tests at Jefferson Proving Ground should settle this question and procurement of quantities in addition to the 50,000 will then be made.</p> <p style="text-align: right;"><i>[Signature]</i> O. P. E. Commanding General, Materiel Command</p>
2.	<i>Handwritten: New Arnold</i>	<i>Handwritten: asg note</i>		<i>Handwritten: [Signature]</i>

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LFH/nc

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8 Jan. & 20 June 1974
By *JAL/LO*; Date *3/11/77*

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~~CONFIDENTIAL~~

June 10, 1942.

MEMORANDUM FOR COMMANDING GENERAL, MAT-RIEL COMMAND. *(John JHR)*

Subject: Rocket Projectiles.

1. Rocket projectiles are desired for use in Balara as soon as they can possibly be perfected and manufactured. The goal of availability for use in that theater is set as of October 1, 1942.

2. Tests have demonstrated that although there are some defects in their airplane installation, these rockets will be extremely valuable for attacking tanks and gun emplacements.

3. Development and production should be speeded up as much as possible and to this end it is directed that the facilities of both the Material Division and the Air Forces Ground, Valparaiso be utilized to the utmost. It is further directed that unless you present a priority mission to me, that Captain Denight of Wright Field be given this project with instructions to let no duty interfere with its speedy completion. It is further directed that action be taken to have an Ordnance Officer familiar with these projectiles work directly with Captain Denight on this project.

4716
(255)

Dispatched
JUN 11 1942
AAG

M. F. HARMON,
Major General, U. S. A.,
Chief of the Air Staff.

*File
cc 6/10/42*

HEADQUARTERS		ARMY AIR FORCES				COORDINATION				
Chief of Staff	Sec'y of Staff	A.A.G.	A-1	A-2	A-3	A-4	A-WPD	A-Inspr.	Budget	Statistics

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4716-255*

AIR MAIL

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8 Jan. & 20 June 1974
By: *DMF.T.C. 1066 3/10/77*

AAF 400

HEADQUARTERS ARMY AIR FORCES
WASHINGTON

HHH/Erh
(AFMAG)

May 20, 1942.

SUBJECT: Basis for Computation of Procurement Requirements of Army Air Force for Army Air Force - Ordnance and Army Air Force - Chemical Warfare Service Equipment.

TO: Commanding General, Hawaiian Department, Fort Shafter, T.H.

In compliance with request contained in cablegram No. 25, from your headquarters, dated May 13, 1942, there is forwarded herewith copy of letter, this headquarters, April 30, 1942, on the above subject. This letter has been revised on May 7, 1942, and supersedes "Basis for the Computation of Requirements for Standard Air Corps Ordnance and Standard Chemical Warfare Service Items" appended as "Tab B" to Memorandum from the Deputy Chief of Staff to the Chief of the Army Air Forces, dated December 19, 1941.

For the Commanding General:

Dispatched
May 26 1942
RRS

*File
5/29/42*

H. H. HEWITT
Major, A.G.D.
Assistant Air Adjutant General.

DA 45 471.6 (252)

1 Incl.-
Ltr above subj., 4/30/42,
Hq. AAF, to CG, SOS, 8 pages.

*Information contained in this letter
obtained from Col Ryan - AFRBS*

		HEADQUARTERS ARMY AIR FORCES				COORDINATION				
Chief of Staff	Sec'y of Staff	A. & G.	A-1	A-2	A-3	A-4	A-WD	A-Inspr.	Budget	Sta-tistics

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8 Jan. & 20 June 1974
By: TML/LC; Date: 2/14/77

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WAR DEPARTMENT
HEADQUARTERS, ARMY AIR FORCES
WASHINGTON

Received from * ~~ARMIG~~ Headquarters, Army Air
Forces the following ~~(~~SECRET~~, ~~CONFIDENTIAL~~)~~ document:

Addressed to: **Commanding General
Hamilton Department
Fort Shafter, T.H.**

Subject: **Basis for Computation of Procurement Requirements of Army
Air Force for Army Air Force - Ordnance and Army Air Force -
Chemical Warfare Service Equipment.**

Type of Corres.: **Letter**

Date: **May 20, 1942.**

Basic Dated: **May 13, 1942.**

No. Incls.: **1.**

PLEASE ACCOMPLISH AND
RETURN IMMEDIATELY TO:
Classified Mail Unit,
Adjutant General A.A.F.
Headquarters, Army Air Forces

DATE RECEIVED _____

BY _____
Name

Rank _____ Branch

OFFICE OF: _____

AAF NO. _____
* Insert symbol of office of origin.

W-7236, A.F.

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6 Jan. & 20 June 1994
By: IS/MCLC: Date: 3/12/77

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June 2, 1942

MEMORANDUM FOR: Colonel Grandison Gardner
Eglin Field, Florida

Subject: Skip Bombing.

Pursuant to the memorandum of April 23, 1942 from General Arnold, subject as above, there is inclosed a copy of an additional communication on the subject matter which has been furnished this office by the British Representatives in Washington. This is transmitted to you for your files.

By command of Lieutenant General ARNOLD:

Sgd. Wm. W. Dick

WILLIAM W. DICK
Colonel, A.G.D.
Air Adjutant General.

1 Incl.

Dispatched
JUN 2 1942
AAG

File 61-610/42

471.6 (251)

HEADQUARTERS ARMY AIR FORCES							COORDINATION			
Chief of Staff	Sec'y of Staff	A. A. G.	A-1	A-2	A-3	A-4	A-WD	A-Insp.	Budget	Statistics

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DOD Hqs.
8 Jan. & 20 June 1994
By *SP/PLC*; Date *5/14/97*

HEADQUARTERS ARMY AIR FORCES
ROUTING AND RECORD SHEET

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Note. -- A line will be drawn across sheet after each comment.

File No. _____
Tally No. AAF _____

SUBJECT: Further Data on Skip Bombing.

NO	FROM	TO	DATE	COMMENTS
1.	AFABI	General Arnold	<i>MAY 20 1942</i>	<p>1. In compliance with R and R from General Arnold to A-2, dated 4/17/42, subject - Request for Data on Skip Bombing, the attached additional information has been obtained from the British, and is forwarded.</p> <p>Hq. Army Air Forces MAY 21 1942 AAG Received <i>5:30</i></p> <p>1 Encl. - Ltr., Br. Admiralty Supply Representative, 5/14/42.</p> <p style="text-align: right;"><i>BRS</i> <i>for R.L.W.</i> <i>C/A-2</i> <i>WBS</i></p> <p style="text-align: right;"><i>Noted by Gen. Arnold</i> <i>5/21/42</i> <i>WMS</i></p>

H. 2/3237

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CONFIDENTIAL

251
20 Bombing

MAY 20 42 AM



RECEIVED
ARMY AIR FORCES
A-2 DIVISION

Copy *Re 194*

OFFICE OF THE BRITISH ADMIRALTY
SUPPLY REPRESENTATIVE
P.O. Box 165, Benjamin Franklin Station
Washington
D.C.
LO 689/42

May 14, 1942

Skimming Bomb

Sirs:

I have been requested by the British Air Commission to give you such information as is available regarding a "Skimming Bomb", which is referred to in the Bombing Committee Paper No. 51. This is a British Admiralty project and not a Royal Air Force one.

The Skimming Bomb is a skimming projectile now under development for use from motor boats and not from aircraft. Its performance has not yet been established, but is promising in calm waters with height of drop not more than four feet. Propulsion is by rocket jet at a speed of the motor boat above forty knots. The weight of charge is about thirty pounds, and the total weight, about 100 pounds. The performance hoped for is at least 1,000 yards. The effect of swell of sea has yet to be ascertained.

The above somewhat bare particulars have been obtained from the British Admiralty, from which it is quite clear that this project is still in a very early stage.

Please let me know if you are still interested in it, and I will endeavour to obtain more detailed particulars later. It is observed that this is an anti-submarine weapon for use from motor boats, and therefore is unlikely to be of direct interest to the air services.

Yours faithfully,

/s/ E.H. Longedon
E.H. Longedon
Commander, R.N.

Major W.S. Holt
(For the information of
General Arnold)
Air Intelligence, Information
Intelligence Analysis Unit

and Lt. Colonel J.F. Olive, Jr.
Air Forces
Acting Assistant Chief of Staff A2
War Department
Washington, D.C.

Ad

(251)
Air 471.6

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AFADS/679
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5/7/42

DECLASSIFIED
DOD ltra
1 Jul & 29 June 1974
JS/MLO: Date 3/10/77

May 7, 1942.

MEMORANDUM FOR THE DIRECTOR OF MILITARY REQUIREMENTS:

Subject: Requirements for the 23rd Parachute
Fragmentation Bomb.

471.6
250

1. Elimination by your office of the requirements for the subject bomb, as stated in your R & R, subject, "Basis for Computation of Procurement Requirements of Army Air Force for Army Air Force - Ordnance and Army Air Force - Chemical Warfare Service Equipment", dated May 1, is not concurred with for the following reasons:

a. There is a definite need for a weapon for use in ground support by low flying airplanes, yet with sufficient delay to permit the airplanes to fly beyond the effective area of the bomb before detonation. The subject bomb provides such a weapon.

b. There are at this time only 6500 of the subject bomb on hand. If these are to be clustered eight to a 300# station, this quantity would be sufficient for only ten missions of a light bombardment squadron at maximum load.

c. Conversion of the stabilized bomb to the parachute type is an extremely difficult and lengthy procurement problem in view of the current shortage of silk, nylon, and similar fabrics.

4 July 1942

2. Accordingly, it is desired that the directive from the Deputy Chief of Staff contained in the memorandum for the Chief of the Army Air Forces, subject, "Revision of Basis for Computation

HEADQUARTERS - ARMY AIR PURCH - COORDINATION							
Chief of Staff	A-3	A-4	A-WPD	A-Ins	Budget	Statistics	
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8 Jan. & 20 June 1974
By: ~~SP/IC~~; Date: 3/2/77

~~CONFIDENTIAL~~

CONFIDENTIAL

WAR DEPARTMENT
Office of the Chief of Staff
Washington

OCS 17874-53

December 19, 1941

MEMORANDUM FOR THE CHIEF OF THE ARMY AIR FORCES:

Subject: Revision of Basis for Computation of Requirements for Items of Air Corps-- Ordnance Equipment.

1. In accordance with paragraph 2, section II of your memorandum for the Chief of Staff, dated November 11, 1941, subject same as above, AAF/292-1, that memorandum and enclosures are returned herewith for necessary distribution.

2. Tab B is approved temporarily and will be used as the basis for the computation of requirements for the items indicated therein until the further amendment directed below has been accomplished and approved.

3. The 20-pound fragmentation bombs, parachute type, and 30-pound chemical bombs will not be eliminated as standard types of fire from light bombardment airplanes except dive bombing types.

4. Necessary action will be initiated to procure racks suited for rapid installation and removal in light bombardment type airplanes (except dive bombing types) now under procurement or included in current programs. These racks are to permit the employment of 20-pound (approximate) fragmentation bombs, parachute type, and 30-pound (approximate) chemical bombs.

5. Concurrently with the procurement of these racks, action will be initiated to further amend subject paper to include appropriate quantities of parachute type and chemical bombs.

By direction of the Deputy Chief of Staff:

/s/ L. S. Kuter

L. S. KUTER,
Major, General Staff,
Asst. Sec., General Staff.

Copies to
A.C. of S., G-3
A.C. of S., G-4

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Tab "a"

G-158, A.C.

air 471.6 (250)

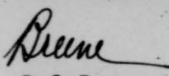
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 A DOD Itra
 8 Jan. & 20 June 1974
 By: [Signature] Date: 3/14/77

HEADQUARTERS ARMY AIR FORCES
 ROUTING AND RECORD SHEET
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Note -- A line will be drawn across sheet after each comment.

File No. _____
 Tally No. AAF _____

SUBJECT: Progress on Rocket Projectiles (Ref. Memo May 7 - copy attached)

NO.	FROM	TO	DATE	COMMENTS
1.	AFDTS	AFACG	1942 5/26	<p>1. The P-40E airplane mounting 2 rocket guns has been at Aberdeen a few days. Preliminary difficulties will delay actual flight tests until at least May 27. It is being followed very closely.</p> <p>2. Ordnance has under procurement 3500 4 1/2" rocket projectiles M-3 and 1,500 4 1/2" rocket projectiles, M-4. The former will be fitted with proximity fuses for use in aircraft against aircraft and the latter against tanks.</p> <p>3. Since the other requests of General Spatts fall under Military Requirements, the directive is being indorsed to AFPMR for setting up the program requested pending release after the experimental tests.</p> <p style="text-align: center;">  R. G. B. Colonel, AAF Director, Technical Services </p>

Air Ab 471-6 (249) B

[Handwritten initials/signature]

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Air Ab 471-6 (249) B

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DOD Hist.

8 Jan. & 28 June 1974
By: JAC/IC: Date: 3/10/77

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HEADQUARTERS AIR FORCE COMBAT COMMAND

Bolling Field, D.C.

May 7, 1942

MEMORANDUM TO: Lieutenant General H.H. Arnold, Headquarters Army
Air Forces, Washington, D.C.

SUBJECT: Recommendations for Rocket Type Projectiles.

1. With reference to your memorandum dated April 22, 1942, subject "Report on Status of 4-1/2 in. H.E. Rocket Shell to be projected from Airplanes", the following action is requested:

a. Necessary action to have the P-50 airplane, now being equipped at Wright Field with rocket firing apparatus, moved to Aberdeen Proving Ground at earliest possible date for firing tests. Request this headquarters be informed of date the P-40 airplane will be sent to Aberdeen Proving Ground.

b. Request necessary action to have 878,000 4-1/2 in. H.E. Rocket Shells manufactured for shipment to Bolero by March 1, 1943.

c. Request necessary action to expedite the supply of proximity type fuzes to enable the use of the rocket shell against aircraft.

d. Request necessary action to expedite the development of the rocket shell in armor piercing form.

e. Request necessary action to equip the following types of airplanes destined for Bolero with apparatus for firing the 4-1/2 in. H. E. Rocket Shell:

- P-39
- A-20
- B-25
- B-26

f. Request necessary action to secure from the Navy without delay 200, each, 14 in. Accelerated Armor Piercing Bombs for shipment to Bolero. This bomb has a rocket booster and is used by Dive Bombers.

/s/ CARL SPAATZ

carl spaatz
Major General, U.S. Army

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E.O. 12958
8 Dec. & 29 June 1974
By: [unclear] Date: 3/10/77

May 6, 1942

Dr. Vannevar Bush, Director
Office of Scientific Research and Development
1530 F Street, N. W.
Washington, D. C.

Dear Dr. Bush:

There is no question about the desirability of the usefulness of the rocket type projectile for use both by antiaircraft and on aircraft. At the present time, we feel that the 4 1/2 inch rocket shell is not practicable for antiaircraft artillery due to its relatively low muzzle velocity and the limited number of projectiles that can be carried along because of their weight. As I understand it, a muzzle velocity of 4,000 feet per second will be required to use the rocket as an antiaircraft weapon.

We are now installing two rocket tubes on a P-40-E airplane for ground and air tests at the Aberdeen Proving Ground, and are making a magazine feed for installation on an A-20 airplane through the Ordnance Department.

These two projects were designed to determine the possibility of using this weapon on aircraft and the behavior of the rockets at high velocity. None of this has yet been investigated. In addition, the proximity type fuse requires further development.

Both the Ordnance Department and the Air Forces are following this rocket project closely and will keep it tied in with the other projects.

Sincerely,

/s/H.H. Arnold

Dispatched

May 7 1942

AAG

H. H. ARNOLD

Lieutenant General, U. S. A.

Commanding General, Army Air Forces.

*Return to Air AG,
Room 2013*

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DOD ltra.
8 Feb. & 20 June 1974
By: JAF/IC: Date: 3/14/77

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Report on Status of 4½ inch H.E. Rocket Shell to be projected from Airplane.

MEM/bt

2. AFDMR General 1942
Arnold 5/1

1. As an anti-aircraft artillery weapon — the 4½ inch H.E. Rocket Shell is not considered practicable for AA Artillery use at this time due to its relatively low missile velocity and the limited number which can be carried because of its weight. Other existing standard weapons having higher missile velocity and greater fire density are more effective. The recently developed weapon, the "Armstrong Mortar" possesses all features of this weapon plus the advantage that it fires stokes mortar ammunition which is cheaper and easier to produce and involves less carrying weight than the Rocket. This Mortar also has the disadvantage of a low missile velocity. Were the missile velocity of the Rocket increased to approximately 4,000 feet per second it may have possibilities as an anti-aircraft weapon.

2. As a weapon to be fired from an aircraft — two tubes for rocket installation are being installed on a P-40E airplane for ground and air tests at Aberdeen Proving Ground. A magazine feed for installation on an A-20 airplane is under development by the U.S. Machinery Corporation under contract

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Report on Status of 4½ inch H.E. Rocket Shell to be Projected from
Airplane.

(2 continued)

to the Ordnance Department. These two projects will determine the possibility of using this weapon on aircraft and the behavior of the rockets at high velocity which has not yet been investigated. The proximity fuse requires further development.

3. No further action is recommended until present test program has been completed. The Ordnance and Air Corps are following this project closely and in full coordination.

Incls. n/c

M. S. F.
Dir. Mil. Res.

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DOD ltra.
8 Jan. & 20 June 1974
By: [Signature] L.G.; Date: 1/21/77

OFFICE FOR EMERGENCY MANAGEMENT
NATIONAL DEFENSE RESEARCH COMMITTEE
OF THE
OFFICE OF SCIENTIFIC RESEARCH AND DEVELOPMENT
1530 P STREET NW.
WASHINGTON, D. C.

JAMES B. CONANT, Chairman
RICHARD C. TOLMAN, Vice Chairman
ROGER ADAMS
CONWAY P. COE
KARL T. COMPTON
FRANK S. JEWETT
MAJ. GEN. R. C. MERRILL
CAPT. LYBRAND P. SMITH
IRVIN STEWART, Executive Secretary

April 21, 1942

ADDRESS REPLY
DIVISION A, NDRC
2101 CONSTITUTION AVENUE
WASHINGTON, D. C.

~~CONFIDENTIAL~~ DECLASSIFIED
ltra. June 1974
By: [Signature] Date: [Signature]

Dr. Vannevar Bush, Director
Office of Scientific Research and Development
1530 P Street NW
Washington, D. C.

My dear Dr. Bush:

In accordance with your request, I am
herewith transmitting to you a report prepared by
Dr. Hickman and Lt. Col. Skinner on the present
status of the 4th rocket for use from airplanes.

Sincerely yours,

Richard C. Tolman
Richard C. Tolman
Chairman, Division A
NDRC

RCT:nl1

Enclosure:

This document contains information affecting the national
defense of the United States within the meaning of the
Espionage Act, Title 18, U.S.C. Sec. 793 and 794, the transmission
or revelation of its contents in any manner to an
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1 Jan, & 30 June 1976
By: [unclear] Date: 3/10/77

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NATIONAL DEFENSE RESEARCH COMMITTEE
OF THE COUNCIL OF NATIONAL DEFENSE
1530 P STREET NW.
WASHINGTON, D. C.

April 21, 1942

VANNEVAR BUSH, CHAIRMAN
RICHARD C. TOLMAN, VICE CHAIRMAN
REAR ADMIRAL H. G. BOWEN
CONWAY P. COE
KARL T. COMPTON
JAMES B. CONANT
FRANK B. JEWETT
BRIG. GENERAL G. V. STRONG
IRVIN STEWART, SECRETARY

(Contribution from Jet Propulsion Research Laboratory, Indian Head, Maryland)

Report on Status of $4\frac{1}{2}$ inch H.E. Rocket Shell to be Projected from Airplanes

By C.N. Hickman, Chairman, Section H, Division A
National Defense Research Committee

Lt. Col. L.A. Skinner, Special Projects Unit,
Research and Engineering Division, Ordnance
Department, U.S. Army

- 1) There is now in an advanced state of development a medium calibre ($4\frac{1}{2}$ inch) high explosive rocket shell which can be fired with a velocity of approximately 1000 feet per second without recoil from a thin walled smooth-bore open tube. The projectile weighs approximately 31 pounds, carries a bursting charge of four pounds so located that the whole projectile is fragmented to give about 23 pounds of fragments. Ground tests have indicated that this rocket, when projected from a 15 foot tube, has a range and dispersion comparable with those of a 105 mm howitzer fired at the same velocity and elevation. With a tube projector (guide tube) 7 feet long the performance is not noticeably changed. It should be remarked that the rocket shell is of simple design, employs no strategic materials, is easier to fabricate than conventional ammunition and uses a propellant of standard composition that can be manufactured with existing equipment, as has already been demonstrated on a commercial scale.
- 2) (a) The characteristics enumerated above, namely, the lack of recoil, high explosive capacity, lightness and simplicity of the projector and accuracy of fire,

4/29 [unclear]

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make this weapon particularly suitable for use from aircraft, pursuit planes as well as heavier types of craft.

(b) The application that can be realized with least delay is the use against ground targets. The projectors (guide tubes) may be mounted on existing pursuit ships without radical structural changes and it has been shown that the plane suffers no damage as a result of firing. Equipped with a contact fuse readily adapted from existing design the projectile should be effective against ground targets such as tanks, railroad trains, power plants and surface submarines, and it is expected that effective fire may be opened against such targets from airplanes at ranges exceeding 1500 yards. However, this cannot be determined definitely until actual firing tests from airplanes are conducted. A special armor-piercing nose, now under development and adaptation for this projectile, will increase its effectiveness against heavily armed vehicles. Reports from Russia indicate that a rocket projectile similar in character, but inferior in accuracy to that described here has been very effective in destroying tanks and breaking up tank attacks when fired from pursuit ships.

(c) A very important application of this same rocket is the use against other planes in flight. Contact or time fuses may possibly be used for this purpose. When proximity fuses, now under development, become available the effectiveness of this application will be increased enormously.

3) The essential external elements of the rocket are a propellant chamber, an explosive nose with a long tube extending into the propellant chamber (see Figure 1) and stabilizing fins, not shown in Figure 1 but shown in detail in Figures 2 and 3. The assembled rocket with an experimental head is shown in Figure 4. The fin assembly in the open and closed positions may be also seen.

(a) The propellant chamber contains the powder charge mounted on a trap, primer and igniting system. For velocities of 1000 ft/sec 4.6 pounds of propellant are used. This burns in 0.18 seconds during which time the projectile

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- 3 -

travels approximately 60 feet. On leaving the guide tube the projectile has a velocity of approximately 400 ft/sec. Numerous experiments made during the past year indicate that the rocket motor is operating at almost its maximum possible efficiency. The operating pressure in the rocket chamber is 3,000 lbs/sq. in., and the bursting pressure of the chamber is 10,000 lbs/sq. in. However, the rocket has been so designed that in the very remote event of a malfunction, the explosive head will part company from the propellant chamber before the bursting pressure of the latter is reached. In this event one piece is ejected from each end of the guide tube, which, experience has shown, suffers no damage.

(b) The explosive nose and attached tube are filled with high explosive which is effective in fragmenting the propellant chamber, as may be seen from Figure 1 which illustrates fragmentation results obtained at the Naval Proving Ground, Dahlgren, Virginia. The average fragmentation velocity was approximately 4,000 ft/sec and the density pattern was between that of a 3 inch and 5 inch antiaircraft shell. The design of the high explosive chamber not only gives more fragmented metal but eliminates one objection raised to antiaircraft rockets, namely, the return of the unfragmented propellant chamber to the ground.

(c) In order that the rocket may be fired from a thin walled guide tube of minimum diameter folding fins, illustrated in Figures 2 and 3, were developed. Flight and wind-tunnel tests have shown that these fins provide adequate stabilization with low drag.

(d) The acceleration forces in the rocket are relatively low (less than 200 g) and this makes the design of a proximity fuse considerably less difficult than in a shell of the conventional type.

(e) In order to secure the rocket in the guide tube and to release it at the time of firing a very simple and positively acting release mechanism has been developed. The rocket may be fired electrically from the pilot's compartment and

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- 4 -

is aimed in the same way as are the present type of fixed aircraft guns, namely, by pointing the plane at the target.

4) The Performance of the Rocket

(a) Preliminary firings for dispersion have been made at Aberdeen Proving Ground and at Indian Head. The results are given in Figures 5 and 6 and indicate a range and dispersion comparable to a howitzer. It should be noted that these firings were made at 30° and 60° elevation and do not give the maximum range of the projectile. This is estimated to be approximately 7000 yards.

(b) The behavior of the projectile in flight is best seen from a study of high speed motion pictures. A number of these are available and will be exhibited on request.

5) The surprise nature of this weapon makes it highly desirable that its first employment be in quantity so that any success resulting from its first use may be fully exploited. Attention is invited to the fact that this projectile is in an advanced stage of development and that it could be applied in actual warfare in the very near future if sufficient direction of its production were undertaken by those having the necessary authority. It is believed that if the performance of the rocket is made known in the proper quarters this directive action will not be lacking.

THIS DOCUMENT CONTAINS INFORMATION AFFECTING THE NATIONAL DEFENSE OF THE UNITED STATES WITHIN THE MEANING OF THE Espionage Laws, 50 U.S.C. 31, and 32. THE TRANSMISSION OR THE REVELATION OF ITS CONTENTS IN ANY MANNER TO AN UNAUTHORIZED PERSON IS PROHIBITED BY LAW.

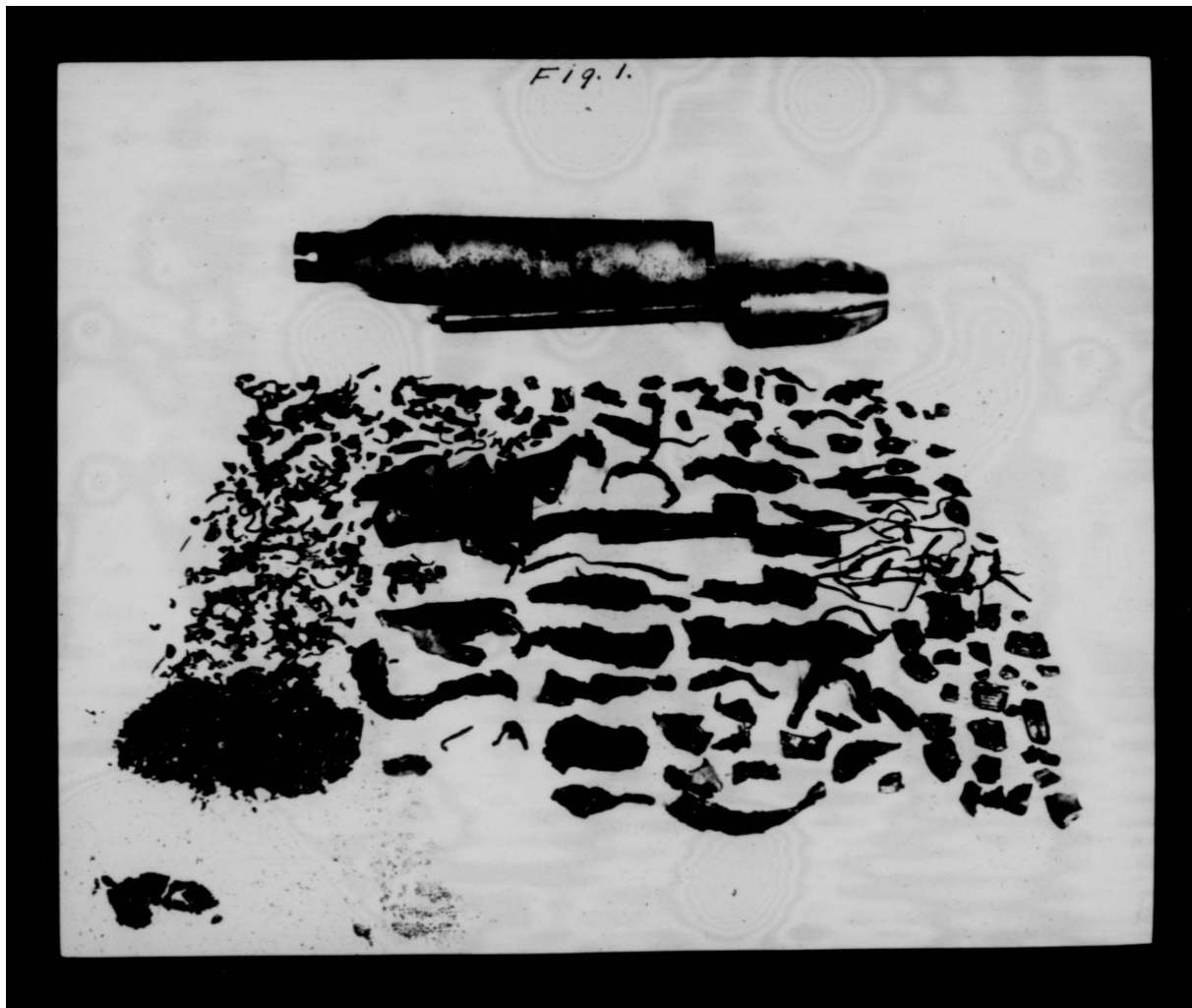
Leah A. Skinner
Lt. Col. L.A. Skinner, Special Projects Unit, Research and Engineering Division, Ordnance Department, U.S. Army

C.N. Hickman
C.N. Hickman, Chairman, Section H, Division A, National Defense Research Committee

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NAVAL POWDER FACTORY
INDIAN HEAD, MD.

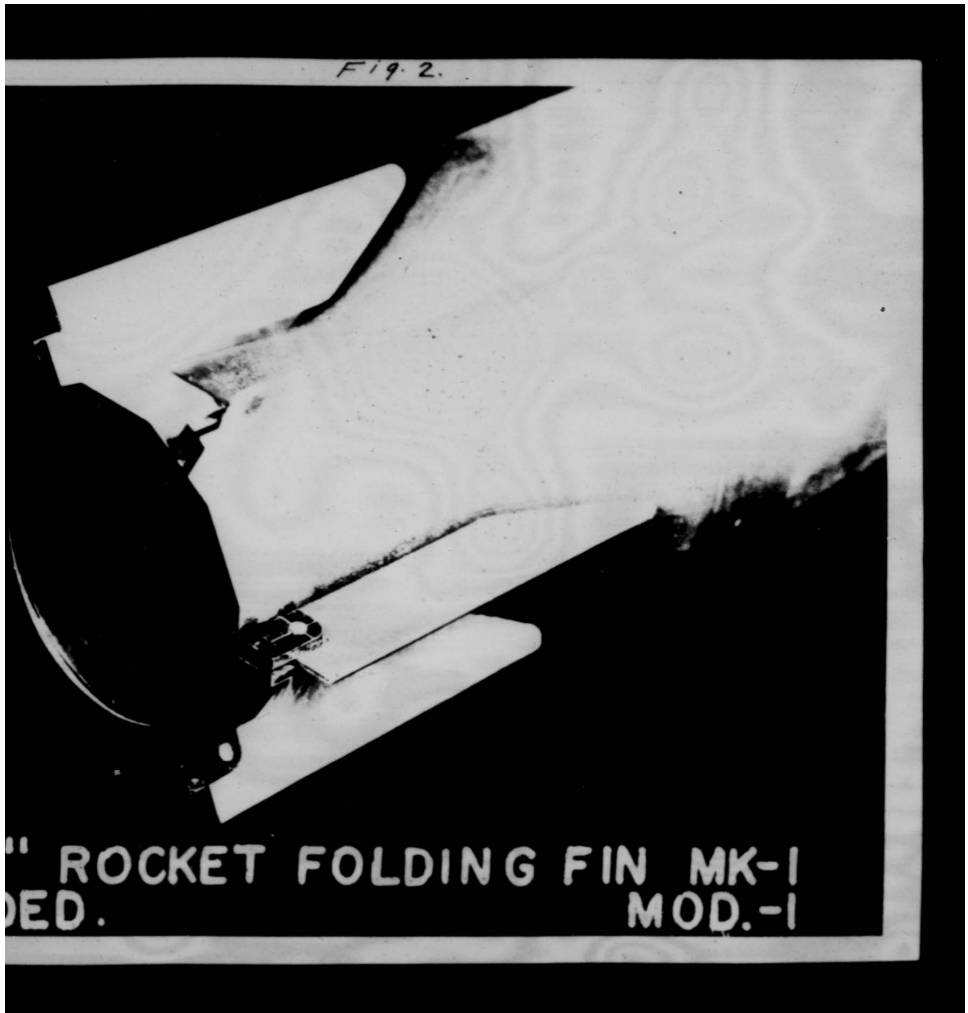
PHOTO NO. 607

DATE TAKEN 12-20-41

SUBJECT Projectile fragments 4 1/2"
without tail

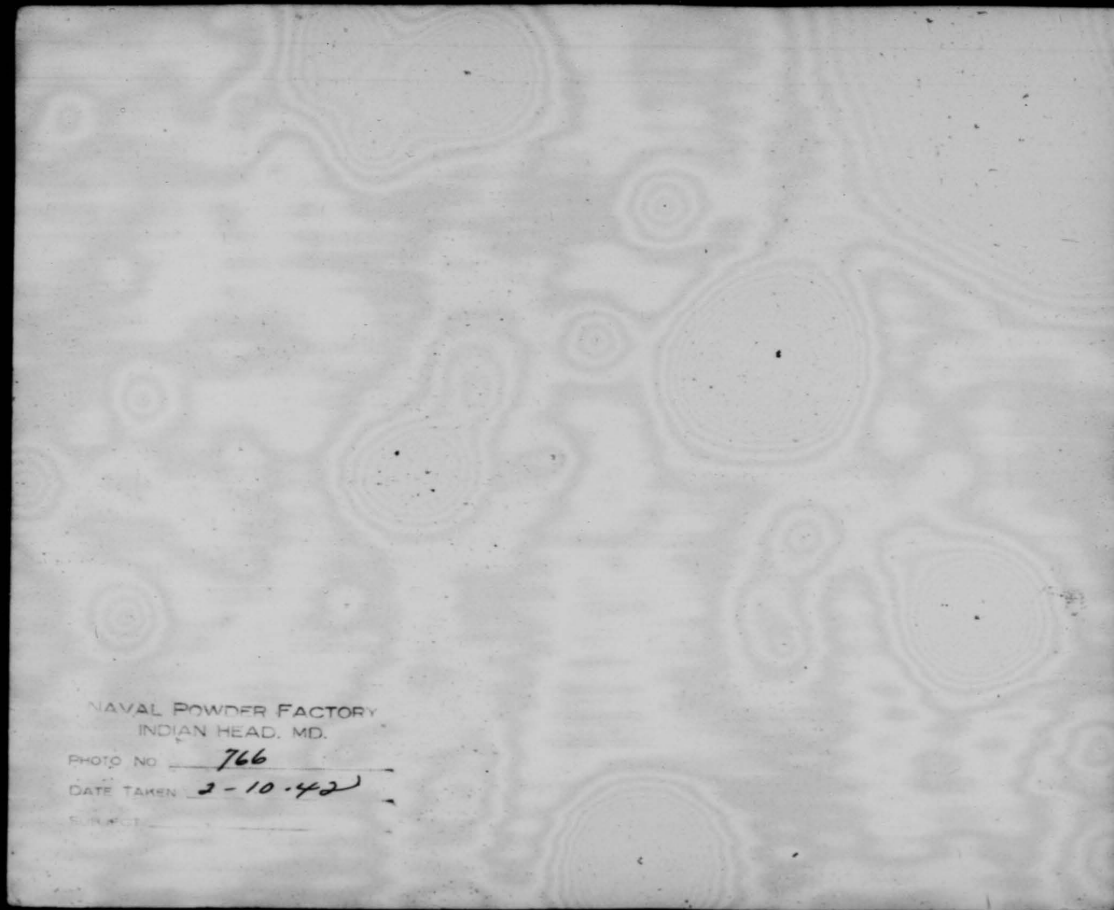
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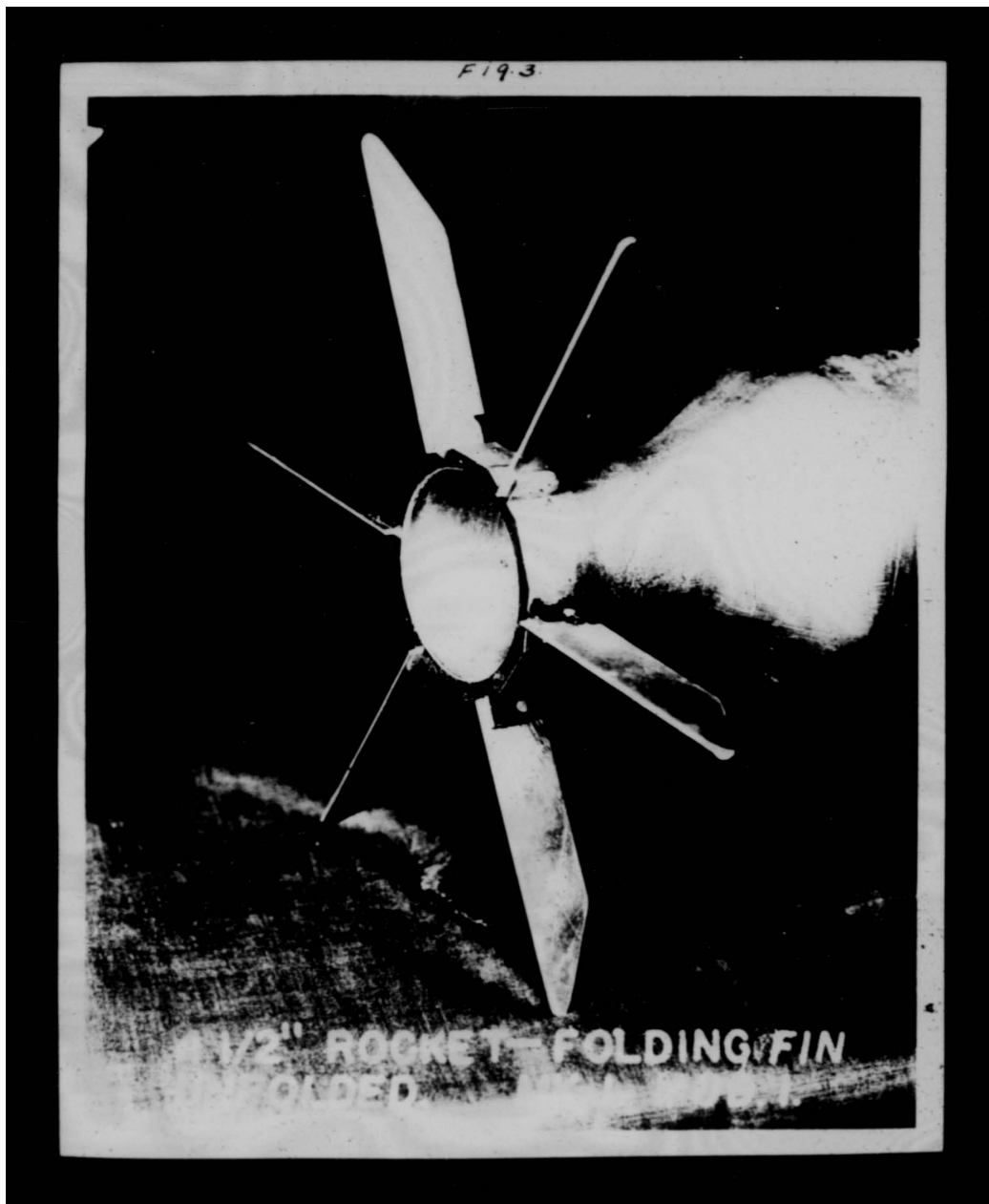


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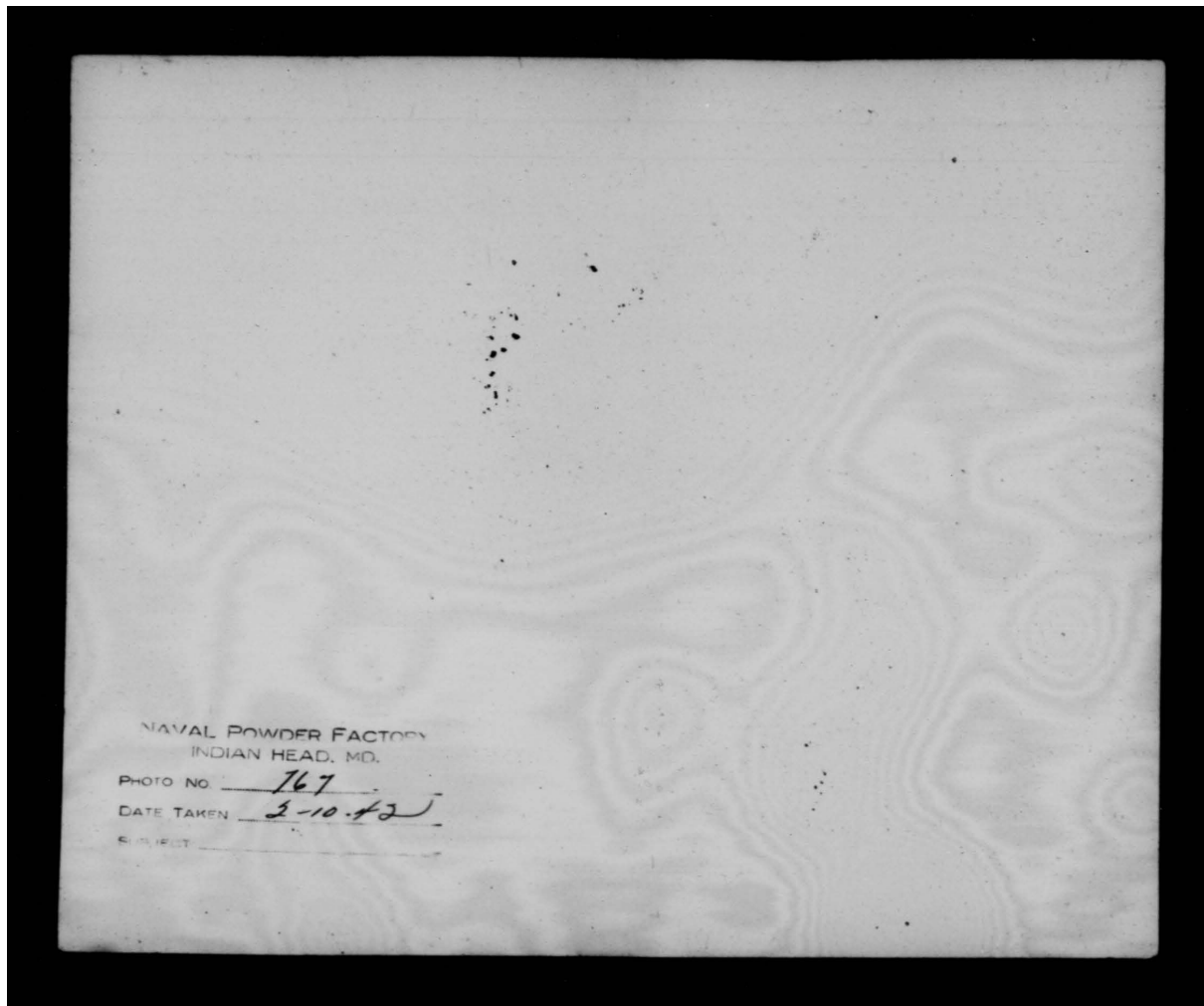
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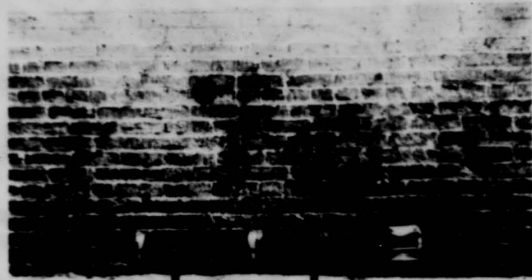


Fig. 4.

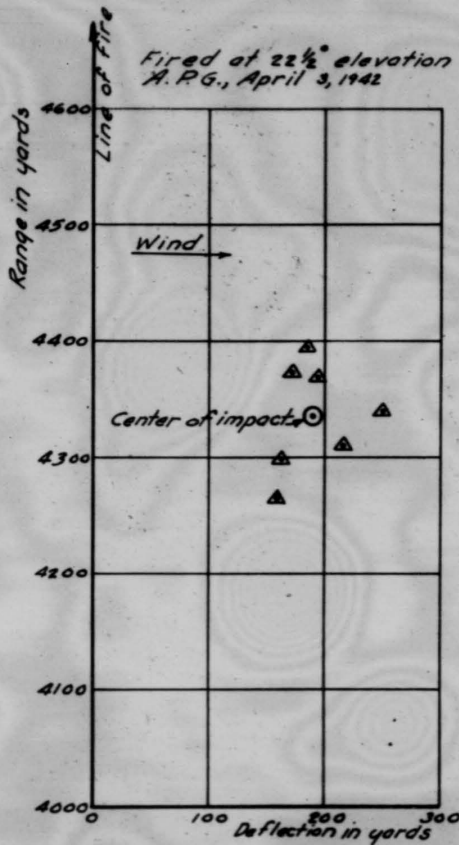


Fig. 5. Dispersion test on $4\frac{1}{2}$ " rockets.



Fig. 6. Dispersion tests on 4 1/2" rockets.

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 DOD Ltr.
 8 Jan. & 20 June 1974
 By: *[Signature]* Date: *3/14/77*

HEADQUARTERS ARMY AIR FORCES
 ROUTING AND RECORD SHEET

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File No.
 Tally No. AAF

SUBJECT: Questions re Inspection Trip to Eglis and Mobile.

NO.	FROM	TO	DATE	COMMENTS
1	AFACG	AFAMC	1942 4/17	<p>1. The following questions came up on my inspection trip to Eglis and Mobile. Let me have the answers to these immediately.</p> <p>a. How are we getting along with the airplane designed to carry the 75 mm cannon?</p> <p>b. Are the turret guns on the B-29 going to be simple to operate or are we getting into more turret trouble on that airplane?</p> <p>c. It was noticed at Eglis Field that the glide bombs there all had complicated radio controls. Some time ago instructions were issued to proceed with the production of a glide bomb without these complicated radio controls. What is the status of this?</p> <p>d. What is being done on the cable cutters for installation on our airplanes?</p> <p style="text-align: right;"><i>[Signature]</i></p>

HEADQUARTERS ARMY AIR FORCES
ROUTING AND RECORD SHEET

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File No. _____

Tally No. AAP _____

SUBJECT: Questions re Inspection Trip to Eglin and Mobile.

NO	FROM	TO	DATE	COMMENTS
2.	AFAMC-9	AFACG	1942 4-18	<p>1. Reference above questions:</p> <p>1 a. <u>75 MM Cannon</u></p> <p>The Douglas YA-26B with 75 MM cannon, semi-automatic feed, scheduled delivery October, 1942.</p> <p>1 b. <u>B-29 Armament</u></p> <p>Considering the armament and fire control problems as related to pressure cabin set-up, we are doing everything we can to keep the turret and fire control equipment as simple as possible. One B-17C with Sperry prototype equipment now ready for test at Wright and Eglin. One B-24C, with GE equipment, now being tested on West Coast. We hope to have this equipment "de-bugged" before B-29 production starts.</p> <p>1 c. <u>Glide Bombs</u></p> <p>Some type of control in addition to stabilization is essential if any accuracy, at all equivalent to that of high angle bombing, is to be attained.</p> <p>Development of all possible types of control including radio, television, heat, light and sound is under consideration. Radio control is being used at the present stage of development because it is much further along due to our work on the target airplane projects.</p> <p>This office has no record of a directive covering elimination of radio control from glide bombs.</p>

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Page 2
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HEADQUARTERS ARMY AIR FORCES
ROUTING AND RECORD SHEET

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File No. _____

Tally No. AAP _____

Note -- A line will be drawn across sheet after each comment.

SUBJECT: Questions re Inspection Trip to Egin and Mobile.

NO.	FROM	TO	DATE	COMMENTS
2.	(Cont'd)		1942 4-18	<p>1 d. <u>Cable Cutters</u></p> <p>The subject of cable cutters has recently been presented to Directorate of Military Requirements outlining structural and aerodynamic problems incident to installation of this equipment and suggesting immediate consideration so that determination be reached as to <u>what particular type equipment</u> be used in <u>what particular type airplane</u>. The production of the cable cutting equipment itself is little or no problem. However, the effect upon airplane production due to modification of structure, reinforcement of leading edge, etc., is a big problem and one which should be carefully weighed before a blanket directive is issued.</p> <p style="text-align: right;"><i>[Signature]</i> C. E. E. Commanding General, Materiel Command.</p>

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HEADQUARTERS ARMY AIR FORCES
ROUTING AND RECORD SHEET

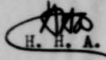
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File No.

Tally No. AAF

SUBJECT: Glide Bombs.

NO.	FROM	TO	DATE	COMMENTS
3	CG/AAF	CG/ Mat. Command	1942 4/20	<p>1. There appears to be a misunderstanding as to the priorities on development and production of glide bombs. In order that all concerned may work to the same objective I am again listing the order of priorities on these projects:</p> <p>a. First priority - a simple glide bomb with stabilization only. This type of bomb will of course not have the accuracy of a more complicated type but when used in quantity will accomplish the result desired against vertical area targets. These bombs will be either attached to airplanes for release or be towed by airplanes and released. These will depend on quantity of projectiles released for effect.</p> <p>b. Second priority - a glide bomb with stabilization plus control, either radio-television, heat, light or what have you. This type of bomb will have the accuracy required for semi-precision work against a particular target.</p> <p style="text-align: right;"><i>precision</i>  H. H. A.</p>

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HEADQUARTERS ARMY AIR FORCES
ROUTING AND RECORD SHEET

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File No. _____

Tally No. AAF _____

SUBJECT: Glide Bombs.

NO.	FROM	TO	DATE	COMMENTS
4.	AFAMC-9	AFACG	1942 5/4	<p>1. A check with the Special Weapons Unit, Materiel Center, indicates that tests are being conducted at this time to obtain suitable stabilizing equipment by which the bomb will be flown in a reasonably straight line after release. It is indicated these tests will be completed in about sixty days. The wing structure itself has reached a point where it is indicated it may be standardized within sixty to ninety days. Should the tests of the stabilizing equipment mentioned above reach a successful conclusion, the simple glide bomb with stabilization only should be ready for standardization and production in large quantities about August 1942.</p> <p>2. Development work and tests on radio control equipment and television as well as heat, light, sound and Radar target seeking equipments are being conducted for possible use in controllable bombs. This development will be allowed to interfere in no way with the development described in paragraph 1, above.</p>

MAY 5 1942
AAF Materiel

TPO

O. P. E.
Commanding General
Air Force Materiel Command

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7/11/42
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(Do not use reverse side) Form No. 1-9/14/41

Page No. 5

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DECLASSIFIED
DOD Item
8 Jan. & 20 June 1984
By: JHE/LC; Date: 7/24/87

Transportation for ~~Emergency~~ Bomb Disposal Squad
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Commanding General, Services of Supply

1. Due to previous commitments and present allocation of transport type aircraft, there are none available at this time for assignment to Aberdeen.
2. However, records in this office show that at this time there are two (2) airplanes assigned to Aberdeen that could be used for the type of work mentioned in the basic communication. These airplanes are:

- one (1) B-18A #37-463
- one (1) B-23 #39-33

For the Chief of the Air Staff:

H. S. Vandenberg
Colonel, G. S. C.
Asst. Chief of Air Staff, A-3

Incl:
Ltr to CG, AAF,
4/18, abv subj.

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**U.S. HEADQUARTERS ARMY AIR FORCES
ROUTING AND RECORD SHEET**

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DOD Hqs.
8 Jan. & 20 June 1974
By: JAF L.C. Date: 3/14/77

Note -- A line will be drawn across sheet after each comment.

File No. _____
Tally No. AAF _____

SUBJECT: Transportation for Emergency Bomb Disposal Squad.

NO.	FROM	TO	DATE	COMMENTS
1.	AFCAS	AFACT (A-5)	1942 4/25	<p style="text-align: right;">AFCAS JYI/mwb</p> <p>1. For recommendation as to policy to be followed in this case.</p> <p>2. For return to Secretary of the Air Staff (Col. York).</p> <p>Incls: Ltr to CG, AAF, 4/18, above subj.</p> <p style="text-align: right;"><i>JYI</i> S/AS</p>
2.	AFACT	AFCAS Attention Col. York	4/30	<p style="text-align: right;">AFACT ABO:dah</p> <p>1. Due to previous commitments and present allocation of transport type aircraft, there are none available at this time for assignment to Aberdeen.</p> <p>2. However, records in this office show that at this time there are two (2) airplanes assigned to Aberdeen that could be used for the type of work mentioned in the basic communication. These airplanes are:</p> <p style="margin-left: 40px;">one (1) B-18A #37-463 one (1) B-23 #39-33</p> <p>Incls: Ltr to CG, AAF, 4/18, abv subj.</p> <p style="text-align: right;">✓ S.A. H.S.V. C/A-3.</p>

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HEADQUARTERS ARMY AIR FORCE
ROUTING AND RECORD SHEET

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Tally No. AAF _____

SUBJECT: Anti-Submarine Activity.

NO.	FROM	TO	DATE	COMMENTS	AFRDB ARM:mr
3	AFRDB	AFGAS thru AFDMR:mw	1942 4/21	<p>1. It is recommended that the attached directive be not issued.</p> <p>2. The trouble appears to arise entirely from the shortage of depth bombs. The shortage has been known and action has been taken to remedy it. At this time there is a shipment of 250-pound depth bombs en route to England which will allow a more efficient loading of medium and light bombers.</p> <p>3. There is no technical requirement which makes it necessary to load bomb racks alternately with depth bombs and bombs. It is believed the shortage of depth bombs is so bad that fewer airplanes could be used on patrol if loaded only with depth bombs.</p>	
	Hq. Army A1			Incl: Ltr. Sub: Anti-Submarine Activity	<p>119 F. L. E. Deputy Dir/Bombardment 24</p>
	APR 23 1942 AAG Received				
				File JRC	

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F-4071, AF. Rev. 8/14/41

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See also 71.6 (242)

DIRECTOR OF
MILITARY REQUIREMENTS
A. A. F.

1942 APR 22 AM 11 31

DIRECTOR OF
MILITARY REQUIREMENTS
A. A. F.

1942 APR 23 AM 9 24

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DOD ltr.

9 Jan, & 20 June 1974
 BY: [redacted] Date: 2/2/77

HEADQUARTERS ARMY AIR FORCES
 ROUTING AND RECORD SHEET

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File No.

Tally No. AAP

SUBJECT: Anti-Submarine Activity.

~~SECRET~~

NO.	FROM	TO	DATE	COMMENTS	APTAI VENIFA
1.	*PTAI Hq. Army A APR 16 1942 AAG Received	AFCAS	1942 4-13	<p>1. The attached letter is submitted for signature although not concurred in by A-4.</p> <p>2. The directive requires that action be taken to supply depth bombs; the point that the present supply is limited does not appear to warrant non-concurrence.</p> <p>3. All papers concerning above subject have been classified as Secret. <i>East</i></p>	
2.	H. ARMY A APR 18 1942 AAG Received	AFCAS	4/17	<p>1. This Division believes that the Director of Bombardment should be consulted on this before signature. As the bombardier can control the bomb stations from which he can release his bombs, the depth bombs could be loaded on separate racks from the aerial bombs. This would enable the airplane to go to the effective dropping altitude of the depth bombs, and then return to a safe altitude before dropping the aerial bomb.</p> <p>Incl: n/c</p> <p><i>Van</i> H. S. V. C/AFACT <i>p</i></p>	

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Page No.

W-4071.40, Rev. 8/1/64

air 28471.6 (242)

APR 19 42 AM

IN  OUT
OFFICE OF
DIRECTOR OF BOMBARDMENT



DECLASSIFIED

ADDRESS REPLY TO
CHIEF OF THE AIR CORPS
WAR DEPARTMENT
WASHINGTON, D. C.

WAR DEPARTMENT
Headquarters, Army Air Forces
~~CORPS HEADQUARTERS, ARMY AIR FORCES~~

WASHINGTON

DECLASSIFIED
& DOD ltra.
S Dec. & 20 June 1974
By ~~SP-1~~ LC: Date 3/14/77

SUBJECT: Anti-submarine Activity.

TO: Director of Bombardment.

1. During an inspection of Air Force units in the Caribbean area on anti-submarine patrols it was reported that the present method of bomb loading, i.e., alternately one (1) depth-bomb and one (1) 300 lb bomb was faulty in that safety requirements limit minimum altitude for dropping the bomb to 1500 feet, whereas greatest effectiveness was obtained from dropping the depth-bomb at a much lower altitude. It was likewise reported that the depth-bomb was a more effective weapon than the bomb.

2. It is therefore directed that action be taken to supply units now on anti-submarine patrols with sufficient depth-bombs to eliminate the necessity of using the 300 lb bomb. In the meantime airplanes should be loaded either with bombs or depth-bombs; not both.

By command of Lieutenant General ARNOLD:



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air 04 471.6 (242)

CONFIDENTIAL

**SUBJECT: Joint Aircraft Committee Case No. 217,
Standardization of Aircraft Bombs**

AAP/D/Bomb
EPS:mld
March 19, 1942

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DOD ltr.

13 Jan. & 20 June 1974
By: [unclear] Date: 3/14/77

1st Ind.

War Department, Headquarters, Army Air Forces, Washington, D. C.
TO: Office, Chief of Ordnance.

MAR 20 1942

1. Action indicated in paragraph 1 basic letter is desired.

For the Commanding General, Army Air Forces:

EDGAR P. SOMMER,
Colonel, Air Corps,
Director of Bombardment.

Encls:
n/o

471.6
239

Dispatched
MAR 21 1942
AAG

MAR 20 1942
AAG Received

HEADQUARTERS ARMY AIR FORCES - COORDINATION											
Chief of Staff	Sec'y of Staff	Air Staff	A.A.G.	A-1	A-2	A-3	A-4	A-WD	A-Inv.	Budget	Statistics

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See Ab 471.6 239

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JOINT AIRCRAFT COMMITTEE
WASHINGTON, D. C.

February 28, 1942

DECLASSIFIED
DOD - Itm, 4
3 Jan. & 20 June 1974
By: J/M/LC: Date: 3/10/77

MEMORANDUM TO: Adjutant General

SUBJECT: Joint Aircraft Committee Case No. 217;
Standardization of Aircraft Bombs

1. It is requested that a directive be issued to the Chief of Ordnance to take the necessary action to carry out the agreement reached by the Army, Navy and British Air Commission, as outlined in Report No. 8 of Case No. 217, the Standardization of Aircraft Bombs.

2. Report No. 8 of Case No. 217 was approved in the meeting of the Joint Aircraft Committee on February 24, 1942. This approval was based upon the recommendation of the Special Subcommittee on the Standardization of Aircraft Bombs.

3. The authority of the Joint Aircraft Committee to make arrangements of this nature is contained in a letter from the Secretary of War, dated April 22, 1941, Subject: "Joint Aircraft Committee," Reference: File No. WD 452 (14-23-41)M. A copy of this letter is attached.

N. H. SHEA
2nd Lieut., Air Corps
Assistant Recorder

Incl.:
Cy. Case No. 217
Cy. ltr frm Sec'y War
CC - Chief of Ordnance

~~CONFIDENTIAL~~
DECLASSIFIED

MAR 20 1942

RECORDED

DECLASSIFIED
DDO
20 June 1974
MFLC: Data 3/1/77

SUBJECT: Low Altitude Water Impact Bombing with M-103 Fuse.

TO: Commanding General,
Third Air Force,
National Guard Armory,
Tampa, Florida.

1. The Army Air Forces have experienced some failures of bombs equipped with the M-103 nose fuse upon impact with water when dropped from low altitude. The Ordnance Department reports that the failure is caused by the M-103 nose fuse failing to completely arm when dropped from altitudes below 1000 or 1500 feet.
2. Pending the issue of a modified fuse to be designated as fuse, AM-103, the following information is furnished for the use of the M-103 fuse. The M-103 fuse should be "partially armed by backing half the arming vane approximately 250 turns or until 1/8" or 1/3" of the safety discs have been exposed by the vane cup".
3. The modified fuse AM-103 when received will permit dive bombing and bombing at low altitudes so that it will arm in from 450 to 650 feet of air travel.
4. It is directed that all airfields and installations under your command be informed as soon as practical.

471.6 (238) B

By command of Lieutenant General ARNOLD:

MAR 20 1942

Edgar P. Sorensen
Colonel, Air Corps
Director of Bombardment

Dispatched
MAR 21 1942
AAG

HEADQUARTERS		ARMY AIR FORCES				COORDINATION					Sta-
Chief of Staff	Secy Air Staff	A.A.G.	A-1	A-2	A-3	A-4	A-APP	A-INS	Budget	Statistics	
											2/2/42 SPT

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MAR 20 1942

SECRET

DECLASSIFIED
DOD No.
3 Jan. & 26 June 1974
BY: [Signature] Date: 3/14/77

DECLASSIFIED

SUBJECT: Low Altitude Water Impact Bombing with M-104 Fuse.

TO: Commanding General,
Second Air Force,
Fort George Wright, Washington.

471.6 (238)

1. The Army Air Forces have experienced some failures of bombs equipped with the M-103 nose fuse upon impact with water when dropped from low altitude. The Ordnance Department reports that the failure is caused by the M-103 nose fuse failing to completely arm when dropped from altitudes below 1000 or 1500 feet.
2. Pending the issue of a modified fuse to be designated as fuse, AM-103, the following information is furnished for the use of M-103 fuse. The M-103 fuse should be "partially armed" by backing half the arming vane approximately 250 turns or until 1/8" or 1/2" of the safety discs have been exposed by the vane cup".
3. The modified fuse AM-103 when received will permit dive bombing and bombing at low altitude so that it will arm in from 450 to 600 feet of air travel.
4. It is directed that all airfields and installations under your command be informed as soon as practical.

By command of Lieutenant General ARNOLD:

Dispatched
MAR 21 1942
-AAG

41. Army
MAR 20 1942
AAG Received

Edgar P. Sorensen
Colonel, Air Corps
Director of Bombardment

HEADQUARTERS		ARMY AIR FORCES				COORDINATION				Sta-	
Chief of Staff	Secy of Staff	A. A. G.	A-1	A-2	A-3	A-4	A-5	A-6	A-7	A-8	tion
											[Signature]
											[Signature]

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471.6 (238)

DECLASSIFIED
 DOD Mem.
 8 Jan. & 30 June 1974
 Hy: *3/21/77* Date: *3/19/77*

HEADQUARTERS ARMY AIR FORCES
 ROUTING AND RECORD SHEET

140
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CONFIDENTIAL

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Note. -- A line will be drawn across sheet after each comment.

File No.
 Tally No. IAF 330

SUBJECT: 4,000-Pound Bomb.

NO.	FROM	TO	DATE	COMMENTS
1.	AFDTS	AFRDB	1942 3-19	<p>RGB:ms</p> <p>1. The attached correspondence, with reference to the 4,000 pound bomb, is forwarded to you for action.</p> <p>2. I am notifying the Secretary of the Air Staff to this effect.</p> <p><i>Breene.</i> R. G. B. Director of Technical Services.</p>
2.	AFRDB	General Arnold	3-26	<p>AFRDB FLA:m</p> <p>1. Plans being made by the Materiel Division as indicated on attached paper will meet our requirements for the use of the 4,000-pound bomb. The 4,000-pound bomb, when used, will in all probability be used at night. The consequent loss in performance by the B-24 and B-17 airplanes due to carrying this bomb on the wings will not be as important a factor, when used at night, as it would be if necessary to use the 4,000-pound bomb as a day weapon.</p> <p><i>all numbers ordered to amplifier?</i></p> <p><i>EPH</i> E.P.S. Dir/Bombardment.</p>
3.	GEN. ARNOLD	AFRDB	3/26	

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(Do not use reverse side) W-4071, AF. Rev. 8/14/41

PAGE NO. *02-66 4711 6 (23)*

HEADQUARTERS AIR FORCE
~~CONFIDENTIAL~~
ROUTING AND RECORD SHEET

Note:--A line will be drawn across sheet
after each comment.

File No.

Tally No. AAF.

SUBJECT: 1,000-Pound Bomb.

NO.	FROM	TO	DATE	COMMENTS
4.	AFRDB	General Arnold	1942 3/27	<p style="text-align: right;">AFRDB JEM:cpw</p> <p>1. In view of the shortage of TNT and the fact that the bomb bodies have been built and can be loaded on short notice, the quantity ordered, and thus far loaded, is considered adequate.</p> <p style="text-align: center;"><i>[Signature]</i> E.P.S. Dir/Bombardment.</p> <p>Incl. Memo. for General Arnold</p>
				<i>[Signature]</i>

Dir
025
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(237)

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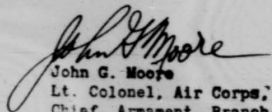
W-071.AC, Rev 8/14-41

Page No. _____ *Dir 025 471.6 (237)*

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~~DECLASSIFIED~~

date as to when this installation can be expected has not been received.

4. In future airplanes, such as the B-29 and B-33, provision has been incorporated for carrying a 4,000-pound bomb internally.


John G. Moore
Lt. Colonel, Air Corps,
Chief, Armament Branch

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3/17

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WAR DEPARTMENT
Headquarters of the Army Air Forces
Washington

March 16, 1942

DECLASSIFIED
DOD ltr.
8 Feb. & 20 June 1974
By: SP4ELC Date: 3/12/77

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MEMORANDUM FOR: General Arnold

SUBJECT: 4,000-Pound Bomb

- Designated MS6 4,000-pound bomb:
 - Length over all ----- 117 $\frac{1}{4}$ "
 - Diameter ----- 34"
 - Percentage of explosive ----- 77%
 - On order ----- -2195 bombs
 - On hand, loaded, available for dropping, located at Seneca, N.Y. 100
 - Total delivered, located at Savannah, Illinois ----- 328 bomb bodies
 - At Elwood, Illinois ----- 1560 bomb bodies
 Bombs are being manufactured by the A. B. Smith Co., Milwaukee.

2. Unfilled bomb cases are being shipped to Wright Field for check installation on the 2,000-pound bomb stations being placed on the wings of the B-17's. From drawings, it would appear that with this wing installation, the bomb fin clearance is from 4" to 8" depending on tire and landing gear pressures. Wright Field has been instructed to determine a method whereby this bomb can be safely carried on the B-17 and, if necessary, to determine an alteration in the fin to take care of it. Shackles and fittings for installation on B-17's are being procured and will be available in approximately one month.

3. The Consolidated Aircraft Company have been instructed to make provision for carrying a 4,000-pound bomb under each wing as soon as possible without delaying production lines. There is no question of clearance on this airplane, but due to the large internal bomb load which could be carried, no provision was made for wing installations to be included and due to the type of the wing construction, it is necessary to design and provide additional strength for this purpose. A rush order for this information has been given to the Consolidated Company, but an exact

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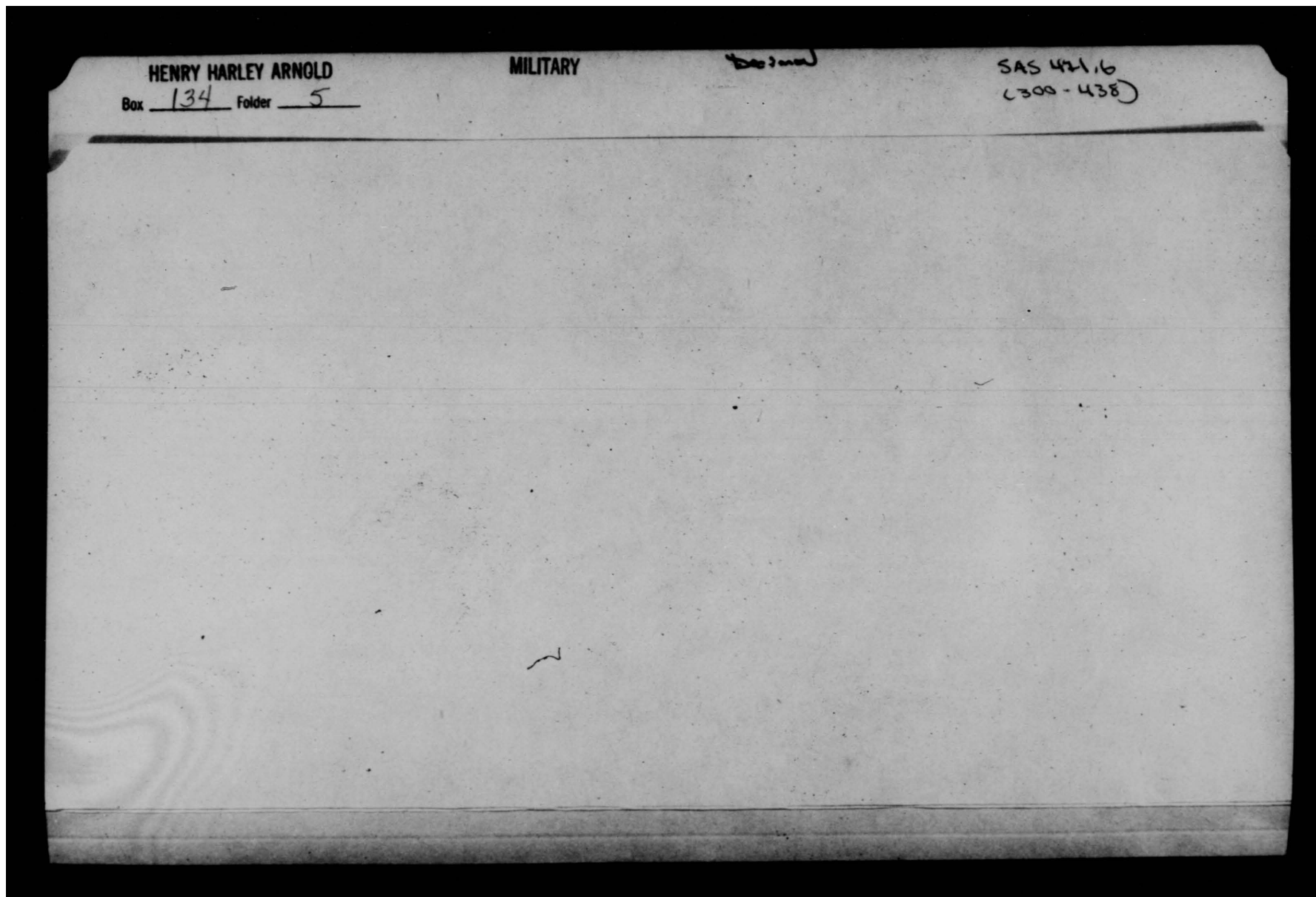
date as to when this installation can be expected has not been received.

4. In future airplanes, such as the B-29 and B-33, provision has been incorporated for carrying a 4,000-pound bomb internally.

/s/ John G. Moore

JOHN G. MOORE
Lt. Colonel, Air Corps,
Chief, Armament Branch

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SAS 471.6

Section 3- Cases ~~201~~ to 440
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DOD Ver.
ON 2/28/84 BY JMS/191
SP-12/101 DDD/1/77

THIS PAGE IS DECLASSIFIED IAW EO 13526

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000 US
8 Dec 8 20 June 1977
7-1-77

Combat Use of Fire Bombs Using Napon.

AC/AS Operations, Commitments & Requirements
Chief of Air Staff

31 AUG

1

1. While in Saipan and also in Burma I witnessed the results of dropping fire bombs using napon from fighter airplanes. At Myitkyina in Burma the bombs were dropped on two story buildings serving as Jap Headquarters with remarkable accuracy. On impact the buildings hit were seen to completely explode in a mass of flame. In Saipan using similar tactics the Japs who were in fortifications and trenches were completely neutralized.
2. I am convinced that we should pursue the use of this type bomb vigorously and assure ourselves that the tactics and techniques of its use are disseminated to all our Air Forces.
3. Furnish the Army Air Force Board with the above information.

Cc AC/AS MAS

Blumog

BARNEY M. GILES,
Lieutenant General, U. S. Army,
Deputy Commander, Army Air Force

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SAS File
471.6

COPY FOR THE SECRETARY OF THE AIR FORCE

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DEL. 1000
Date: 6 Dec 1977
By: 2516 J.C. Doe. 44177

17 AUG 1944

TO: Commanding General's Office, Attn:
Colonel C. A. Peterson
FROM: AC/AS, M&S, Air Ordnance Officer

Date

Comment No. 2
Lt. Colonel Grutch/fac/71175

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432

1. The American 4,000-lb. and 10,000-lb. bombs, and the British 2,000-lb., 4,000-lb., 8,000-lb., and 12,000-lb. H.C. bombs are essentially all thin case bombs having approximately 75% high explosive filler and are designed for blast purposes.
2. The relative destructibility of the British 12,000-lb. H.C. bomb has been compared by the British against their 8,000-lb. H.C. Mark II, 4,000-lb. H.C. Mark IV and 2,000-lb. H.C. bombs. This comparison has been made with various types of known explosives ranging from the Amatol 6Q/40 filling to the most sensitive aluminized explosives, Torpex and Minol.
3. Damage performance of the blast bombs, as assessed from aerial photographs reveals that one 4,000-lb. H.C. Mark IV bomb inflicts 50% more damage than two 2,000-lb. H.C. bombs to German building construction. On the bombs of 4,000-lbs. and larger, damage inflicted is directly proportional to the weight of the explosive charge in the bomb.
4. The data shows that with the same type of explosive filler, one 12,000-lb. H.C. bomb damages essentially the same area as three 4,000-lb. H.C. Mark IV bombs; and one 8,000-lb. H.C. Mark II bomb damages essentially the same area as two 4,000-lb. H.C. Mark IV bombs.
5. With an RDX explosive filling, the 4,000-lb. H.C. Mark IV bomb produces an area of damage visible on aerial photographs of 10,300 square yards with typical German domestic construction, and, as the weight of the filling in the bomb is

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Destructibility of the British 12,000 lb. Bomb.

Commanding General's Office, Attn:

Colonel C.A. Peterson

AC/AS, MMS, Air Ordnance Officer

Lt. Colonel Grutch /saa/71175 2

(Continued)

3,095-lbs., the viable area of damage is 1.33 square yards per pound of RDX. The use of aluminized explosives, Torpax or Minel, will cause approximately 9% more damage than RDX. However, RDX is the most effective explosive currently being loaded into bombs by the Ordnance Department and should be used as the basis for predicting the results that might be attained in any special operation.

6. For special operations, the British have designed the 12,000-lb. "Tall Boy" (M) bomb which is 50% general purpose type of bomb containing 5,645-lbs. of H.S. This bomb is 38" in diameter, 252" overall length, and has a side wall thickness of 1-1/4" steel. It is currently being manufactured in the U.S. for the British. The bomb is streamlined and designed to penetrate 40 ft. to 60 ft. deep into the earth prior to exploding. Over 150 of these bombs have been used operationally to cause land slides, block tunnels and caves, and damage heavy concrete structures by undermining the foundations and bringing about a partial or total collapse of walling and roofs. A design study of a still larger "Tall Boy" (L) bomb weighing 22,000-lbs., 46" diameter and 305" overall length has been made and construction of approximately 25 per month is contemplated by the British.

7. A comparison of the large American bombs shows that the 4,000-lb. light case bomb will result in an area of demolition equivalent to approximately three 2,000-lb. General Purpose bombs, which is substantially in agreement with British data. However, the British, in carrying out trials to determine the blast performance of the 4,000-lb. American bomb filled with Amatol 60/40 have determined that the blast impulses given by the 4,000-lb. American type AN-M56 bomb filled with Amatol 60/40 are greater by a margin of 6% at 100 feet, than those obtained from the British 4,000-lb. H.C. bombs filled with the same explosive.

8. The 10,000-lb. T1 bomb, on the basis of a limited number of tests, shows a damage performance directly proportional to the weight of explosive charge in the bomb when compared to the 4,000-lb. bomb against German domestic targets.

9. The Army Air Forces Board investigated the advisability of using high explosive bombs weighing 4,000-lbs. and more against Japanese built-up areas to obtain the most destruction. They recommended that the present 4,000-lb. bomb, AN-M56 light case, be considered the optimum size bomb when unconfined blast is desired, and that a series of these bombs be employed to duplicate the effect of larger bombs. They also recommended the development of a strengthened heavy case bomb weighing approximately 4,000-lbs. with a relatively large high explosive content (50%) for the penetration of bomb proof structures which the Japanese are expected to erect to protect their key targets.

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Destructibility of the British 12,000 lb. Bomb

Commanding General's Office, Attn:
Colonel C.A. Peterson
AG/AS, M&S, Air Ordnance Officer

Lt. Colonel Grutch / fac/71175

2

(Continued)

10. A study is currently being prepared on the approximate sizes of single bombs weighing up to 20,000-lbs. of the various bomb types, anti-armor piercing, general purpose, and blast and the degree of modification that will be necessary to the present B-29 and B-32 aircraft in order to carry the bomb load in a single bomb.

H. G. PORTER
Col., Ord. Dept.
Actg. Air Ordnance Officer

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471.6

In incendiary Bomb Stocks for Seventh Air Force.

Secretary to the Air Staff

AC/AS, M & S,

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000 000
8 Jan 44 & 20 June 1977
11/17

2 Aug 44

1

Lt. Col. J.S. Entriken/emb/72375

1. Attached memorandum with accompanying papers addressed to the War Department General Staff, Operations Division requests approval of certain stated levels for incendiary bombs to be stocked in the Central Pacific for the Seventh Air Force.
2. The stocks are computed in accordance with War Department Memorandum of 1 Jan 44, subject, "Changes in Supply Procedure and Supply Levels" and they are computed on the number of days of supply established for Central Pacific.
3. The above referenced War Department Memorandum requires approval of stock levels as calculated by the General Staff and it is requested that the attached memorandum be signed and sent forward.

(Signed) E. M. Powers

3 Incls.

- Ltr. to WDCS, Oper. Div.
- Ltr. fr 7th AF w/Inc.
- Chart of Req. for 7th AF.

E. M. POWERS
Brigadier General, U. S. A.
Deputy Asst. Chief of Air Staff,
Material and Services

S.D. 471.6 (435)

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Letter for General Kenney

Secretary, Air Staff

22 JUL 1944

Asst C/AS, Operations, Commitments & Requirements

1
Col Giffin/ck/6687

General Arnold directed that the attached letter be prepared for his signature and for dispatch by courier. The inclosures, being bulky, are being retained by Lt. Col. Fix who can be contacted at extension 2856 as soon as the letter is signed.

1 Incl

Letter to Gen. Kenney

Kenneth P. Bergquist
Colonel, Air Corps
Executive Assistant Chief of Air Staff
Operations, Commitments & Requirements

Requirements Division

548 471.6 (428)

Handwritten notes:
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10/10/44

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Non-Persistent Gas Bombs
Secretary of the Air Staff
AS/AS, MMB

DECLASSIFIED
10 JUL 1977
3/11/77

10 JUL 1944

1

Recommended that attached memorandum for the Chief of Air Staff be signed and forwarded. ^{asst} ^{OPR}

1 Encl.
Memo. dtd. 7 July 1944
subj. as above.

O. P. ECHOLS
Maj. General, U. S. A.
Asst. Chief of Air Staff
Materiel, Maintenance & Distribution

SAS 9/16/44
424

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424

SUBJECT: Reply to ASC USSTAF on bomb stock levels

TO: Deputy Chief of Air Staff
Attn: Brig. Gen. F. W. Timberlake
FROM: AG/AS, M & S

DATE: 12 Aug 1944

COMMENT NO. 2
Gen Powers/42-1153

548
471.6
422

1. The attached is forwarded for signature of the Chief of Air Staff.

(Signed) E. M. Powers

E. M. POWERS
Brigadier General, U. S. A.
Deputy Asst. Chief of Air Staff,
Material and Services

File
548 471.6 422

OPD 471.6 (3 Jul 44)

DECLASSIFIED
000 000
2 Apr. & 20 June 1974
By TS/24 [Signature]

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X AU

Date Initials

Stock Level of Aircraft Bombs for U. K.

31 July 1944

✓
I CG, AAF

✓
I Approved

✓
I See notation == below

1. This confirms informal approval extended 25 July 1944, of recommendations in paragraphs 3a, b, c, d, e, and f, of attached Disposition Form to Assistant Chief of Staff, G-4 and Operations Division, War Department General Staff from Commanding General, Army Air Forces, file AAF 471.6 (AFDMO-3), subject: "Stock Level of Aircraft Bombs for U.K.", 25 July 1944.

2. Assistant Chief of Staff G-4, War Department General Staff, has informed this Division that same, substantially as recommended in paragraph 4, of attached Disposition Form to Assistant Chief of Staff, G-4 and Operations Division and referred to in paragraph 1, above has been dispatched to Commanding General, European Theater of Operations.

1 Incl
D/V, AAF,
AAF 471.6,
24 Jul 44,
w/2 Incls.

THOS. T. HARRIS,
Major General,
Assignment Officer of Staff.

JOHN C. DALY,
Colonel, U. S. C.,
Chief of Staff, Logistics Section,
Logistics Group, OPD, EDGS.
COPY TO ACCOMPANY ORIGINAL

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GPO Use

9 Jan. & 20 June 1974
100 Dec 11/17

Status of Bombs in United Kingdom

General Echols

Deputy Chief of Air Staff

4 July 44

PWT/eva/5265³

Can you give me a report on bomb stockages by types in all theaters with the estimated rate of expenditures somewhat similar to the attached figures by 15 July

Signed

PATRICK W. TIMBERLAKE,
Brigadier General, U.S.A.,
Deputy Chief of Air Staff.

2 Incls n/c

Handwritten:
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Dispatches
5 JUL 1944
AAG

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GPO 1974
8 Jan. 6 10 30 AM 1974
BY 15 100 Date 2/16/77

Letter to General Giles, 18 July 1944, from General Spants

AC/AS - Personnel

24 July 1944

Chief of the Air Staff

RHM/1a/3373 1

1. For your information, there is enclosed a copy of a letter just received from General Spants reference the proposal to send Colonel Tom Campbell to England.

2. In view of the attitude of the Theater, no action should be taken at this time to send him on this particular project.

ATTACHED

DONALD WILSON
Brigadier General, U. S. Army
Acting Chief of the Air Staff

1 Incl:
cc of Ltr
to Gen. Giles,
7/18/44, from
Gen. Spants.

Sgt 471.6
419

DISPATCHED
24 JUL 1944
AAG

File
41

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Sgt 471.6 419 R

HEADQUARTERS ARMY AIR SERVICES
ROUTING SLIP

DATE *8 Aug*

TO:

OFFICE OR SYMBOL	BUILDING
ATTENTION: <i>Sew Wilson</i>	ROOM

FOR:

	COORDINATION	INVESTIGATION	REC. ACTION
	INFORMATION	RECOMMENDATION	SIGNATURE
	FILE	CONFERENCE	

REMARKS:

*I think we are
all set on fuses
and NAPALM for
ETO :-
MTO has also
received an air
shipment of NAPALM*

AW

FROM:

NAME	PATRICK W. TIBBETTS <i>AW</i>
	Brigadier General, U. S. A.
PHONE	*Deputy Chief of ^{POOY} Air Staff

3-218, AF

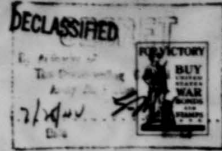
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Gen. Lumbertala -
Noted
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ARMY SERVICE HEADQUARTERS
COMMANDEER GENERAL, ARMY AIR FORCES
WASHINGTON 25, D. C.

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ATTENTION:

HEADQUARTERS, ARMY AIR FORCES
WASHINGTON 25

471.83
AFDGH-5

DECLASSIFIED
GPOD 104
BY: [unclear] 3/11/77

28 July 1944

MEMORANDUM FOR DEPUTY CHIEF OF AIR STAFF:
(Attention: Brig General F. W. Timberlake)

Subject: Gasoline Tank Igniters for European Theater of Operations

1. Returned herewith is letter dated 18 July 44, from Lt. General Spaatz to Lt. General Giles. The following comments are applicable to the sixth paragraph.

2. As a result of the test conducted at Eglin Field, and the subsequent visit of the instruction team from the Army Air Forces in the United States (Lt. Col. Fix's party), the use of the "fire bomb" has received tremendous impetus. The development of this method of using thickened gasoline for an incendiary was conducted in a very hasty and rapid manner in view of the importance of the objective. As a result, improvised munitions were used and it is known that these munitions (fuses, grenades, etc) are not the best that can be obtained were the development conducted in an orderly fashion. However, the test indicated that they were operationally suitable. If operational use indicates a large proportion nonfunctioning in this equipment, it is suggested that the theater be advised that they should use two igniters on each tank. This will probably insure 100% functioning. In the meantime the development is being carried on to correct the known deficiencies on this type of igniter. The USSAFE has been advised of this suggestion.

3. One thousand three hundred fifty fuses were shipped to arrive with the Headquarters Group headed by Lt. Colonel Fix and subsequently 5,000 fuses were air shipped, one-half on 23 July and the other half on 24 July. An additional 5,000 are being manufactured, 1,000 of which will be ready for shipment by 4 August.

4. This office has forwarded to Commanding General, Army Service Forces an Army Supply Program requirement for 30,000 complete igniters filled with sodium and 80,000 filled WP. The shipments of fuses referred to are in addition to these requirements. Action to secure Army Service Forces approval and prompt manufacture is being expedited by this office although the igniter has not yet been standardized.

nates
PWT

File 471.83 (19)

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DECLASSIFIED

Memo for Dep. Chief of Air Staff, page 2, 28 July 1944

5. Immediate requirements for napalm have been taken care of by air shipment of 10 tons during the past week and arrangements for additional shipment by fast boat.

E. Montgomery
E. MONTGOMERY
Brig General, USA
Air Chemical Officer

4 Incls:

- Incl 1. Ltr from Gen Spaatz
- Incl 2. Ltr from Gen Giles
- Incl 3. Ltr from Col. Campbell
- Incl 4. Mes. from Gen Wilson

*File
in 11 Aug 44*

DECLASSIFIED
~~SECRET~~

ran 471.6 419

HEADQUARTERS ARMY AIR FORCE
ROUTING SLIP

TO: _____ DATE 7/28/41

OFFICE OF SYMBOL AFDCH	BUILDING Pentagon
ATTENTION: General Montgomery	ROOM 5E 1023

FOR:

	COORDINATION	INVESTIGATION	REC. ACTION
	INFORMATION	RECOMMENDATION	SIGNATURE
	FILE	CONFERENCE	

REMARKS:

General Tisberlake has been informed that this matter is under development in your office and has agreed to transferring action to you. Please inform this office if there is any assistance we can give in regard to the Ordnance furnished components needed for this project.

FROM:

NAME Brig. Gen. R. C. Coupland	OFFICE OF SYMBOL AFDAC
PHONE 72836	BUILDING Pentagon
	ROOM 5C 1050

3-218, AF

HEADQUARTERS ARMY AIR *Fiv*
ROUTING SLIP

TO: General Timberlake DATE 24 July 46

OFFICE OF SYMBOL	BUILDING
ATTENTION:	ROOM

FOR:

COORDINATION	INVESTIGATION	REC. ACTION	
INFORMATION	RECOMMENDATION	SIGNATURE	
FILE	CONFERENCE		

REMARKS:

I have sent a copy of this letter on the Colonel Tom Campbell project to AC/AS, Personnel.

However, I desire that you follow through on their request for more Napalm and better fuzes for the igniters.

DW

DONALD WILSON
Brigadier General, U. S. Army
Acting Chief of the Air Staff

1 Incl:
Ltr to Gen. Giles,
7/18/44, frm Gen.
Spatz.

FROM:

NAME Brig. General Donald Wilson	OFFICE OF SYMBOL AFCAS
PHONE 3373	BUILDING Pentagon
	ROOM 3-E-993 ✓

3-218, A/

~~SECRET~~

HEADQUARTERS

UNITED STATES STRATEGIC AIR FORCES IN EUROPE

OFFICE OF THE COMMANDING GENERAL
APO 633

18 July 1944

3
SECRET
AUTOMATICALLY DECLASSIFIED
DATE: JUL 20 1984
INITIALS: RSB

4716
CF Lt. Gen. Barney M. Giles,
Chief of Air Staff,
Headquarters, Army Air Forces,
Washington 25, D.C.

Dear Barney:

Answering your letter of 4 July 1944, reference the possibility of Col. Tom Campbell coming here to assist in preparations of the use of thickened fuel in large incendiaries, I would like to give you a brief report of our progress to date.

The type of fuel and igniters developed in the Eglin tests and as demonstrated by the group you sent over, was very well received and dove-tailed perfectly into plans that were already under way here for the use of fighter belly tanks. You will be interested to know that not only was 'Pete' Gussada enthusiastic about the weapon but the film was also shown to General Bradley, American ground force commander, who concurred in the possibilities and a mission was immediately planned.

Four days after this, one of the best P-38 groups in the Ninth Air Force was set up for a mission and the first operational use was made yesterday. The operation was a squadron mission against a supply dump and competent observers classified the results as remarkable. A large mission will be held in several days against a specific target designated by General Bradley. The VIII Fighter Command also will be ready for their first mission in several days.

We have investigated all British fuels, and have already contracted for the output of one of their factories as it appears that British production will be needed to supplement what the U.S. can send over to meet our requirements.

We do appreciate a great deal your offer of Col. Tom Campbell's services but we are convinced now that everything is well started and there is nothing Col. Campbell can add at this time.

However, we do need help from the U. S. in getting more Napalm and better fuses for the igniters. Incidentally, we are well pleased with the work your group has done, as they have assisted on all details, from helping make the equipment in the depot to going on the combat mission to observe the results. Lt. Col. Fix is returning to the U. S. to get these ideas started and can give you any first-hand information you want.

We will keep you posted on future operational developments on the use of this weapon against the Hun.

Sincerely,

DECLASSIFIED

DOD ltr.

8 Jan. & 20 June 1976

By: SLC; Date: 3/14/77

~~SECRET~~

St. Curtis Brig. Gen.

CARL SPAATZ,
Lieutenant General, USA,
Commanding.

Encl.
X 5727

573 4716 (418)

THIS PAGE IS DECLASSIFIED IAW EO 13526

INVOICE

The number below identify classified items
(Letter prefixes indicate type of document)
L--USSTLF Mimeographed publication.
Y--Correspondence emanating from this HQ
K--Sealed envelope, pouch or package)

Commanding General
U. S. S T A F
APO 633 U.S. Army

Via Courier No 221

Date 20th July 1944

To Lt. Gen. Barnary W. Giles
Chief of Air Staff
Hdqs. A.A.F.
Washington, D.C.

Y-5727

Please sign original in space below and return IMMEDIATELY to:

Received by _____

Organization _____

Time _____ Date _____

(Over)

Commanding General
U S S T A F
APO 633
U.S. Army.

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Commanding General
U S S T A F
APO 633 U.S. Army

Via Courier No 221

Date 20th July 1944

To: Gen. Barney K. Giles
Chief of Air Staff
Hqqs. A.A.S.F.
Washington, D.C.

Y-5727

Please sign original in space below and return IMMEDIATELY to:

Received by _____

Organization _____

Time _____ Date _____

Commanding General
U S S T A F
APO 633
U.S. Army.

(Over)

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INFORMATION AND INSTRUCTION

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DECLASSIFIED
EOD 104
1 Jan & 20 June 1975
By SP5 11/12??

DECLASSIFIED
By SP5
The Assistant General
APOCR/Col McKee/br
Wrtm 3-July
Date Initials

4 JUL 1944

Lieutenant General Carl Spaatz
Commanding General
U. S. Strategic Air Forces in Europe
APO 633 c/o Postmaster
New York, New York

Dear Tocoy:

Reference is made to your cable E 35260, 28 June 1944, in which you stated that there was a great deal of interest there in the possibilities of bulk containers filled with thickened fuel and your request in the same cable for the immediate shipment of three officers thoroughly acquainted with the project. Lieutenant Colonel George Fix of our Bombardment Branch and two officers from Eglin Field, all of whom are well acquainted with the details of the project, are now enroute to your theater.

As you may know, Colonel Tom Campbell has been working on this and similar projects for a long time and is intensely interested in the possibilities of various types of fuels being used in connection with incendiary bombs. In view of the work he has done General Arnold has agreed, provided the theater concurs, to let him go to the UK temporarily for whatever assistance he may be able to render. It seems that General Arnold had considerable discussion with Pete Quezada while he was there on the possibility of dropping gasoline and thickened fuels from fighters and bombers. I suggest therefore that you might want to turn Colonel Campbell over to Quezada during his period of temporary duty in your theater.

Sincerely,

BARNEY M. GILES,
Lieutenant General, U. S. Army.
Deputy Commander, Army Air Forces.

DISPATCHED
4 JUL 1944
AAG

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545
4716
(49)

DECLASSIFIED

ADDRESS REPLY TO:
COMMANDING GENERAL, ARMY AIR FORCES
WASHINGTON 25, D. C.



ATTENTION:

HEADQUARTERS, ARMY AIR FORCES
WASHINGTON

5 July 1944

Brig. General Donald Wilson,
Deputy Chief of Air Staff,
Room 3E 1019, The Pentagon,
Washington, D. C.

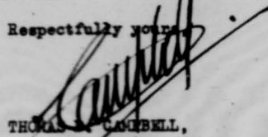
Dear General Wilson:

Justice James F. Byrnes, White House, Telephone National 1414, told me last night that he would clear me immediately for any proposed trip overseas that he thought was more necessary right now than Rehabilitation. The president is away and I do not know whether Justice Byrnes contacted him or not, but he told me he had full authority to make this release.

Brigadier General Frank T. Hines, Veterans Bureau, Telephone District 6110, told me that he would release me also and that if I would return in two months, it would be satisfactory to him. He rather urged me to go.

Both of these men said that they would be very glad to confirm the above by telephone if you should need it as a record.

Respectfully yours,


THOMAS G. CAMPBELL,
Colonel, Air Corps.

*File
RAH*

CHIEF OF THE AIR STAFF

19 July 1944

SECRET

3373

PRIORITY

CG, US ARMY FORCES
LONDON ENGLAND

WE HAVE DEFERRED SENDING COLONEL TOM CAMPBELL ON BULK CONTAINER FINE
BUILDING PROJECT AWAITING THEATER CONCURRENCE REQUESTED IN LETTER FOURTH
JULY FROM GILES TO SPAATZ PD PAREN TO EISENHOWER FOR SPAATZ FROM WILSON
SIGNED ARNOLD PAREN CAMPBELL'S EXPERIENCE IN THIS DEVELOPMENT MAY PROVE
VALUABLE AND HIS AVAILABILITY IS BEST AT THIS TIME PD PLEASE CABLE YOUR
WISHES

DONALD WILSON
Brigadier General, U. S. Army
Acting Chief of the Air Staff

Level 4

~~SECRET~~
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DOO lrs.
8 Jan. & 20 June 1974
By ES/ce SAC Date 2/1/77

Development of Large Bomb

AC/AS - Operations, Commitments & Requirements

11 July 1944

Deputy Chief of the Air Staff

DR/ia/6371

3

1. After conference with the Chief of Air Staff, the following is determined as steps to be taken:

a. Arrange a schedule for the development of bombs to include in one bomb the greatest weight which can be carried by projected aircraft on short missions.

b. Make provision for carrying in projected airplanes the bomb load in a single bomb or any combination of smaller bombs.

c. Investigate the desirability of modifying B-29's and B-32's to carry full bomb load in one bomb.

d. Develop control for bombs from 500 pound upward, progressively toward the heavier bombs.

e. Initiate the development of controlled bombs carried internally until time for launching.

2. It is desired that necessary action be taken to prosecute these developments without delay.

Disproves

11 JUL 1944

~~SECRET~~

Incl:
a/c

DONALD WILSON
Brigadier General, U. S. A.
Deputy Chief of the Air Staff

DEIA 9/11/45

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~~SECRET~~

825 471.6 (419) a

Development of Large Bomb.

AG/AS - CGAR
Copy to: HNSD

30 June '44

1

Chief of the Air Staff.

1. It is desired that the Army Air Forces develop, at the earliest practicable date, a very large bomb weighing approximately eight to ten thousand pounds that can be controlled primarily by radar on the early part of its flight, then be possibly magnetic controlled on its large steel buildings or vessels.
2. Desire that CGAR prepare a letter for my signature to the Commanding General, Army Air Forces Proving Ground, setting up a directive as indicated above.
3. I am of the opinion that further development work should be accomplished to gather greater control and accuracy of heavy bombs that may be launched at great distances from the objective. I also feel that we have not accomplished sufficient control of heavy bombs that will guarantee accurate bombing of carriers, battleships and other major war vessels.

DANNY M. GILLES,
Lieutenant General, U. S. A.
Chief of the Air Staff.

SAS
7/14/44
(414)

File

SAS 471.6 (47)

~~SECRET~~
DECLASSIFIED

DECLASSIFIED
DDO ltr.

8 Jan. & 20 June 1974
By PLC / 10, Date 2/1/77

TO: Chief of the Air Staff

DATE 12 JUL 1944

FROM: Asst C/AS, Operations, Commitments & Requirements

SECURITY NO. 2

Necessary action has been taken to provide sufficient bombs for the European Theater of Operations.

1 Incl - "Status of Bomb Tons for England"

B. A. Craig
Major General, U. S. Army
Asst. Chief of Air Staff
Operations, Commitments & Requirements

SAS
471.6
7/1/6
7/1/6

File
File
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DECLASSIFIED

471.6 (47)

DECLASSIFIED
 DOD IWS
 8 Jan. & 30 June 1974
 W. J. K. / J. G. D. / J. H. S.

~~SECRET~~
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~~SECRET~~
 DECLASSIFIED
 The Adjutant General
 of the Army Air Forces
 7/14/74
 INITIALS

Status of Bomb Tonnage for England

1. Records on ammunition status in United Kingdom indicate that there is on hand a sufficient quantity of bombs of most common types to enable the Air Forces in that theater to operate without restriction. The pipeline has also been kept full and indications are that sufficient bomb tonnage will be available to satisfy their requirements. It is true that there are shortages on two individual types of bombs; namely, the 100-lb. GP and the M41 fragmentation cluster. This condition exists because of the following reasons:

- a. Bomb requirements were not received in this headquarters in sufficient time to establish necessary production schedules. Our requirements have jumped considerably from those requested in March by the strategic air forces, and it has been difficult here to establish their needs. As you know, it takes approximately eight months to obtain bombs from new production.
- b. The fighter-bomber requirements have exceeded their planned estimate.
- c. The European Theater Commander has not authorized sufficient shipping space in the past five months to permit a timely build up of bomb stocks that suits the air forces in that theater. Tonnage released by this headquarters have consistently been greater than required to fill shipping space.

2. This office, with Asst C/AS, HQAD, Air Ordnance, has been working very hard to maintain the proper flow of bombs to that theater. General Copeland went there personally in March of this year to obtain their future needs and upon his return did take action to step up production in line with their anticipated needs.

3. The Asst C/AS, HQAD, Air Ordnance, has taken the following additional action in the past five months to alleviate this situation:

- a. The inactive theaters have been searched for bomb stocks and action is under way to reship all these excess bombs from present location to active theaters.
- b. Requested the British Air Commission to cable England to point out our situation and recommend:
 - (1) British aid United States Army Air Forces in obtaining quicker unloading in British ports and greater transportation facilities in the interior.
 - (2) Increase British bomb production.
 - (3) Returning to United States Army Air Forces in England all United States bombs in hands of Royal Air Forces.

OFFICE SYMBOL	1	2	3	4	5	6
SUBJECTS OF RESPONSIBLE OFFICER						
INTERNAL OFFICE COORDINATION						

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(4) Considering use of British 500-lb. bomb on fighters of the Ninth Air Force which are operating under the AAF.

The British Air Commission has done this.

g. Requested the Navy to transfer to the Army Air Forces any stocks of surplus bombs they may have which are usable by the Army Air Forces. The Navy has agreed to this transfer, which will involve approximately 45,000 short tons during the next two months. It is possible that about 70,000 tons of depth bombs may be requested.

h. Requested the Joint All-ations - Air to present a recommendation to the Joint Chiefs of Staff that a study be made by the Joint Logistics Committee relative to establishing a joint Army-Navy supply of aircraft munitions in the Pacific areas. This is in process.

i. Air Chemical Officers has informed the Chief of Chemical Warfare Service to end the procurement of W76, 500-lb. incendiary bombs. Chief of Ordnance is converting these case lines to the 500-lb SP.

j. Chief of Ordnance is making the necessary 500-lb. and 1000-lb. chemical bomb (non-persistent agent) cases to match Chemical Warfare Service procurement of filler in 1944. Success case facilities are being converted to 500-lb. and 1000-lb. SP cases.

k. Chief of Ordnance is increasing production in 1944 on all H.X. and fragmentation bombs except Butterfly Bombs and Parachute Fragmentation Bombs. A preliminary reading of the progress made in this action only (cumulative of actions indicated in paragraphs a, b, c, and d above) is as follows:

	June	July	Aug	Sept	Oct	Nov	Dec
Schedule as of 15 June 1944	104	110	110	118	121	117	119
Schedule as of 25 June 1944	104	129	129	144	162	157	161

(All figures in thousands of short tons)

The entire increase possible has not yet been recorded. Of the tonnage in the preliminary schedule as of 25 June 1944, these tons are 500-lb. SP bombs only:

June	July	Aug	Sept	Oct	Nov	Dec
53.5	53.5	53.5	53.5	75.0	57.5	57.5

l. Action has been taken to restrict the use of all combat types of bombs from training use, and stocks of bombs becoming available due to this restriction are being moved into the supply pipeline for active overseas theaters.

m. Action has been taken to investigate the possibility of loading with H.X. a portion of the W76 empty bomb cases, 100-lb., which are now in this country, and which were intended for loading with persistent gas. Investigation is being made to determine whether or not this case will provide satisfactory 100-lb. bomb when loaded with H.X. Provided this investigation

OFFICE SYMBOL							
RESPONSIBLE OFFICER							
JOURNAL OFFICE							
COORDINATION							

- 2 -
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Col *Summerfelt/sgm/19297*
Room 4 E 120
8 July 1944

indicates that this action is desirable, as many of the WFO cases as possible will be loaded with H.E. It is likely that approximately 500,000 100-lb. H.E. bombs may be quickly obtained in this manner.

4. This office has taken further action to ascertain future bomb requirements for UNFAAF by sending our bomb project officer, Lt. Colonel Fin, to the U. K. It is contemplated that he will return on 21 July with their planned future needs. Action will be taken at that time to make adjustments if found essential.

MERVIN E. CROSS
Brigadier General, U. S. Army

OFFICE SYMBOL	1 AFPRB	2 AFADS	3 AFDCR	4 AFRC	5	6
BRANCHES OF RESPONSIBLE OFFICES	<i>AFW</i>	<i>AFADS</i>	<i>AFDCR</i>	<i>AFRC</i>		
INTERNAL OFFICE COOPERATION	<i>AFW</i>					
DECLASSIFIED				4716	(412)	

16-70243-1 GOVERNMENT PRINTING OFFICE : 1942

~~SECRET~~

DECLASSIFIED

Col Summerfelt/bgm/70497
Spec 4 B 120
8 July 1944

DECLASSIFIED
DDO 105

8 Jan. & 20 June 1974
By 316 M2 Date 4/17

Bomb Tons in England

TO: Chief of the Air Staff

DATE 12 JUL 1944

FROM: Asst C/AS, Operations, Commitments & Requirements

COMMITTEE NO. 2

Necessary action has been taken to provide sufficient bombs for the European Theater of Operations.

1 Incl - "Status of Bomb Tons for England"

H. A. Craig
Major General, U. S. Army
Asst. Chief of Air Staff
Operations, Commitments & Requirements

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S/S 471.6 (417)

~~SECRET~~
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ODD FOR

1 Jul 44
10 June 1944
10 June 1944

Bomb tons in England.

AC/AS - OAS

30 June '44

Chief of the Air Staff.

1

1. Mr. Lovett stated that on his recent trip he received a number of complaints as to the low number of bomb tons at the operating stations and in storage in England.

2. Request you check in with the Air Ordnance Officer and HMMB to verify this report and to take corrective action if found necessary.

~~SECRET~~
BARNEY M. GILES,
Lieutenant General, U. S. A.
Chief of the Air Staff.

Handwritten: 477.6 (417)

Dispatches

1 JUL 1944

AGG

Handwritten: File a

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Handwritten: 477.6 (417)

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SECRET~~

DECLASSIFIED
EOD 105

By FELIX JAC. Date: 3/11/27

Description and Status of Guided Missiles Now Under Development & Production

Chief of Air Staff

21 Jun 44

Air Communications Officer

FLM/nd/5375

The attached summary describes all guided missiles now under development and production. It should be noted that one, the AZON, has been actively used in the theatre. In addition, the GB-1, which is not remotely controlled, has been given a preliminary trial with the Eighth Air Force. The GB-4 and GB-8 are in production, but have not been fully evaluated as to their capabilities. All other missiles on the list are still in various stages of development.

1 Incl.
Summary as abv.

H. M. McCLELLAND
Brig General, U. S. Army

*Y...
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6/2/44*

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SA 471.6 (42)

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DDO WRS
8 Jan. & 20 June 1974
By JS/CC J.C. Date 3/11/77

3 June 1944

SUBJECT: Crude Oil or Napalm As Destructive Elements.

TO: Lt. General Barney H. Giles.

1. The attached sheet just received from Group Captain H. V. Bean, British Air Ministry, indicates that:

- a. The British Air Force is certainly considering the use of large size incendiary bombs.
- b. Our method of fusing or ignition might solve their problems.
- c. Their results with the 450 lb (crude oil barrel) bomb, their paragraph 4, are similar to ours before we developed the napalm mixture and the assured ignition. Our present volume incendiary bomb as recently developed at Eglin Field seems superior to anything on the attached list. It will burn with violence on land, objects or water and should have real invasion value if flame throwing has any merit.

2. The British Government would like to have copy of our Eglin Field tests with pictures to send immediately to England.

3. It is recommended that we not only furnish the British Air Ministry full information regarding the Eglin Field tests but that we send immediately to England a construction crew with full blue prints and parts as thousands of these volume incendiary bombs can be made in less than two weeks after arrival.

1 Incl:
of British Rpt.

THOMAS D. CAMPBELL,
Colonel, Air Corps.

*Done
RWS
6/12/44*

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MAR*

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471.6
(711)*

DECLASSIFIED

See 471.6 (4)

DECLASSIFIED
DOD Ref.
8 Jan & 20 June 1974
By TS/LS LC Date 2/11/07

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Transfer of Aircraft Bombs and Ammunition.

Secretary of the Air Staff.

AG/AS, Materiel, Maintenance & Distribution.

21 JUN 1944

1
Col. Tisdale:ejr/72345

Recommend that the attached memorandum for the Chief of Staff (Attention: G-4 Division), be signed and forwarded.

1 Incl:
Memo, subj as abv,
w/1 Incl.

O. P. ECHOLS
Maj. General, U. S. A.
Asst. Chief of Air Staff
Materiel, Maintenance & Distribution

for 471.6 (410)

DECLASSIFIED **SECRET**

for 471.6 (410)

DECLASSIFIED
DOO Hrs
8 Jan. & 20 June 1973
By: [unclear] /sub/

DECLASSIFIED

CONFIDENTIAL

DECLASSIFIED

JUN 21 1944

MEMORANDUM FOR MR. J. H. AMBERG, SPECIAL ASSISTANT TO THE SECRETARY OF WAR, THE PENTAGON BUILDING, WASHINGTON 25, D.C.

SUBJECT: Concrete Practice Bombs.

1. Your attention is invited to attached letter from Mr. H. LeRoy Whitney, of the War Production Board who is investigating the Army Air Forces' use of the standard M38A2 steel practice bomb in lieu of the concrete practice bomb.

2. The development of the concrete practice bomb was requested by the Army Air Forces at the time when steel was very critical. This development was intended as a substitute for the present bomb in the event that the supply of steel became so short that bombing practice might have to be curtailed as a result. Bombing tests proved that the substitute concrete bomb was quite satisfactory ballistically but it was not considered advisable to adopt it in lieu of the standard bomb for the following reasons:

- a. The supply of steel became a great deal less critical.
- b. The concrete bomb cost more to manufacture; not only cost more, but very much more difficult to transport.
- c. It requires 35% more manpower on the part of the Service Units of the Army Air Forces to handle and prepare the concrete bomb for use.

3. The use of the concrete bomb would eliminate the need for paper required for packing the standard bomb, but the lugs and bolts on the concrete bomb must be carefully protected and in order to do so, milled wooden blocks, packing felt, and steel straps are used. This material may also prove to be in a critical status.

8
471.6
697

COPY FOR SEC. OF AIR STAFF

Sub
made
6/21/44

DECLASSIFIED

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471.6

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4. The Army Air Forces Training Command recommended that the concrete bomb be used only in the event that it became impossible to procure the standard steel practice bomb. Among the reasons given for this recommendation was that it required approximately 35% more manpower within the Army Air Force Service Units to handle the concrete bomb. The problem of manpower in Service Units of the Air Force is one of our greatest problems. It is no advantage to the war effort as a whole to use non-skilled labor at a savings of 20% of manhours in the factory when the end product requires 35% greater manhours on the part of troops in the field to use the product.

5. Since transportation facilities constitute a strategic problem, the availability of transportation must be considered. The concrete bomb weighs about 105 lbs. whereas the steel bomb weighs about 18 lbs. The transportation costs for shipment of the concrete bomb including the cost of securing and checking the loads will exceed the cost of shipment of the standard item.

6. The concrete bomb as developed by the Concrete Products of America is now considered as a substitute for the standard bomb. If, in the future, the availability of sheet steel should become critical, the use of the substitute concrete bomb would be reconsidered.

For the Commanding General, Army Air Forces:

Signed

Incl.
Ltr. 5/29/44 from
Mr. Whitney

— DONALD WILSON,
Brigadier General, U.S.A.
Deputy Chief of Air Staff.

21 JUN 1944
AAG

DECLASSIFIED

WAR PRODUCTION BOARD
Washington, D.C.

Office of
DONALD M. NELSON
CHAIRMAN

Major General Oliver P. Echols
Assistant Chief of Air Staff
Material, Maintenance and Distribution
4-C-886 Pentagon Building
Arlington, Virginia.

Dear General Echols:

A short time ago Mr. Hugh Fulton, Chief Counsel of the Truman Committee, asked me to investigate the reasons for the continuance of the manufacture of sand filled, sheet steel practice bombs, when sheet steel and skilled labor were in short supply and the concrete industry operating at less than twenty-five per cent capacity. The findings of my investigation are as follows:-

1. The development of concrete practice bombs began in July 1943 as part of the conversion program set up by Maj.Gen. L. H. Campbell Jr., Chief of Ordnance.
2. The development project has produced a concrete bomb that is superior to the standard steel practice bomb but Army Ordnance is required by the Army Air Forces to supply only the steel bomb.
3. The advantage of the concrete bomb over the standard steel bomb are as follows:
 - (a) Each concrete bomb will save 15 lbs of sheet steel.
 - (b) The concrete bomb requires no critical facilities for manufacturing it, such as deep drawing presses and automatic seam welders that are required for the steel bomb.
 - (c) A non-skilled class of labor is required to manufacture the concrete bomb and an overall saving in manpower on a manhour basis of 20% is indicated.
 - (d) The concrete bomb will eliminate the need of a paper carton that is used to pack each steel practice bomb. Each carton weighs approximately 2 lbs. and it is estimated that 30,000,000 lbs of paper cartons were used for this purpose during 1943.
 - (e) The standard steel bomb must be filled with 80 lbs. of sand in the field. This requires additional critical manpower, and if the proper weight of sand is not added, the ballistic characteristics of the bomb changes and it is intrinsic accuracy is seriously affected.

The concrete bomb is manufactured to specification, its ballistic characteristics are controlled, and its performance is uniform at all times.

- (r) The steel bomb loaded with sand is easily damaged. Ordinary handling and trucking in the field results in dented noses, caved in sides, and bent fin assemblies which further affects its ballistic performance due to wide deviations in weight.

In contrast, 30 concrete bombs were used for low altitude skip bombing practice and 28 of them failed to crack or break and could be used over again.

4. The concrete bomb was tested, approved and recommended for service by the U. S. Army Proving Grounds, Aberdeen, Maryland, as covered by their report #360, dated May 26, 1943, because of its superiority to sand filled bombs. Complaints from Air Force Training Centers to the Ballistic Research Laboratory at service conditions and directed Aberdeen, indicate the bad ballistic performance of the steel bomb under field service conditions and directed their conclusion that proper control of weight and uniform performance could not be expected with the sand filled steel bomb.
5. The concrete bomb was ready for quantity production in June 1943. Cost estimates and proposals had been completed and agreed upon with Army Ordnance.
6. An extensive testing program was set up with the Air Forces instead of putting the concrete bomb into production although there was a shortage of practice bombs at that time.
7. The steel bomb was placed on the "short list" and manufacturers increased production resulting in the excess number of bombs now on hand.
8. Completion of the Air Forces tests found the concrete bomb to be acceptable and the Air Forces requisitioned 250,000 concrete bombs in October 1943. This requisition was held up and delayed and all efforts to have it released have proved unsuccessful.
9. The reasons given by the Army Air Forces for holding up the concrete bomb program are as follows:-
 - (a) There is an excess number of steel bombs on hand.
 - (b) Steel and the facilities for manufacturing the steel bomb are no longer considered being in a critical category.
 - (c) The concrete and the steel bomb are both satisfactory. Why change or use two kinds of bombs in the middle of the war?
10. Army Ordnance and the Air Forces emphasize that they are well pleased with the quality of the concrete bombs and that a good development job was done. Thus it is recognized that real progress has been accomplished in the development of satisfactory concrete bombs.
11. More practice bombs must be manufactured for the 1945 requirements. No facilities are now set up for manufacturing the steel bombs so that new facilities must be planned for these requirements whether they are steel or concrete.

12. Conclusions:-

Inasmuch as the supply of sheet steel, paper and skilled labor is most critical it would appear that the concrete bomb should be used for all future practice bomb requirements.

I would appreciate your looking into this matter and letting me know your findings. With kindest personal regards, I am

Sincerely yours,

/s/ H. LeRoy Whitney

H. LE ROI WHITNEY
TECHNICAL ADVISOR TO THE CHAIRMAN

cc Maj.Gen.L.H.Campbell, Jr.
Chief of Ordnance

Concrete Practice Bombs

Deputy Chief of the Air Staff

Office of Legislative Services

DECLASSIFIED

20 June 1944

WSE/bum 1

Annexed herewith is memorandum for Julius H. Amberg, Special Assistant to the Secretary of War, which is responsive to an inquiry addressed to Major General Oliver F. Bohals, AC/AS, MM&D, by Mr. H. LeRoy Whitney, Technical Adviser to Mr. Donald Nelson, on behalf of the Truman Committee, dated 29 May, above subject.

WARREN S. EGE
Colonel, Air Corps
Chief, Legislative Services

1 Incl-Memo to Mr. Amberg, w/incl.

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DECLASSIFIED

DECLASSIFIED
DDO WFS

8 Dec 8 20 June 1977
73/16 JG, Date 3/16/77

COPY

400.312
(10 May 44)

3rd Ind

AFDCH-5

Hq Army Air Forces, Washington 25, D. C. 9 June 44

TO: Chief, Chemical Warfare Service, Temporary Building T-7, (Gravelly Point) Washington 25, D. C.

1. Inasmuch as item requested in this requisition has never been standardized and is now being procured only for service and tactical testing by the Army Air Forces, shipment of these items in accordance with provisions of this requisition is not favorably considered by this Headquarters.

2. Attention is invited to the fact that the estimated weight and estimated cubage are considerably in excess of true weight and true cubage. Bomb weighs approximately ten pounds instead of 525 pounds as estimated.

For the Commanding General, Army Air Forces:

JOHN L. EBAUGH, JR.
Major, CWS
Assistant to the Air
Chemical Officer

1 Incl
n/c

806 971.6 887
806 971.6 442

*Filed
Wmk*

*File
21 June 44*
JUN 15 1944

DECLASSIFIED

806 971.6 442

~~CONFIDENTIAL~~
DECLASSIFIED

COPY

DECLASSIFIED
DDO Hqs.

SPTAE-400.312-CW
(7-0024)

1st Ind

By: *FB* ^{78 Dec & 20 June 1974} *LC* Date: *3/1/77* TEALL/mk

Army Service Forces, SFPE, Fort Mason, California. 26 May 44.

TO: Chief, Chemical Warfare Service, War Department, Gravelly Point,
Washington 25, D. C. ATTENTION: Supply Division.

It is recommended that requisition be approved in amounts
requested.

1 Incl
EX Reqn 7-0024 (Dup)

WARREN S. LeROY,
Lt. Col, CWS
Port Chemical Officer

SPGVH 400.312 SFPE (70024) (0)
(10 May 44)

2nd Ind

HAG/by/4751

ASF, OCCWS, Washington 25, D. C., 31 May 44.

TO: Commanding General, Hq. Army Air Forces, Washington 25, D. C.
Attn: Major J. L. Ebaugh.

1. Subject requisition is forwarded for your consideration and
necessary action.

For the Chief of the Chemical Warfare Service:

1 Incl n/c
Info cc to PCO, SFPE

NORMAN D. GILLET
Colonel, CWS
Assistant

DECLASSIFIED

DECLASSIFIED
 DOD Hqs.
 9 Jan. & 20 June 1994
 OFFICE, 101, Date 1/1/77

WAR DEPARTMENT
 G. M. C. FORM NO. 400
 Revised Apr. 9, 1961

REQUISITION

COMMANDING GENERAL,
 San Francisco Port of Embarkation,
 To San Francisco, California

No. of Sheets 1 Sheet No. Cover

Requisition No. E707 Date 10 May 44 Period Special

SHIP TO EPIC

CONFIDENTIAL
 DECLASSIFIED

COPY

REQUISITIONED BY (show Signature, Rank, Organization, Destination. If different from "SHIP TO" include address):

GEORGE M. NACE, Jr.
 Capt. CWS, Act'g CWSO
 Headquarters, SOS

APPROVED BY:

BARLOW WINSTON
 Colonel, GSC
 Director of Supply & Salvage

STOCK No.	ARTICLES	UNIT	ON HAND AND DUE	CONSUMED	REQUIRED	APPROVED
	ATTENTION: Lt. Colonel G. G. White, Materiel Command; Office of the Chief, Chemical Warfare Service.					
BASIS:	Incendiary bombs, AN-M74, WP desired for experimental use no bombs of this type in the definite need for them.		filled, equipped for static firing are in this Theater. At present there are Theater and it is believed there is a			
	FOR: EPIC-P-CWSV-E707					

DECLASSIFIED

INSTRUCTIONS FOR PREPARATION OF REQUISITION

Space "TO."—To show the approving office to which requisition is submitted.

Space "PERIOD."—Show period for which the supplies are required.

Space "SHIP TO."—Full shipping address to be given. Where mail address is different from shipping address the former should also be shown, e. g., "Q. M., Fairfield Air Depot, Osborn, Ohio. Mail address, Fairfield." * Except for established camps, posts, or stations, street or building address should be shown, e. g., "C. O. 328th Inf., National Guard, 486 Republic Bldg., Grand Haven, Mich." Where the property is to be invoiced to an organization, etc., different from that to which it is to be shipped, the required information will be shown.

Space "STOCK NO."—Show stock number listed in Federal Stock Catalogue.

Space "ARTICLES."—Include sizes required. Show purpose numbers applicable to an article or group immediately above the article or group concerned.

Space "ON HAND AND DUE."—Show the quantity on hand plus the quantity approved on previous requisitions and not yet received.

Space "CONSUMED."—Show quantity consumed during the previous period.

Space "REQUIRED."—To be the quantity asked for by the requisitioner.

Space "APPROVED."—To be the quantity approved by the approving officer.

This form may be used in lieu of Q. M. C. Forms Nos. 402, 409, and 410 by appropriate modification. IN THE SPACE BELOW SHOW BASIS FOR REQUISITION, i. e., Strength of Command, Number of Animals, Number of Animal-Drawn and Motorized Vehicles, Armament, or such other data as may be required by instructions issued by approving authorities.

THIS SPACE FOR ACTION OF APPROVING OFFICER

DECLASSIFIED
 000 000
 19 June 1981
 CONFIDENTIAL
 EXTRACT REQUISITION FOR OVERSEA SHIPMENT
 COPY

WAR DEPARTMENT
 Q. M. O. Form No. 400
 Revised Apr. 5, 1961

REQUISITION

Chief, Chemical Warfare Service
 To: War Department, Gravelly Point
 Washington 25, D. C. ATTN: Supply Div. No. of Sheets _____ Sheet No. 1

Requisition No. 7-002 Date 26 May 44 Period _____

SHIP TO Port Transportation Officer, Charleston Port of Embarkation, Charleston, S.C.
Port Station No. 04-197

REQUISITIONED BY (show Signature, Rank, Organization, Destination. If different from "SHIP TO" include address):

APPROVED BY:

WARREN S. LEROY
 Lt. Col, CWS
 Port Chemical Officer

STOCK No.	ARTICLES	UNIT	ON HAND AND DUE	CONSERVED Quantity	REQUIRED	APPROVED
	Supplies called for are scheduled for shipment from the Charleston Port of Embarkation during the "P" period and should be assembled in so far as practicable for shipment to the Port by <u>8 July 1944</u> . All supplies must be available for shipment to the Port not later than <u>15 July 1944</u> . Mail Notices of Availability to CG, San Francisco Port of Embarkation and CG, Charleston Port of Embarkation.					
	1 - Bomb, incendiary, AN-W74 (WP filled, equipped for static firing)	ea		100		
	Estimated weight: 52500 lbs Estimated cube: 1000 cu ft.					

DECLASSIFIED
 CONFIDENTIAL

OF 122A1371

AM 1211371

INSTRUCTIONS FOR PREPARATION OF REQUISITION

- Space "TO."—To show the approving office to which requisition is submitted.
- Space "PERIOD."—Show period for which the supplies are required.
- Space "SHIP TO."—Full shipping address to be given. Where mail address is different from shipping address the former should also be shown, e. g., "Q. M., Fairfield Air Depot, Oshawa, Ohio. Mail address, Fairfield." Except for established camps, posts, or stations, street or building address should be shown, e. g., "C. O. 328th Inf., National Guard, 456 Republic Bldg., Grand Haven, Mich." Where the property is to be invoiced to an organization, etc., different from that to which it is to be shipped, the required information will be shown.
- Space "STOCK NO."—Show stock number listed in Federal Stock Catalogue.
- Space "ARTICLES."—Include sizes required. Show purpose numbers applicable to an article or group immediately above the article or group concerned.
- Space "ON HAND AND DUE."—Show the quantity on hand plus the quantity approved on previous requisitions and not yet received.
- Space "CONSUMED."—Show quantity consumed during the previous period.
- Space "REQUIRED."—To be the quantity asked for by the requisitioner.
- Space "APPROVED."—To be the quantity approved by the approving officer.
- This form may be used in lieu of Q. M. C. Forms Nos. 402, 406, and 410 by appropriate modification.
- IN THE SPACE BELOW SHOW BASIS FOR REQUISITION, i. e., Strength of Command, Number of Animals, Number of Animal-Drawn and Motorized Vehicles, Armament, or such other data as may be required by instructions issued by approving authorities.**

THIS SPACE FOR ACTION OF APPROVING OFFICER

4-5-52

OF 122A1371

DECLASSIFIED
CONFIDENTIAL

DECLASSIFIED
EO 13526

8 Jan & 20 June 1974
By: 2579 LC Date: 2/16/77

AFMAG-1
31 May 1944

MEMORANDUM FOR GENERAL ARNOLD:

Subject: Large British Bombs

1. A short time ago you asked me why the British used 8,000 and 12,000 lb. high capacity bombs in preference to a multiplicity of 4,000 lb. bombs of equal weight. I have recently been advised by the British that this was primarily done because of loading characteristics of their airplanes, some of which could carry the 12,000 lb. bomb, or only two 4,000 lb. bombs. In other cases, they could carry one 8,000 lb. bomb, or one 4,000 lb. bomb. In such cases, this led to the selection of the largest bomb for maximum loading.

2. I was further informed that where airplanes could carry an equal weight in the various categories, a multiplicity of the 4,000 lb. bomb was preferred.

R. C. GOULDEN
Brigadier General, U.S.A.
Air Ordnance Officer

SAS 471.6 (406)

DECLASSIFIED
CONFIDENTIAL

File
on 7 June 44

SAS 471.6 (406)

DECLASSIFIED

AFRDB
Lt Col Fix-es-2656
wrtn 27 May 44
Room 4E 112
Rswrtn: AFOCR/Col McKee/hn/
28 May 44 6785

DECLASSIFIED

By: [Signature]
Date: 10/10/87

27 MAY 1944

MEMORANDUM FOR GENERAL ARNOLD:

Subject: T-50 Proximity Fuse

Ramshe

1. As you know, we have had under consideration the possible use of T-50 proximity fuses in forthcoming operations. Release of these fuses for operational use must be approved by the Combined Chiefs of Staff.

2. Tests have been conducted at the Army Air Forces Proving Ground, Eglin Field, Florida, under the highest priority. Since a production version of the fuse has not been available, the tests were conducted with laboratory-made samples. Some of the results obtained are quoted below:

a. On release of 20 bombs with 50-foot intervalometer spacing, there were 7 early functions out of 20 on arming (air burst at 5,000 to 7,000 feet). This is equivalent to 35 percent duds.

b. In two trials, releasing 20 bombs with 15-foot spacing, there were 12 early functions in one case and 10 in the other. This is equivalent to 60 percent and 50 percent duds respectively.

c. On single releases (one bomb at a time), the early functioning has resulted in approximately 18 percent duds.

It is apparent from these tests that the fuse is not yet fully suitable for tactical use.

3. In view of the urgent need for the proximity fuse in our war against Germany, request that every effort be made by your people to correct the apparent deficiencies in the design of the fuse and to expedite production of a model suitable for tactical operations.

Signed

H. H. ARNOLD
General, U. S. Army

29 MAY 1944
683

SAS
V-1116
105

DECLASSIFIED

COPY FOR GENERAL ARNOLD

208 4716 605

S/102

AFICL-LI
JZM;bjc 5264
26-5-44

28 MAY 1944

Air Marshal W. L. Welsh
British Joint Staff Mission
Office of the Combined Chiefs of Staff
Washington, D. C.

My dear Air Marshal Welsh:

Your request of 8 May 1944 that working drawings of certain fuses be made available to the Ministry of Aircraft Production has been forwarded to the Chief of Ordnance, U.S. Army, under whose jurisdiction this matter falls.

We have been informed that favorable action will be taken as promptly as possible.

Sincerely yours,

105940091
28 MAY 1944
443

Barney M. Giles
Lieutenant General, U. S. Army
Chief of the Air Staff.

Lat 471.6 404

Giles
Miles

COPY FOR GENERAL GILES

COPY FOR CHIEF OF AIR STAFF

471.6 (404)

AFICL-LI
JZM:bje 5264
26-5-44

28 MAY 1944

Air Marshal W. L. Welsh
British Joint Staff Mission
Office of the Combined Chiefs of Staff
Washington, D. C.

My dear Air Marshal Welsh:

Your request of 8 May 1944 that working drawings of certain fuses be made available to the Ministry of Aircraft Production has been forwarded to the Chief of Ordnance, U.S. Army, under whose jurisdiction this matter falls.

We have been informed that favorable action will be taken as promptly as possible.

Sincerely yours,

Signed

BARNEY M. GILES,
Lieutenant General, U. S. Army
Chief of the Air Staff.

RECORDED
28 MAY 1944
440

Handwritten: Sent 4/21/44 (initials)

AFTER SIGNATURE RETURN TO ROOM 3E 1045

COPY FOR SECRETARY, AIR STAFF

Handwritten: FILE *ci*

Handwritten: SAS 471.C RJK

AFICL-LI
JZM:bje 4264
1/6/44

Air Marshal W. L. Walsh
Office of the Combined Chiefs of Staff
Washington, D. C.

Dear Freddie,

In compliance with your request of 30 May 1944, in regard to the release of working drawings of certain fuses to the Ministry of Aircraft Production, we have advised the Office of the Chief of Ordnance, U.S. Army, to send the drawings to Air Vice-Marshal Mansell of the British Air Commission.

Sincerely yours

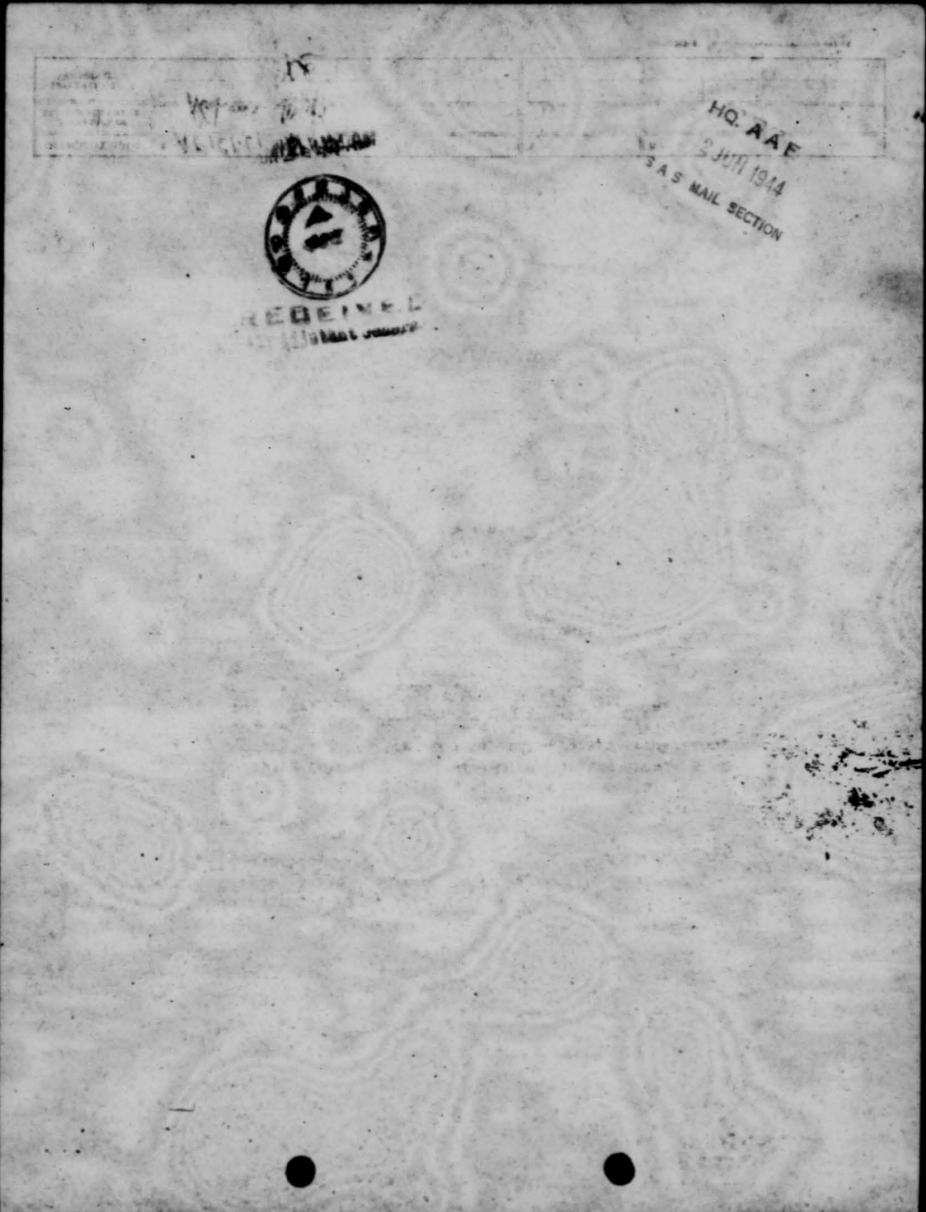
SAS 4716
404B

*Not used - Col. Libby states that
reply is not necessary. Highway, AFSAS*

*File
in 3 June 44*

OFFICE SYMBOL	AFICL-LI					
SIGNATURE OF RESPONSIBLE OFFICER	<i>[Signature]</i>					
INTERNAL OFFICE COORDINATION	<i>[Signature]</i>					

SAS 4716 404B



RJEM 810

DECLASSIFIED

BRITISH JOINT STAFF MISSION
OFFICES OF THE COMBINED CHIEFS OF STAFF
WASHINGTON

AIR STAFF

30th May, 1944.

DECLASSIFIED
JAN 1975
By: [initials]
Date: 2/11/77

My dear Barney,

I acknowledge your letter of the 28th May,
and thank you for the action which you have taken
to arrange release of working drawings of the fuses
in question.

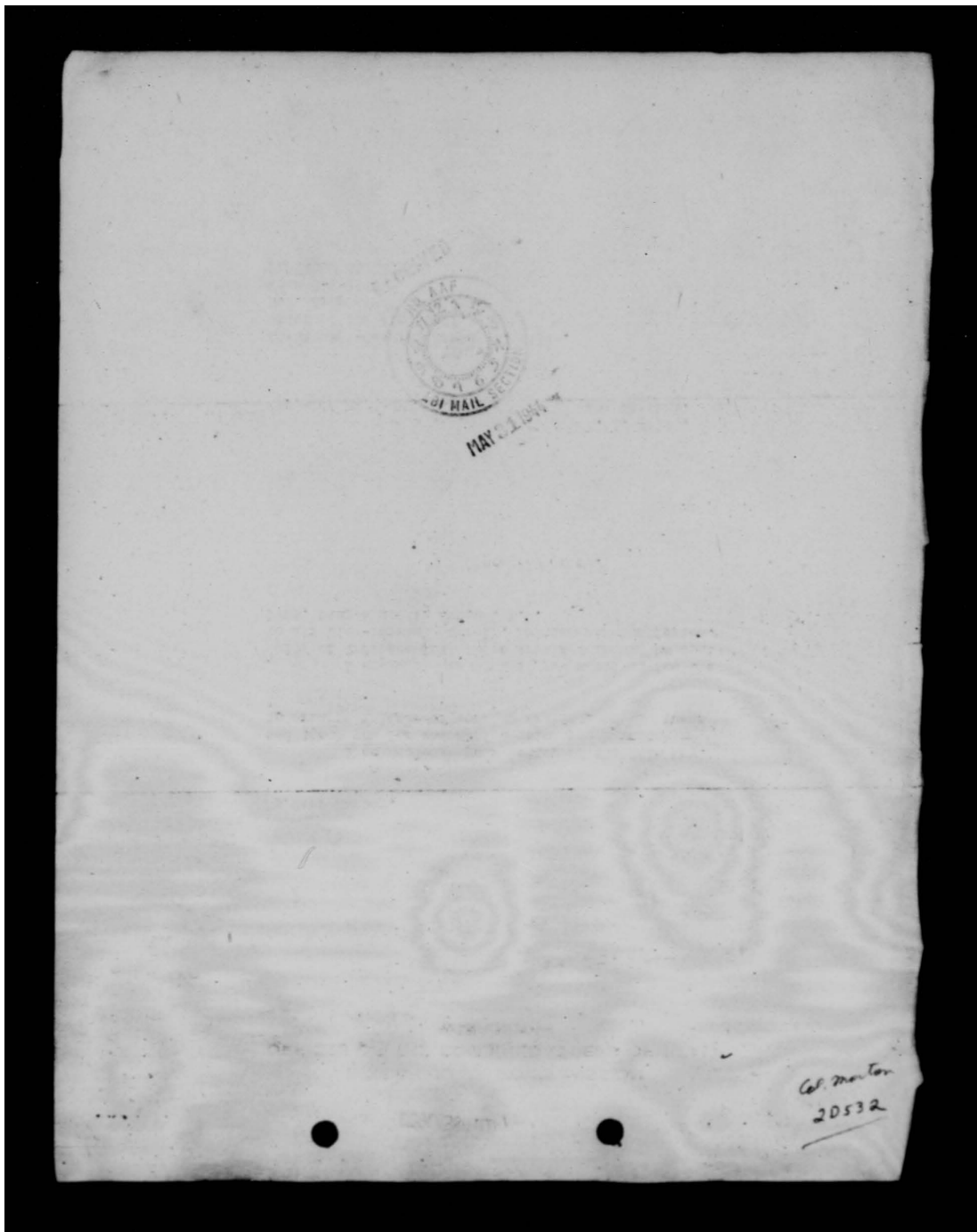
I would be grateful if you would advise the
Chief of Ordnance that these drawings should be sent
to Air Vice-Marshal Mansell, British Air Commission,
1785, Massachusetts Avenue, N.W.

Sincerely yours,

W. L. Welsh,
Air Marshal.

Lieutenant-General Barney M. Giles,
Chief of the Air Staff,
U.S. Army Air Forces,
Room 3-E-1007,
PENTAGON BUILDING.

605471-6 (004) B



Col. Norton
20532

Proposed cable
AC/AS, Intelligence
Deputy Chief of the Air Staff

~~SECRET~~
DECLASSIFIED

DECLASSIFIED
OOO 102
8 Jan. & 20 June 1974
By: 312 / 10 Date: 2/16/77

4-24-66

VEN: JT 5246 ¹

General Giles does not approve the dispatch of this message; he feels that we can leave this matter to our Commanders.

1 Incl.
Cable

WILLIAM W. HALL,
Brigadier General, U. S. Army,
Deputy Chief of the Air Staff.

Dissemination:
24 APR 1944
883

W.W.H. 471.6
395

FILE
ci

DECLASSIFIED

W.W.H. 471.6 (395)

HEADQUARTERS ARMY AIR FORCE
ROUTING SLIP

DATE: *2 June*

TO: *Col Fitypatrick*

<small>OFFICE SYMBOL</small>	<small>BUILDING</small>
<small>ATTENTION:</small>	<small>ROOM</small>

FOR:

	COORDINATION	INVESTIGATION	NEC. ACTION
	INFORMATION	RECOMMENDATION	SIGNATURE
	FILE	CONFERENCE	

REMARKS:

Kill this round-robin, but make a memo for the record that Intelligence has notified the Chief of Ordnance

Mr. Gray
Comby

FROM: *mal*

<small>NAME</small>	<small>OFFICE OR SYMBOL</small>
<small>PHONE</small>	<small>BUILDING</small>
	<small>ROOM</small>

3-218, AF

~~SECRET~~
DECLASSIFIED

DECLASSIFIED
DOO 903

By: 3372 & 20 June 1974
100 Date: 3/11/77

Project on Incendiary Ammunition.

JUN 2 - 1944

Chief of Air Staff

~~SECRET~~

Asst C/AS, Operations, Commitments & Requirements

Lt.Col. Reason/6328/ans ³

1. In respect to subject ammunition, the following is submitted:

a. Caliber .50 Incendiary Ammunition.

The latest development in the family of Caliber .50 Incendiary Ammunition is the armor piercing incendiary round (API) which has been standard combat issue since October 1943 in all theaters for all Air Forces. This is a combination round having the same efficiency as the regular armor piercing round and about .8 efficiency as an incendiary round. It supplements the standard issue incendiary round.

b. 20 mm Incendiary Ammunition.

In 1942, development was initiated to establish a new family of 20 mm projectiles having more favorable ballistics. Included in that family is an incendiary round known as the "T18." This round was tested by the Army Air Forces in January 1944, and based upon those tests, the round was recommended for standardization. This family of 20 mm ammunition is now in the final stages of development. Methods are being devised to produce them on a mass production basis. The problem of loading the "T18" incendiary round has not as yet been solved. The tentative schedule for this ammunition is as follows:

<u>T18 (Incendiary)</u>	- June	100,000
	- July	500,000
	- August	1,500,000.

It is planned that the T18 round will replace the present 20 mm incendiary round in all theaters for all Air Forces.

Incls
n/o

H. A. Craig
Major General, U. S. Army
Asst. Chief of Air Staff
Operations, Commitments & Requirements

AFREQ _____

AFREQ/M _____

~~SECRET~~
DECLASSIFIED

304716 (370)

SAS 4716 (370)

DECLASSIFIED

DECLASSIFIED
EO 13526
Date: 30 June 1984
By: [Signature] 2/11/87

Project on Incendiary Ammunition

Assistant Chief of Air Staff, CGAR

24 May 1944

Chief of the Air Staff

ME/Ad/3373

1

General Arnold directed this date that action be taken at once to secure large quantities of the improved incendiary ammunition and have same issued to all units. Let me know what your plans are on this project.

[Signed

BARNEY N. GILES
Lieutenant General, U. S. Army
Chief of Air Staff

Incl:
Ltr to Exec. AAF Board
Orlando dtd 22 Apr fr
Gen. Giles w/ 1st Ind.
fr Gen. Babank dtd 11 May
Routing Slip fr Gen. Craig

Handwritten: Ser 471.6 (398)

Dispatched
25 MAY 1944
AGG

DECLASSIFIED

FILE 

398 471.6 (398)

SECRET
DECLASSIFIED

DECLASSIFIED
DDO US
8 Jan & 30 June 1974
By SP/CC W.C. Date 1/16/77

*aw
on.*

DECLASSIFIED	
AFMOR Col McKee/100/9770	
Wrt'n 21 Apr 44	
By Authority of	
The Commanding General	
Army Air Forces	
Date	Initials

Project on Incendiary Ammunition

**Executive
Army Air Forces Board
Orlando, Florida**

1. On 20 April, the Commanding General, Army Air Forces, visited Aberdeen Proving Ground, where he went into the subject of incendiary ammunition at some length and also the possibilities of the 105 mm. air-borne cannon. He noted that great progress had been made in 60 cal. and 80 mm. incendiary ammunition. One round of this 80 mm. improved incendiary ammunition destroyed a modern German tank.

2. The great strides which we have made in the development of incendiary ammunition bring up the following questions:

a. When the Germans or the Japanese, after we start using the ammunition in quantity in combat, get physical possession of some of this ammunition, how long would it take them to get into the production of equally effective ammunition?

b. Would they be able to make identical copies of this ammunition and utilize it in their existing armament?

c. If the enemy were able to manufacture this ammunition in any quantity, what would be the effect upon our air offensive?

d. Taking into consideration the time necessary for the enemy to produce this ammunition, do you believe that he would have sufficient air power left to exploit its use?

e. Since it has been shown that incendiaries fired into an external tank on an airplane in flight will not result in fire, should we contemplate the use of all external tanks in future airplanes? What are the pros and cons of this idea?

3. A copy of this directive has been furnished to the Air Ordnance Officer, who is directed to assist you in every way possible in obtaining answers to the questions outlined above.

*AW 471.6
394*

DECLASSIFIED

~~SECRET~~

AW 471.6 394

COPY FOR OFFICE OF SIGNATURE

DECLASSIFIED

4. An early report of your findings will be submitted to this office.

By command of General ANNEAL:

BARRY H. GILES
Major General, U. S. A.
Chief of the Air Staff

THE

cl

DECLASSIFIED
- 2 -
~~SECRET~~

~~SECRET~~
DECLASSIFIED

DECLASSIFIED
EX-100

1 Jan 4 10 June 1974
By JSLK Mr. Loran 2/11/77

*WU to
me*

Tests of Army Air Force Bombs

**Asst G/AS, HMB (Air Ordnance Officer)
Chief of the Air Staff**

22 April 1944

HMB/OSVS

1

1. Reports from overseas indicate that almost 40 percent of the bombs now being dropped by the Germans are duds.

2. This leads to the question of the effectiveness of our bombs. For example:

a. What percentage of our bombs coming from production and prior to shipment overseas may we expect to be duds?

b. What is your best estimate, based on reports and experience, of the percentage of duds which we may expect from our bombs in each of our major theaters?

c. What positive action is being taken to decrease the percentage of duds?

3. It is desired that you initiate tests in conjunction with the Army Air Forces Board to determine the percentage of our bombs which we may expect to be duds. These tests should be continuous in order that we may have an up-to-date picture of our bombing efficiency.

4. A copy of this HMB is being furnished the Assistant Chief of Air Staff, CGMA, who is directed to assist in the conduct of these tests.

*471.6
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BARNEY M. GILES
Major General, U. S. A.
Chief of the Air Staff

*Date
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GPO Pub

24 Apr & 20 June 1974
By: SP6 AC Date: 2/11/77

26 February 1944

MEMORANDUM FOR CHIEF OF THE AIR STAFF

Thru: Brig. Gen. H. A. Craig

SUBJECT: Non-persistent Chemical Agents

1. Transmitted herewith is memorandum from ASF.
2. The Chief, Chemical Warfare Service was notified in September 1943 that the Army Air Forces requested the production of 25,000 bombs of each size, 1,000 lb. and 500 lb., as a procurement for development and operational testing. None of these bombs were made available toAAF.
3. When the bombs were fully proof tested and ready for standardization, the Army Air Forces established a requirement for 150,000 1,000 lb. bombs and 60,000 500 lb. bombs, published by change in Army Supply Program, dated 10 December 1943. All of these bombs were to be produced in 1944 and the previous requirement for 1943 production was eliminated. The same requirement was restated in the Army Supply Program dated 1 February 1944.
4. Contrary to the statement made in paragraph 3 b, that present stocks approximate 8400 tons, none of these bombs have been made available to the Army Air Forces at this time. Information from Office, Chief, Chemical Warfare Service indicates that this quantity of bombs will not become available prior to 1 May 1944.
5. In a plan for retaliatory gas warfare against Japan, a study was prepared by AC/AS, Plans, in conjunction with the Air Chemical Officer, in which non-persistent gas bombs were to be used. It is my understanding that this plan has been reviewed by General Giles and is now before the Joint Chiefs of Staff.

Acw 471.6

358

(Signed) B. E. Meyers

B. E. MEYERS
Brig. General, U. S. A.
Deputy Assistant Chief of Air Staff,
Material, Maintenance & Distribution

Incl.

None 25 Feb 44 fr ASF
w/5 incls.

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Acw 471.6 358

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WAR DEPARTMENT

HEADQUARTERS OF THE ARMY AIR FORCES
WASHINGTON

7 Mar 44

MEMORANDUM FOR GENERAL PERRIN

SUBJECT: Bomb, Incendiary, M69.

1. By cable no. 2033 dated 6 Dec 43 all theaters were advised to test the M69 bombs for percentage of functioning and submit a report to this Headquarters. This action was based on reports from the Chief, Chemical Warfare Service that bombs in storage absorb moisture from the air due to the hygroscopic nature of the ejection charge and that a high percentage of failures is caused thereby.

2. The defects pointed out in cable W29RR dated 5 Mar 44 did not become known and could not have become known until after a period of surveillance, therefore, no reason existed to suspect the failure of the bombs at the time they were shipped. All bombs manufactured prior to 1 Dec 43 must be reconditioned before they will be satisfactory for use. The necessary development work to determine the extent of this reworking and the proper methods by which it may be accomplished have been completed. Necessary action has been taken to assure that all M69 bombs shipped to theaters will have been proof tested prior to shipment.

3. The leaks in the bomb are a basic defect caused by the hexagonal shape of the bomb which makes it virtually impossible to achieve a completely tight seal using mass production methods. Future production of this bomb will have a circular seal and will successfully remedy this defect.

4. The tests quoted in paragraph one of cable W29RR indicate that all duds were caused by moisture absorption. The leakage of bombs does not affect their functioning except in so far as they prevent tails from coming out or cause bombs to stick together thereby making them unstable in flight.

5. The suggestions concerning the addition of rope handles to permit easier handling and the stencilling of the cases to assure more carefull handling are considered appropriate and necessary action will be taken to have these suggestions adopted.

6. The M69 bombs furnished in connection with the Matterhorn Project are completely reworked bombs which have been water proofed and can, therefore, be expected to give satisfactory functioning. If these bombs are

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*Notes
M69
Exp. file*

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Memorandum for General Perrin (Continued)

stored for a long period of time in a hot climate some leakage may be anticipated, however, it is not believed that the 10,000 clusters already furnished will be in storage long enough for this defect to arise.

7. Reclustering of those bombs now in the theater, on the basis of previous reports and cable W29RR, is not worth while and the Fourteenth Air Force has been so advised.

8. An answer to cable message W29RR has been sent covering the information given above.

E. Montgomery
E. MONTGOMERY
Brig. General, U. S. Army
Air Chemical Officer

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DOO 115
8 Jan. & 20 June 1974
7/2/74 J.C. Date 3/11/77

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Rocket Development

AC/AS, W&A Attention: Air Ordnance
Lt. Col. J. H. Grutch
Deputy Chief of Air Staff

15 March, 1944

W&A:hj 74287

What do you think we should do about this?

1 Incl
Memo dated 4 Mar, 1944
w/3 encls w/d

EDWIN S. PERRIN,
Brigadier General, U. S. A.,
Deputy Chief of Air Staff

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15 MAR 1944
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7 MAR 1944

MEMORANDUM FOR ASSISTANT CHIEF OF STAFF, OPERATIONS DIVISION

SUBJECT: Theater Priority for Non-Permeant Gas Bombs.

1. References:

a. Memorandum, Assistant Chief of Staff, OPD, file OPD 471 (19 Jan 44) dated 25 Jan 44, subject: "Theater Priority for the Supply of Aircraft Munitions".

b. Memorandum, Assistant Chief of Staff, OPD, file OPD 305 CWP (6 Feb 44) dated 26 Feb 44, subject: "Theater Plans for Chemical Warfare".

2. It is requested that the following be approved for priority of shipment of Non-Permeant Gas Bombs:

Theater	1000 lb. Size	500 lb. Size
(1) European and Mediterranean	Entire production prior to 31 May 44	
(2) China-Burma-India	2,000	1,400
(3) Southwest Pacific	3,000	3,100
(4) South Pacific	1,500	200
(5) Central Pacific	900	200
(6) Alaska	200	200
(7) Subsequent production to be distributed in accordance with reference 1,a, until levels approved by reference 1,b, are obtained.		

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For the Commanding General, Army Air Forces:

EDWIN S. PERRIN
Brigadier General, U. S. A.
Deputy Chief of the Air Staff

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27 Mar 44

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DDO WTS
8 Jan & 29 June 1974
By FB/CC LC Date 3/16/74

wrtm 28 Feb 1944

28 FEB 1944

MEMORANDUM FOR THE COMMANDING GENERAL, ARMY SERVICE FORCES:

SUBJECT: 10,000 incendiary bombs on B-29 Special Project.

1. The B-29 Special Project now has 10,000 incendiary bombs, 500 lbs. each, at Los Angeles Port of Embarkation awaiting shipment to Calcutta. A minimum of 3,000 incendiary bombs are required at Calcutta by 15 April 1944, if present target date is to be maintained. Present shipping arrangements will deliver 3,000 of these bombs by slow cargo vessel to Calcutta on 1 May 1944.

2. Therefore, it is requested that it be ascertained whether or not other vessel space can be made available for delivery of 3,000 of these bombs (1,125 ship tons) to Calcutta by 15 April 1944.

For the Commanding General

Signature

Barney M. Giles,
Major General, U. S. Army,
Chief of the Air Staff.

Att. 05. 471.6 (580)

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DDO R/S
8 Apr. & 20 June 1971
By: SS/CC IC Date: 3/11/77

AFOCR

28 February 1944

MEMORANDUM FOR GENERAL CRAIG:

Subject: 10,000 Incendiary Bombs for B-29 Special Project

1. There are a total of 10,000 incendiary bombs on the B-29 special project and are now at the Los Angeles Port of Embarkation awaiting overseas shipment. Three thousand of these bombs are needed in the theatre by 15 April, if the present target date is to be maintained. The theatre has radioed that these bombs are to have priority over all Air Forces munitions except rockets.

2. On 18 February 1944, this office ascertained that shipping out of Los Angeles would not deliver the bombs to overseas theatre until 1 May; also, there weren't any fast cargo ships available on the West Coast for delivery of these bombs to overseas theatre prior to 1 May 1944. It was learned that the last 4,000 of the 10,000 bombs had just left Edgewood Arsenal and were on the Pennsylvania Railroad in the vicinity of Pittsburgh. Orders were immediately issued to stop and hold these 4,000 bombs on the railroad while East Coast shipping was investigated for delivery of these bombs to overseas theatre by 15 April 1944. War Shipping Administration, Transportation Corps, and Atlantic Overseas Air Service Command at Newark, New Jersey, were all contacted but no vessel space was available for delivery by 15 April to the desired port in theatre. The 4,000 bombs were then continued to Los Angeles POE.

3. Transportation Corps stated that a troop ship, which would be loading in a few days, could deliver these bombs to Bombay by 15 April 1944. In answer to a radio from this office, the theatre stated that delivery to Calcutta by 1 May was more satisfactory than delivery of 15 April to Bombay; in fact, Bombay does not have personnel or facilities suitable for handling these 3,000 bombs.

4. The Transportation Corps now states that the only possibility of delivering these first 3,000 bombs to Calcutta by 15 April would be to load the troop ship mentioned in par. 3 above with these bombs and force the theatre to accept delivery of this vessel at Calcutta. Normally, troop ships do not carry cargo of this type as an explosion or fire would probably set off the bombs and the vessel would disintegrate; nor do troop ships usually operate to Calcutta because of lack of available housing.

- 1 -

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5. The attached memorandum has been prepared for General Arnold's signature to be delivered to General Somervell, with the thought of placing 3,000 bombs on the troop ship and forcing the theatre to accept this vessel at Calcutta. Part of the personnel on this vessel belongs to the XI Bomber Command and debarking at Calcutta is an advantage to progress of B-29 special project.

K. H. GIBSON
Colonel, A.C.
VHB Project Officer

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JSCC JG. Date: 11/11/77

HEADQUARTERS ARMY AIR FORCES

ROUTING AND RECORDS SECTION

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TALLY NO.	
FILE NO.	471.6

SUBJECT: Russian Bombs, Bomb Fuses, and Bomb Suspension Equipment.

TO: The Chief of the Air Staff.
FROM: AC/AS, Materiel, Maintenance & Distribution.

DATE 22 FEB 1944
COMMENT NO. 1
JMG:md 71175

1. In accordance with the directive from General Vandenberg that necessary information be obtained on the subject of Russian bombs, bomb fuses, suspension methods and ballistics for potential use in standard U. S. bombers, conference was held 8 Feb 1944 in the Air Ordnance Office with the Washington representatives of the USSR Air Force.

2. The following personnel were present at the conference:

- Colonel Kramarenko.
- Colonel Piskounov.
- Colonel R. G. Butler, Technical Division, Office, Chief of Ordnance.
- Lt. Colonel Paul N. Gillon, Ballistic Section, Office, Chief of Ordnance.
- Mr. S. Feltman, Ballistic Section, Office, Chief of Ordnance.
- Mr. J. W. Moseman, Technical Division, Office, Chief of Ordnance.
- Lt. Colonel D. B. Mehl, AC/AS, MM&D, Armament Branch, Materiel Division.
- Lt. Colonel J. M. Grutch, AC/AS, MM&D, Air Ordnance Office.
- Major W. S. Blalock, AC/AS, OC&R, Requirements Division.

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Noted by
Gene Kites
28 Feb 44

3. CONCLUSIONS:

a. Colonel Piskounov stated that there was no information available in the United States on the specific details of Russian bombs, bomb fuses, nor bombing tables on these bombs.

b. No literature is available in the form of training manuals, technical bulletins, armament instructions, or technical orders on Russian ordnance materiel.

c. Colonel Piskounov recommended that:

(1) A cable be sent by the Army Air Forces to General Deane, Chief, U. S. Military Mission to Moscow, for necessary information.

(2) A B-17, B-24 or C-54 airplane be flown to Russia with the necessary technical personnel to obtain latest information on ordnance equipment and to bring back representative bombs, fuses, suspension gear, bomb arm- ing mechanism and bombing tables.

4. RECOMMENDATIONS:

a. That a cable be sent to General Deane requesting available detailed drawings on bombs and fuses, bombing tables, training manuals, and ten (10) each of empty demolition bombs of the 50, 100, 250, 500 and 1,000 KG sizes.

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HEADQUARTERS ARMY AIR FORCES
ROUTING AND RECORD SHEET

TALLY NO.	9
FILE NO.	471.6

~~SECRET~~

SUBJECT: Russian Bombs, Bomb Fuses, and Bomb Suspension Equipment.

TO: The Chief of the Air Staff.

DATE 22 FEB 1944

FROM: AC/AS, Materiel, Maintenance & Distribution.

COMMENT NO. 1 (Cont'd.)

JMG:mad 71175

b. That a mission be delegated to go to Russia with the specific purpose of obtaining all technical information with respect to bombs, bomb fuses, arming mechanism, bomb suspension methods and ballistic tables for these bombs.

e. That action be taken to procure limited quantities of suspension bands, bomb fins, arming wire assemblies, bombing tables, etc., upon obtaining technical information.

d. That immediate consideration be given to the stockage of an air depot for the maintenance and repair of damaged bombers arriving from a shuttle mission.

5. ACTION:

a. A cable has been sent to the Commanding General, U. S. Military Mission to Moscow (Brigadier General Deane) requesting details of Russian bombs, fuses, and arming mechanism by Operational Plans Division, AC/AS, Plans. Lt. General Spaatz is to be notified of the action taken by General Deane.

b. A Military Mission is to be sent from the U. K. by General Spaatz to Moscow to coordinate with General Deane in obtaining necessary information on Air Service Command and Tactical problems.

e. Cable was received from General Deane 21 Feb listing a tabulation of Russian bombs in weights and sizes with a statement that the high explosive bombs from the 2,000 to the 250 kg sizes and the 300 kg incendiary bombs are equipped with suspension bands to fit bomb racks of A-20B aircraft. All other types of HE fragmentation and incendiary bombs have single suspension. Adequate information was not given in this cable so another cable was sent to General Deane 22 Feb requesting additional information and assembly drawings of bombs and fuses.

P. E. M.
O. P. ECHOLS
Major General, U. S. Army
Assistant Chief of Air Staff,
Materiel, Maintenance & Distribution.

File 29 Feb 44

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E.O. 13526
DATE 20 June 1978
BY *11/1/78*

M-69 Incendiary Bomb Project.

Secretary of Air Staff

18 Feb 1944

AC/AS, Operations, Commitments and Requirements

1

A suggested letter to Dr. Vannevar Bush, Director of the Office of Scientific Research and Development, is attached for signature by the Assistant Secretary of War for Air.

WILLIAM F. MCKEE
Colonel, Air Corps
Deputy Asst. Chief of Air Staff
Operations, Commitments & Requirements

Incl.
Ltr to Dr. Bush
fr Asst. Sec. of War
for Air

File by 4776 (396)

*Letter signed by Mr. Lanett
& dispatched 19 Feb 44
fr GSWA.*

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8 Jan. & 20 June 1974
WES/IC J.C. Doe *Auto*

ADDRESS REPLY TO
HEADQUARTERS OF THE ARMY AIR FORCES
WAR DEPARTMENT
WASHINGTON, D. C.

WAR DEPARTMENT
HEADQUARTERS OF THE ARMY AIR FORCES
WASHINGTON

16 February 1944

MEMORANDUM FOR THE CHIEF OF AIR STAFF:

Subject: Bomb, Incendiary, M69.

1. Reference cablegram, Aquila W-380 CM-IN 6327 from New Delhi dated 9 February 1944, which reported 30 M-69 fragmentation bomb malfunctions from a drop test of three clusters. This figure represents 16.6 percent malfunction. You directed that a report be submitted to you on this matter.

2. The following information, supplied by the Air Chemical Officer, relative to the M-69 incendiary bomb is given for your information.

a. By cable 6 December 1943, all theaters were advised to test the M69 bombs for percentage of functioning and submit a report to this Headquarters. This action was based on reports that bombs in storage absorbed moisture from the air due to the hygroscopic nature of the ejection charge, and that a high percentage of failures is caused thereby.

b. The defects could not be determined until a period of surveillance had passed; therefore, they had not become known at the time the bombs were shipped. It has been found that all bombs manufactured prior to 1 December 1943 must be reconditioned before they will be satisfactory for use. Action has been taken to assure that all M69 bombs shipped to theaters will have been proof-tested prior to shipment.

c. A cable has been sent to New Delhi advising that if contemplated targets are such as to require use of this bomb, 15 percent duds will have to be expected, and further, that action has been taken to eliminate the causes of failure in any bombs shipped in the future.

3. Later developments of incendiary bombs, several types of which are available in all theaters, provide for more stable results from tropical storage than the original M69.

Copy 4716
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William V. Moran
Colonel, A.C.,
Deputy Asst. Chief of Air Staff,
Operations, Commitments & Requirements

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15 FEB 1944

*a o p
mc*

Dr. Vannevar Bush, Director
Office of Scientific Research
and Development
1530 P Street, N. W.
Washington 5, D. C.

Dear Dr. Bush:

Douglas Aircraft Corporation has a project with Division 5, National Defense Research Committee in which I am very much interested. This project is for the development of a guided missile known as "Boc". I have already asked Douglas Aircraft to do everything possible to expedite the completion of this development. They have now reached the point where they need additional assistance from the National Defense Research Committee, particularly in the microwave field.

I will be grateful if you will do anything which seems necessary to assure the committee of the high priority of this device within the Air Forces, to the end that people competent in this field can be made available for use on this project.

Sincerely,

[Signature]

Barney M. Giles,
Major General, U. S. Army,
Chief of the Air Staff.

Dispatch 1
15 FEB 1944
AAG

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DDO 115.
8 Jan & 20 June 1974
By *BJG* LC Date *2/11/76*

HEADQUARTERS ARMY AIR FORCES

ROUTING AND RECORD SHEET

SECRET

TALLY NO.	
FILE NO.	471.82

SUBJECT: Special Fuses, Third Weekly **DECLASSIFIED**

TO: Deputy Chief of The Air Staff.

DATE 1 NOV 1943

FROM: AC/AS, MMBD, Air Ordnance Officer.

COMMENT NO. 1

LKP:md 71175

1. In conformance with verbal directive, your office, October 15th, submitted herewith is third weekly summary of the status of special fuses.

2. The operational control of influence fuses in bombs is still restricted by the Combined Chiefs of Staff Memorandum 299/1, and has been promulgated by memorandum from the War Department General Staff to the Commanding General, Army Air Forces, 1 September 1943. The War Department memorandum states that the Commanding General, Army Service Forces, would not distribute any influence fuses to using arms for operational use without specific authority of the Chief of Staff, War Department.

3. The procurement requirements of the influence-radio fuses for general purpose and semi-armor piercing bombs in the sizes of 500-lb. and 1,000-lb., together with the 265-lb. fragmentation bomb, has been aided by a priority reclassification request, this Headquarters to the Chief Signal Officer, indicating that the B-380 priority precedence in the present program of electronic devices is too low. It was requested that the entire program project for the radar set AN-CPQ1 be moved to the B-1 priority, Army-Navy Electronic Precedence List, and that a quantity of 25,000 be moved to the A precedence priority category. In effect, this means that the electronic mechanism of the bomb radio special fuse can attain a monthly production of approximately 25,000 by March, 1944. This quantity will be ample to care for the total Army Air Force usage.

4. The special fuses P.D. T4 (photo-electric) and P.D. T5 (radio) are undergoing air proof test firing at Eglin Field, Fla. The program has been delayed because the firing pursuit aircraft has not had knowledge of the passage of the influence fused rocket shell near the PQ 8 target aircraft, and action has been initiated for the installation of a National Defense Research Council sonic recording device to indicate the distance at which the aircraft rocket passes the target airplane. No special fuses are available for the 4.5" aircraft rocket at this time due to technical difficulties that have occurred in the experimental development of these fuses.

5. The special fuse T73 (radio) for the 76mm aircraft cannon, is in the highly experimental development stage, and action by the Army Ground Forces to increase the production of special fuses has increased the need for special fuses for all types of artillery. Approximately 75% of all anti-aircraft shells will contain the radio fuses and approximately 15% of all howitzer ammunition will be so equipped in the contemplated production of this type.

6. No special fuses for aircraft weapons are available at this time which are suitable for operational use.

*File
AK
2/11/44*

R. C. Coupland
R. C. COUPLAND
Brig. Gen., U.S.A.

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PAGE - 1 -

471.82 (37) 3-1109 A.F.

REQ/M
Colonel Boushey/af-FL/06

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2 November 1943

MEMORANDUM FOR GENERAL ARNOLD:

Subject: Reference Delay in Producing Proximity Fuses.

I. Discussion.

1. Availability

Type	Available Now	
	High Explosive Booster (Combat type)	Black Powder Spotting Charge (Practice type)
FD T-4 (photo-electric type)	4,827	60,100
FD T-5 (radar type)	18,700	9,604

2. General Description

All fuses have a 0.7 second arming time. They can be made available to the Army Air Forces at any time. The Ordnance Department can assemble approximately 4,000 of each type per day in addition to the quantities listed above, and it is believed an assembly rate of 8,000 per day for each type is feasible in the near future, if required. Component parts for approximately 75,000 of each type fuse are now on hand for the Army Air Forces. A total of 300,000 are in the Army Supply Program. Both type fuses are considered satisfactory for immediate use, although the desirability of the 0.7 arming time has not yet been determined. For tactical employment, an airplane firing from the rear of a "string" formation might damage one of the leading airplanes in event the time of flight for the rocket to pass the friendly lead airplane exceeded 0.7 seconds. No difficulty is anticipated in changing the arming time to whatever period may be determined most desirable. These fuses are considered satisfactory for use against aircraft in flight, barrage balloons and against any ground or water objective which would be a suitable target for fragmentation bombing. Past tests indicate that at least 80% of these fuses function satisfactorily. A direct hit with these fuses is impossible, since they are designed to detonate approximately 60 feet from the target. The use of subject fuses on rockets at high altitudes and the low temperatures encountered is still uncertain. Tests are presently being conducted to determine the operational suitability of rockets at low temperatures.

3. Requirements

The only immediate requirement for proximity fuses is for a small

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"reserve" stock to be maintained on hand in event their use becomes advisable in the future. The quantity necessary for initial use pending establishment of a supply rate is estimated to be 100,000. This number will supply three fighter groups (75 aircraft per group) at a rate of twelve sorties per aircraft per month for six months. Stock of parts on hand exceeds 150,000, which is considered ample at the present time.

4. Employment

No fuses have been shipped or used to date because of the ruling of the Combined Chiefs of Staff which states this equipment will not be used until released by the Combined Chiefs of Staff because they would probably be of more advantage to the enemy than to us should one of the fuses fall into their hands as a dud.

II. Action Recommended.

Employment of subject proximity fuses be withheld until such time as released for use by the Combined Chiefs of Staff.

MERVIN E. GROSS,
Brigadier General, U. S. A.,
Deputy Assistant Chief of Air Staff,
Operations, Commitments & Requirements.

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7-28-64
G. J. H. C. Y.

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DDO HHS

8 Apr. & 20 June 1974
By *ES/ka* M. Date *3/11/77*

Testing of Bombs with Special Fuses

AC/AS, M&D, Air Ordnance Officer

10 Feb 44

Deputy Chief of Air Staff

ESP/eva/6371

Referring to Comment #2, paragraph f., what do you plan to substitute for the "ghost town" bombardment with HE filled bombs? I definitely feel that we should make some sort of test with HE bombs dropped on a city or industrial center.

EDWIN S. PERRIN
Brigadier General, U.S.A.,
Deputy Chief of Air Staff.

11 Feb 1944
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DDO #10
A. W. Jones 1977
3/11/77

Testing of Bombs with Special Fuses.

AC/AS, MM&D, (Attention: Air Ordnance Officer)
Deputy Chief of the Air Staff.

24 Jan '44

1
ESP/emo/6571

1. Confirming telephone conversation this date, it is desired that:
 - a. Air Ordnance Officer issue a directive to Eglin Field for the testing of bombs with special fuses. These tests should include drops from various altitudes and varying speeds in order to get a desirable height of burst.
 - b. Production on these special fuses should be pushed. I would like to have a new production schedule.
 - c. It is desired that 500, 1,000 and 2,000 pound bombs, with phosphorous in the fuses, be tested both against city targets and slit trenches.
 - d. It is further desired to try these fuses with 500 and 2,000 lb filled bomb against metropolitan targets. You might be able to find an abandoned town or city for this test.
 - e. It is desired that all theaters be contacted to see whether or not any of them desires the mechanical air-burst fuses that have been furnished Kenny.
2. Please advise this office of the action taken on the above.

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Dispatched
24 JAN 1944
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EDWIN S. PERRIN,
Brigadier General, U.S.A.,
Deputy Chief of Air Staff.

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30 June 1974
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28 June 44 - ?
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MEMORANDUM FOR: General Arnold

SUBJECT: Wire Wrapped Bombs

1. This office requested the Ordnance Department some eight months ago to produce the 85-lb. and 260-lb. Fragmentation Bomb in addition to the 20-lb. Fragmentation Bomb. With these three Fragmentation Bombs and the 500-lb. and 1000-lb. SAP Bombs, it was felt we would have the fragmentation field very well covered with the object in view of obtaining the maximum effectiveness with the airplanes now in production.

2. In support of the above statement, consider the following comparison:

- 100-lb. G.P. Wire Wrapped - 54-lb. explosive with 84-lb. metal for fragments. Maximum of 40 to heavy bomber
- 500-lb. G.P. Wire Wrapped - 266-lb. explosive with 340-lb. metal for fragments. Maximum of 12 to heavy bomber
- 20-lb. Fragmentation - 3-lb. explosive with 17-lb. metal for fragments. Maximum of 240 to a heavy bomber
- 85-lb. Fragmentation - 12-lb. explosive with 73-lb. of metal for fragments. Maximum of 72 to heavy bomber
- 260-lb. Fragmentation - 34-lb. explosive with 210-lb. of metal for fragments. Maximum of 40 for heavy bomber.

SAS 471.6
(366)

This is the heavy frag - cl
of fragments

3. It will be seen that one B-24 load of:

3540	100-lb. G.P. Wire Wrapped gives 3360-lbs. of fragments
4050	500-lb. G.P. Wire Wrapped gives 4080-lbs. of fragments
4050	20-lb. Fragmentation gives 4080-lbs. of fragments
4200	500-lb. SAP gives 4200-lbs. of fragments
5250	85-lb. Fragmentation gives 5256-lbs. of fragments
5500	1000-lb. SAP gives 5500-lbs. of fragments.
8400	260-lb. Fragmentation gives 8400-lbs. of fragments

The above figures are based on the B-24 Type Airplane, and will vary somewhat proportionately with other airplanes.

~~DECLASSIFIED~~

rb6

CONFIDENTIAL
DECLASSIFIED

DECLASSIFIED
DOD REF
8 Apr. & 23 June 1974
By TS/KC 16 Dec 2017

AAF 471.6

Wire Wrapped Bombs

Deputy Chief of Air Staff, Attn Brig General Perrin

22 JAN 1944

AC/AS, MND, Air Ordnance Office

JMR/mmf/71175
1

1. Reference General Arnold's request regarding the size of red and wire used in the test of 500-lb. wire wrapped bombs in the United States as compared to size wire that General Kenney uses in the Fifth Air Force:

a. Tests were conducted at Aberdeen Proving Grounds on wire wrapping, using the same size wire and red sections and wound around the bomb in exactly the same manner reported by the Fifth Air Force. The wire size was 1/8-inch (#8 gauge), soft drawn wire, and the red was 3/8-inch concrete reinforcement type.

2. The following is a comparison of wall thicknesses on fragmentation demolition and wire-wrapped demolition bombs:

Bomb	Sidewall Cyl- inder Thickness	Square Wire Relts	Round Wire FRAMED
20-lb Frag	7/64"	7/16"	
85-lb "	3/16"	3/4"	
260-lb "	1/4"	1"	
100-lb Standard G.P.	3/16"		
500-lb " G.P.	5/16"		
100-lb G.P. 5th AF w/wrap	3/16"		1/8" wire 3/8" red
500-lb G.P. 5th AF w/wrap	5/16"		1/8" wire 3/8" red
500-lb Standard S.A.P.	3/4"		
1000-lb Standard S.A.P.	1"		

1 Incl
Discussion, "Method of
Wire Wrapping Bombs"

R. C. COUPLAND
Brig General, USA
Air Ordnance Officer

*File JMR
2130 JMR*

DECLASSIFIED
CONFIDENTIAL

U.S. 471.6 300

DECLASSIFIED
DOO lrs.
8 Jan. 6 20 June 1994
1/16/97

DECLASSIFIED
SECRET

Nine Mapped Amb.

157ma

*mmms
DAS*

Est.

TO: Deputy Chief of Air Staff, Brig. Gen. E. S. Ferrin
FROM: AG/AS, HQAS, Air Ordnance Office

DATE 21 JAN 1944
COMMENT NO. 1
JMS/vb 71178

Necessary action has been taken to conduct the comparative tests requested by General Arnold. A copy of the test directive is attached.

R. C. COUPLAND
Brig. Gen., U.S.A.
Air Ordnance Officer

Incl.
By Ltr AAF 471.6
(20 Jan 44)

DECLASSIFIED
SECRET

~~SECRET~~

DECLASSIFIED

DD FORM

1 Jan & 20 June 1974

13/12

13/12

Wire Wrapped Bombs

AG/AS, HMMB

Attn: Air Ordnance Officer
Deputy Chief of Air Staff

15 Jan 64

ESP/ova/6371

1. Although General Kenney has stated that he no longer has a requirement for wire wrapped bombs since the heavier case fragmentation bomb is out, General Arnold directs that comparative tests be run between the wire wrapped bomb that General Kenney used and the new heavier case fragmentation bomb.

2. He further directs that one of these new heavier case bombs be wire wrapped and tested against one that is not so wrapped to determine whether or not there is any advantage.

EDWIN S. FERRIN,
Brigadier General, U.S.A.,
Deputy Chief of Air Staff.

DECLASSIFIED

~~SECRET~~

DECLASSIFIED
DND 188
6033/6
3/11/77

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DECLASSIFIED

Wire Wrapped Bombs

LHK:ms

General Perrin.

14 Jan 44

Acting Chief of Air Staff.

1

1. There appears to be a great reluctance on the part of the Ordnance Department to face the facts with regard to the value General Kenney has found in the wire wrapped bomb.
2. At the same time it is believed that no official statement has been made to the effect that comparative tests with the new heavier case fragmentation bomb prove the advantage of retaining wire wrapping (possibly on the new bomb). General Arnold is anxious that this project be followed through, not so much for the advantage of the 9th Air Force, as for our Air Forces in other theaters.
3. Please add this project to your list.

L. S. EVERT,
Brigadier General, U. S. A.
Acting Chief of Air Staff.

TO: General Euter
FROM: Deputy Chief of Air Staff

DATE 15 Jan 44

COMMENT NO. 2
ESP/ova/6371

1. Although I have been unable to contact General Kenney, I have talked with Colonel Hipps in whose office General Kenney is staying. Hipps assured me yesterday afternoon by telephone that General Kenney no longer desired wire wrapped bombs and that the new heavier case fragmentation bomb would entirely satisfy his needs. Hipps and General Kenney had apparently discussed this subject at lunch yesterday. Hipps was to verify this again specifically and notify me if the above was incorrect.
2. In the meantime, Air Ordnance has been directed to run comparative tests between the wire wrapped bomb and the new heavier case bomb. They have also been directed to wire wrap the new heavier case bomb to determine whether or not there would be any advantage.

EDWIN S. PERRIN,
Brigadier General, U.S.A.,
Deputy Chief of Air Staff.

DECLASSIFIED
~~SECRET~~

DECLASSIFIED

DECLASSIFIED
DOD DIR
1 Jan & 10 June 1975
SBJ/c
1-10 Date 3/10/77

"Secret Weapon".

AC/AS, HMAA.

21 Jan. '44

Deputy Chief of Air Staff.

HSP/ans/6571

1. Reference the "Secret Weapon" described in the attached correspondence, General Arnold is extremely anxious to have this tried immediately at Eglin and/or Orlando.

2. Request you take the necessary action and give me a report - both on progress of tests and whether or not such bombs have a tactical use. Also desire to know whether or not tests are being conducted with actual flame throwers mounted in airplanes.

H 71.6

Incls: Cy secret ltr to Gen. Arnold
frn Col. Boardman, dtd 1-18-44,
and ltr to Gen. Giles frn Col.
T.L. Campbell, 1-18-44, Subj:
Crude Oil Fires from Bombers.

EDWIN S. FERRIS,
Brigadier General, U.S.A.,
Deputy Chief of Air Staff.

365

Copy: AC/AS, OCAE.

Dispatched
21 JAN 1944
AM

File
0.23/Jan 44

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SECRET

air a. g.
ans 471.6/365

SECRET
DECLASSIFIED

SECRET
DECLASSIFIED
GPO: 1964
2 Jan. & 20 June 1964
3/11/97

Col. D. Reardan, U. S. Army
7 W. Drive, Margate
Atlantic City, N. J.

January 15, 1944

SUBJECT: "Secret Weapon" for Use in the Invasion of France.

TO : General H. H. Arnold, Commander-in-Chief, Army Air Forces.

1. The use of the new method of waging war proposed herewith does not appear to violate existing treaties.
2. This method is, as yet, untested. However, tests may be expected to show it to be "20/20".
3. Briefly, it is the use of "Liquid Fire" against underground coastal fortifications, by converting present airplanes to use as "Aerial Flame Throwers":
4. This Liquid Fire is to be produced by gasoline for quick, intense flame and by oil for more lasting fire effect. Oil and gasoline to be dropped in commercial containers, both drums and tins, with incendiary bombs.
5. It is believed that present planes of all types can be readily adapted to drop these containers.
6. Liquid fire will flow into underground chambers. In addition, such fires will spread over these underground fortifications and cause serious oxygen deficiency therein, even 'tho the fire does not reach them!
7. It is believed the initial use of this weapon against the enemy should be reserved for the cross-channel invasion.
8. It is estimated that 4,000,000 gallons (a coverage of almost 40 gals. per foot front on a front of 20 miles) could be dumped in one mission in a two hour period over the target.
9. The great availability of oil and gasoline may dictate the dispatch of a number of missions to maintain the fires for a 24-hour period prior to assault of ground troops.
10. I have no drawings or specifications to submit to accomplish the foregoing.
11. A further effective use of this weapon would be against "Submarine Sheds".

Handwritten: 471.6 (365)

JOHN D. REARDAN,
Colonel, U. S. Army, Ret'd

DECLASSIFIED
SECRET

Handwritten: Noted by [signature]
File # 102
MAR 21 1944
471.6 (365)

~~SECRET~~
DECLASSIFIED
DOD 502
8 Jan. & 20 June 1974
By 3816 LCI, Date 4/17/77

19 January 1944

MEMORANDUM FOR THE ARMY AIR FORCES BOARD:

Subject: Guided Missiles.

1. Attached hereto are two photostats concerning guided missiles, the winged bomb, and winged torpedoes, forwarded to you for your information and guidance.
2. It is desired that one of the attached copies be forwarded to the Proving Ground Command at Eglin Field.

By Command of General ARHOLD:

ROTT S. VANDENBERG,
Brigadier General, U.S.A.,
Deputy Chief of Air Staff.

2 Incls:
2 photostats.

*File
7-15-44*

*508
471.6
363*

~~SECRET~~
DECLASSIFIED

Copy of this enclosure also furnished, by truck slip, to Col. Rivers, Air Communications Office, Cheyenne, Wyo. Original paper, from which enclosure was copied, returned to Col. O'Donnell with notation that Gen. Van has negative of copy, if he should want to read it. All sent forward on 19 Jan. 1944. Cy. to Col. Rivers through Gen. Kuhn. Kuhn handed to Miss Ch... Original handed to Miss Ch... in Col. O'D... office.

DECLASSIFIED

DECLASSIFIED
EOD 100

3/11/77

Wire Wrapped Bombs

AG/AS, M&D
Attn: Air Ordnance Officer
Deputy Chief of Air Staff

15 Jan 44

ESP/ova/6371¹

1. Although General Kenney has stated that he no longer has a requirement for wire wrapped bombs since the heavier case fragmentation bomb is out, General Arnold directs that comparative tests be run between the wire wrapped bomb that General Kenney used and the new heavier case fragmentation bomb.

2. He further directs that one of these new heavier case bombs be wire wrapped and tested against one that is not so wrapped to determine whether or not there is any advantage.

EDWIN S. FERRIS,
Brigadier General, U.S.A.,
Deputy Chief of Air Staff.

471 C
321

Dispatched
16. 11/34
AMG

File
copy

DECLASSIFIED

air 471. 6/11/77

Wire Wrapped Bomb

DECLASSIFIED
DND 812

DECLASSIFIED

8 Jan. & 20 Jan. 1954
By 726 AG, Date 3/1/77

TO: General Kuter
FROM: Deputy Chief of Air Staff

DATE 15 Jan 54

COMMENT NO. 2
ESP/eva/6371

1. Although I have been unable to contact General Kenney, I have talked with Colonel Hipps in whose office General Kenney is staying. Hipps assured me yesterday afternoon by telephone that General Kenney no longer desired wire wrapped bombs and that the new heavier case fragmentation bomb would entirely satisfy his needs. Hipps and General Kenney had apparently discussed this subject at lunch yesterday. Hipps was to verify this again specifically and notify me if the above was incorrect.

2. In the meantime, Air Ordnance has been directed to run comparative tests between the wire wrapped bomb and the new heavier case bomb. They have also been directed to wire wrap the new heavier case bomb to determine whether or not there would be any advantage.

Dispatched
15 JAN 1954
AAG

EDWIN S. PERRIN,
Brigadier General, U.S.A.,
Deputy Chief of Air Staff.

DECLASSIFIED
SECRET

Original 471.6 Perry AG.

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DECLASSIFIED

Miss. Ordnance

Study of Radar Bombing.

DECLASSIFIED
DOD 485
1 Apr & Before 1974
By *SP/CC* SC. Date *2/11/77*

TO: Chief of the Air Staff

Date: 24 Jan 44

FROM: Air Adjutant General

Comment No. 1
HRT/38 5794

Inviting attention to Comments #1 and 3.

Incl. n/a

H. H. HEWITT,
Lt. Col., A.C.S.,
Asst. Air Adj. Gen.

4716
368

To: Chief, Management Control. (Attn: Organizational Planning)

Date: 1/18/44

From: Secretary, Air Staff. (Lt. Colonel Burt)

Comment No. 1
HRT/38 5458

1. Before General Vandenberg gives final approval to the project cited in Comment No. 1, he desires to know what is involved in the way of personnel and organization in this matter, and where the people and equipment are to come from. Also, it will be necessary to know the organizational control arrangements.

Incl. n/a

WM. R. BURT,
Lt. Colonel, U.S.C.,
Asst. Secretary, Air Staff.

DECLASSIFIED

~~SECRET~~

4716
10/3/44
368

Study of Radar Bombing

- (1) Management Control
- (2) Air Communications Officer
Deputy Chief of the Air Staff

31 Jan 1944

WFB/ia/5458

7

1. It is desired that above matter be included in the study undertaken in conjunction with secret R&B to Management Control, dated 28 Jan 1944, subject: "Increase in Manning Tables in Connection with Guided Missiles and Countermeasures".
2. Note is made of the time lag between comment No. 5 and No. 6, which appears inconsistent with the urgency placed on this matter by the Air Communications Officer in Comment No. 1 and the content of Comment No. 6. Future action is to be expedited.

Incl:
n/c

WILLIAM F. BURT
Lt. Colonel, U. S. C.
Asst Secretary, Air Staff

K716 (360)

Study of Radar Bombing.

DECLASSIFIED

DECLASSIFIED
DOO has
10 on 3/12/77
AC Date 3/16/77

TO: AC/AS - Operations, Commitments & Requirements
FROM: Deputy Chief of the Air Staff

DATE 5 Feb 1944

COMMENT NO. 10
FRB/1a/5458

To implement the recommendation contained in Comment No. 1 subject to the provision of Comment No. 9.

Incl:
n/a

EDY S. VANDENBERG
Brigadier General, U. S. A.
Deputy Chief of the Air Staff

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DECLASSIFIED

Increase in Manning Tables in Connection with Guided Missiles and Countermeasures.

DECLASSIFIED
DOO 100
15 Jan 1944
Office IC, Date 3/11/77

TO: Management Control
Attn: General Gates
FROM: Deputy Chief of the Air Staff

DATE 28 Jan 1944

COMMENT NO. 2
WRB/1a/5458

It is desired that your office study the organization and operation of the Air Communications Office in order to expeditiously determine the best manner in which that office can absorb the responsibility for "controlled missiles" within existing Manning Tables for Headquarters, AAF.

1 Incl:
n/c

L. S. KUTER
Brigadier General, U.S.A.
Acting Chief of the Air Staff

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DECLASSIFIED

DECLASSIFIED
DDP #15

Dec. 6, 20 June 1976
SAC, Dese. 3/4/77

Request for increase in Manning Table

TO: Air Communications Officer
FROM: Chief of the Air Staff

DATE 2 March 1944

COMMENT NO. 1
HAL/nd/3373

471.6
(360)

To note the foregoing and file, if no further action is necessary.

Incl: n/e

Dispatched
2 MAR 1944
AGG

M. A. LIBBY
Colonel, G. S. C.
Secretary, Air Staff

File
ci 2 MAR 44

~~SECRET~~

Att 471.6 (360)

DECLASSIFIED

DECLASSIFIED
DOD 602
1700 & 1800 June 1975
EJCC AG Dec 2/1/77

084471.6
360

TO: Management Control
Attn: General Gates
FROM: Deputy Chief of the Air Staff

DATE 29 Jan 1944

COMMENT NO. 2
WRB/1a/5498

It is desired that your office study the organization and operation of the Air Communications Office in order to expeditiously determine the best manner in which that office can absorb the responsibility for "controlled missiles" within existing Warning Tables for Headquarters, AAF.

Dispatched
29 JAN 1944
AWB

1 Encl:
n/c

L. S. EYER
Brigadier General, U.S.A.
Acting Chief of the Air Staff.

File
in 29 January

DECLASSIFIED

084471.6 (360)

Glide Bombs

General Perrin

Asst C/AS, OCAF

SECRET

DECLASSIFIED
DDO 100
Apt. 4 20 June 1975
3/11/77

27 Dec 1945

Maj Fitz/Ms/72000

In accordance with your request, attached for your approval is a letter to Commanding General, Eighth Air Force, requesting that operational use of the glide bomb be initiated at the first practicable date.

WILLIAM F. McKEN
Colonel, Air Corps

Bombardment Br. _____

M & E Sec. _____

471.6
358

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DECLASSIFIED

File
ci 5 Jan 4

471.6 (358)

DECLASSIFIED

SECRET

FORM 100
14 JUN 54

HEADQUARTERS ARMY AIR FORCES

ROUTING AND RECORD SHEET

*Noted by
Gen. Hinkle
15 Dec*

TALLY NO.	
FILE NO.	

SUBJECT: Cable DL057, USANW

TO: Deputy Chief, Air Staff (Brigadier General E. S. Ferris) DATE Dec. 14, 1943

FROM: AC/AS, MM&D, Air Ordnance Officer COMMENT NO. 1
JMG/mhh/ 72837

1. Reference Cable DL057 dated 11 December 1943 from USANW on the subject of re-assembling shipping plugs to long delay fuzes after inspection or after a scrubbed mission.
2. The fuzes were originally designed to withstand vibration and rough handling incident to shipment to theaters and field storage. In order to provide the maximum safety measures possible, a shipping plug and screw were devised to support the firing pin spring pressure so that during shipment overseas and under severe handling conditions, the firing pin would not tend to force the firing pin locking balls into plastic washer. This condition might occur if excessively high temperatures were encountered during shipment over desert areas or in holds of ships when stored near engine room bulkheads.
3. In case the fuzes are inspected or are returned after a scrubbed mission, a simple adjustment of the shipping screw would be necessary if shipping plugs were interchanged during inspection process. This would consist of turning the shipping screw with a screwdriver until firing pin spring pressure was encountered and then the screw tightened an additional half turn. The reinstallation of shipping plugs in the theaters after inspection or after scrubbed missions is not considered necessary as the fuze is designed to withstand all normal storage conditions.
4. No data is available as to the length of time the plastic washer can be expected to withstand spring load without weakening under the temperatures obtained in England. However, extensive testing has been conducted at accelerated temperatures of 150°P. over two-week periods, after which fuzes successfully passed the drop tower test at Picatinny Arsenal. Fuzes passing this test are considered satisfactory for long periods of field storage.
5. Picatinny Arsenal has been notified of the assembly details encountered in the Eighth Air Force and have been requested to take extra inspection precautions on the final assembly of these fuzes.
6. No modification of the long delay fuze, T-38 series, is contemplated to prevent movement of firing pin away from primer detonator as the basic design incorporates an additional plastic cap washer over the firing pin in the longer delays of 36 to 144 hours, which in effect restricts movement of firing pin and accomplishes the same result requested by the Eighth Air Force. This restriction of movement is not incorporated in the shorter delay time and is not considered necessary in any of the delays if simple precautions are taken when reassembling shipping plugs.

*024
471.6
(354)*

J.M. Brutch
R. C. COUPLAND,
Brigadier General, U. S. A.
Air Ordnance Officer.

*File
6/12/6/43
6/354*

DECLASSIFIED
SECRET

DEC 15 43 AM



RECEIVED
AIR MAIL

SECRET
DECLASSIFIED

Destruction of Glider Bombs

DECLASSIFIED
DDO Ref.

9 Jan. & 20 June 1974
3572 101 Date: 3/11/77

Handwritten: OAR 471.6 (351)

Re: AG/AS, Intelligence.

Date: 7 Dec. 1943

From: Secretary of the Air Staff.

**Comment No. 2
MAL/gnd/3572**

Noted by General Giles and returned.

**HILLARD A. LIBBY,
Colonel, G. S. C.
Secretary of the Air Staff.**

Incl. 2/6

Stamp: Dispatched
7 Dec 1943
AGS

Handwritten: File
12/11/43

SECRET RECLASSIFIED

Handwritten: OAR 471.6 (351)

SECRET

DECLASSIFIED

DECLASSIFIED
GPO PLS

EX-100
10. DATE 2/11/77

16 NOV 1943

SUBJECT: Expediting Components for Guided Missiles Program.

TO: Assistant Chief of Air Staff
Material, Maintenance and Distribution
Headquarters, Army Air Forces
Washington, D. C.

1. In order to meet urgent current needs, the Assistant Chief of Air Staff, Material, Maintenance and Distribution is authorized and directed to pursue the active coordination and expediting of all guided missile development and research projects established under the broad directive of the Air Communications Officer and to press them to the earliest possible availability for Service use.

2. In the execution of this directive it is anticipated that certain articles must be procured to meet immediate requirements although better articles are in an advanced stage of development. The procurement of any type or model of controlled missile is authorized immediately upon its approval by the Air Communications Officer even though it is expected to be superseded by an improved type or model within a short time thereafter.

3. It will be the responsibility of the Assistant Chief of Air Staff, Material, Maintenance and Distribution to keep the Air Communications Officer fully advised as to the status of research, development, and procurement of all controlled missile projects established under this directive.

By command of General ARNOLD:

Signed
Barney M. Giles,
Major General, U. S. Army,
Chief of the Air Staff.

Dispatched
16 NOV 1943
AAG

FHR/lb
AFMA-2

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DECLASSIFIED

File
encl 11/43
As 471.6 (348)

COPY FOR OFFICE OF COMMANDING GENERAL, ARMY AIR FORCES

~~CONFIDENTIAL~~
DECLASSIFIED

DECLASSIFIED
DDO RUS

8 Jan. & 20 June 1974
By SP6 M.C. Date 2/1/77

TAS

Manual Releases for External Bomb Racks.

- (1) Deputy Chief of Air Staff (Gen. Perrin) (For Approval)
- (2) Asst. C. AS, M (Material Division) IN TURN
- Asst. C. AS, OCP (Requirements Division)

3 Nov 1943

1

HAB:br71406

1. Reports from combat theaters indicate excessive malfunctioning of electrically operated external bomb racks.

2. It has been proven that more accurate results are obtained when electrical release is used, yet it is obvious that electrical release is not wanted if it cannot be relied upon to function properly. Serious consequences in combat have resulted from inability to release belly tanks or bombs. The release of one wing tank without release of the other is particularly bad.

3. Therefore, every effort should be made to perfect the electrical release for 100% functioning.

4. It is requested all future installations of external bomb racks for Fighter type aircraft incorporate a manual release. The manual release may be in addition to the electrical release if weight and space considerations permit. In event both type releases cannot be incorporated, the manual release will be utilized.

J.A.B.

SEPAD _____
AFFER _____

MOFFIE F. NELSON,
Colonel, Air Corps.

TO: AC/AS, M&D, Material Division

DATE 12 Nov 43

FROM: Deputy Chief of the Air Staff

COMMENT NO. 2
JRB/ec/73691

Approved provided installation of manual releases does not delay delivery of aircraft.

H. A. CRAIG
Brigadier General, U. S. A.
Acting Chief of Air Staff

Dispatched
13 Nov 1943
AM

~~CONFIDENTIAL~~

File
2-11-43
avi 164716 3-1

AFMAG:HDG:JB 5792

DECLASSIFIED
DOO WFO
1 Dec. & 20 June 1974
w/ B/CC LG. Date 3/16/77

~~SECRET~~
DECLASSIFIED OF THE
GENERAL OF THE ARMY AIR FORCES
DATE: INITIALS

AAF 471.6

17 NOV 1943

SUBJECT: Objectives for Glide Bombs

TO: Commanding General,
Eighth Air Force,
London, England.

The enclosed study from the Army Air Forces Board dated 16 October 1943, with exhibits 1 - 11, inclusive, are forwarded to you for your information and comment.

For the Commanding General, Army Air Forces:

Dispatched
7 NOV 1943
AAG

Signed

James H. Doolittle,
Major General, USAF, Army,
Chief of the Air Staff.

1 Incl. - Cy study 62d
16 Oct 43 w/incls

AAF 471.6 344

AFMAG

DECLASSIFIED

file
11/1/43
Air 48 471.6 344

DECLASSIFIED

DECLASSIFIED
DDO 105

3/14/97
3/14/97
3/14/97

Douglas Guided Missile

Chief of Air Staff

Air Communications Officer

28 Oct 43

1
Gen. McClelland/mwv 6324

1. The Douglas Company is developing a guided missile on a NDRC contract. This missile is now in the form of a one thousand pound armed firebomb. It offers great promise but development is slow due to lack of sufficient interest on the part of the Services.

2. The missile can take any form of guide control and also can be fitted with certain target seeking devices such as infra-red and radar. It has been given the name of "Roc".

3. I have learned from NDRC personnel that unless some evidence of interest is furnished the Douglas Company, that rapid progress toward completion of development cannot be expected. Knowing General Arnold's interest in the general subject of guided missiles and his desire that increased emphasis be placed on their development and production, I have prepared the attached letter for his signature to Mr. Douglas. It is requested that it be sent by air mail as NDRC people are now at the Douglas Plant endeavoring to speed up development. It will be useful if this letter arrives while they are still there.

H. M. McCLELLAND
Brig Gen, USA

Incl
let for Gen. A's sign.

471
ehs

File
at 11/1/43
As 26 472.6 302

DECLASSIFIED

DECLASSIFIED

31 OCT 1943

Mr. Donald W. Douglas, President
Douglas Aircraft Company, Incorporated
Santa Monica, California

Dear Doug:

There is a development being carried out by Mr. Frank R. Colburn of your Company which is of very great interest to me. I do not wish to discuss the details in this letter, but I do want to ask you to give it all the support necessary to insure its completion at the earliest practicable date.

If this thing "pans out", I think we will have something that will be very useful indeed.

Yours sincerely,

WALTER BRADY,
General, U. S. Army,
Commanding General, Army Air Forces.

WAB 471.6
345

Dispatched
31 OCT 1943
AMG

WAB 471.6

DECLASSIFIED

Written DAO
JBG: PAC
Rewritten
CAS

DECLASSIFIED
DOO 173
BY: 6 20 1994
3/16/97

4 NOV 1943

Air Marshal W. L. Welsh,
British Joint Staff Mission,
Office of the Combined Chiefs of Staff,
Washington, D. C.

My dear Air Marshal:

Reference your letter of October 25th, I am pleased to note that your complete "Tallboy" project is already underway and no further action appears necessary from this headquarters.

It might be of interest to you to know that the production of 21,000 of your British type 4800-lb. bombs from American production has been arranged.

With best personal wishes, I am

Sincerely yours,

Gen. H. H. Arnold

H. H. ARNOLD,
General, U. S. Army,
Commanding General, Army Air Forces.

DAO 4716
(341)

Unrecorded
4 Nov 1943
AMJ

File
center 3

DECLASSIFIED

AO 471.6 (341)

COPY

DECLASSIFIED

DECLASSIFIED
000 803

Rev. 6 28 June 1974

AC: Date 7/11/77

BRITISH JOINT STAFF MISSION
OFFICES OF THE COMBINED CHIEFS OF STAFF
WASHINGTON

Air Staff

25th October, 1943.

Personal.

My dear General

You will remember MacNeece Foster spoke to you about the urgent requirement for 100 "Tallboy" medium bombs and you were good enough to say that you would help us if we had any difficulty in securing a sufficiently high priority.

I have just been informed that the requirement has been increased to 125 and the same high priority is requested. I find that the increased order has been placed by the British Air Commission and the necessary high priority accorded to it. There is therefore no need for you to take any further action, but I thought you should know of the increased requirement,

Yours sincerely,

/s/ W. L. Welsh,

W. L. WELSH,
Air Marshal.

General H.H. Arnold,
Commanding General,
U.S. Army Air Forces

DECLASSIFIED
SECRET

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000 hrs

By *[Signature]* & 20 June 1974
Date *3/11/77*

Bomb and Fuse Development Conference Summary

AC/AS, Materiel, Maintenance & Distribution
Attn: Air Ordnance Officer
Secretary of the Air Staff

19 Oct 1943

LVB/1a/71509 1

1. General Ferrin requests that the attached paper on the Bomb and Fuse Development Conference be briefed. He is particularly interested in the current availability and distribution of the various items.
2. He is not interested in any information on this summary on proximity fuses, as that will be contained in a special weekly report requested by him.
3. As an example of how this should be set up, he has briefed the first two items which are attached for your information.

- 2 Incls:
1. Summary
 2. Brief

MILLARD A. LIBBY
Colonel, G. S. C.
Secretary, Air Staff

47716

TO: Secretary of the Air Staff
FROM: AC/AS, M&AD, Air Ordnance Office

COMMENT NO. 2
LB-tm 72343

339

Attached hereto are the briefs on the Bomb and Fuse Development Conference, showing the availability and distribution of the various items, as requested by General Ferrin.

- 3 Incls
Incl 1 - 2 n/a
Incl 3 (added)
Brief

R. G. COUPLAND
Brigadier General, U. S. A.

*File
E-31 January*

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DECLASSIFIED
DDG 103
DECLASSIFIED

8 Jan. & 20 June 1974
By: *ES/C* JG: *ES* Date: *2/15/77*

Bomb and Fuse Development Conference Summary

AC/AS, Material, Maintenance & Distribution
Attn: Air Ordnance Officer
Secretary of the Air Staff

19 Oct 1943

LVR/ia/71589

1. General Ferrin requests that the attached paper on the Bomb and Fuse Development Conference be briefed. He is particularly interested in the current availability and distribution of the various items.
2. He is not interested in any information on this summary on proximity fuses, as that will be contained in a special weekly report requested by him.
3. As an example of how this should be set up, he has briefed the first two items which are attached for your information.

- 2 Incls:
1. Summary
 2. Brief

MILLARD A. LIBBY
Colonel, G. S. C.
Secretary, Air Staff

Dispatched
19 OCT 1943
AMB

4771.6
(339)

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File
ca 19 Oct 43

4771.6 (339)

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DDO #13
1 Dec. & 30 June 1974
J.C. Don. 3/1/77

HEADQUARTERS ARMY AIR FORCES

ROUTING AND RECORD SHEET

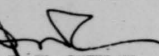
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TALLY NO.	
FILE NO.	

SUBJECT: Project Officer for Controlled Missiles

TO: Chief of Air Staff THRU: Air Communications Division DATE 14 Oct. 1943
and Deputy Chief of Air Staff, General Hall, in turn
FROM: Asst. Chief of Air Staff, M. M. & D. COMMENT NO. 1
RCR/mm/6716

1. Major F. H. Richardson, Development Engineering Branch, Materiel Division, is designated as the project officer for controlled missiles. This action is taken in compliance with instructions from Brigadier General W. E. Hall that one individual in the office of the Assistant Chief of Air Staff, M. M. & D., be named as the project officer for controlled missiles and that his name be reported to the Chief of the Air Staff.



E. W. CHIDLAW,
Brig. General, U. S. A.,
Chief, Materiel Division.

TO: Deputy Chief of Air Staff, General Hall
FROM: Air Communications Officer

Date 15 Oct 43

Comment No. 2
JEM:smw 4335

Noted.

for J. E. McClelland
for H. M. McCLELLAND
Brig Gen, USA

*File
mmh*

10/28/43

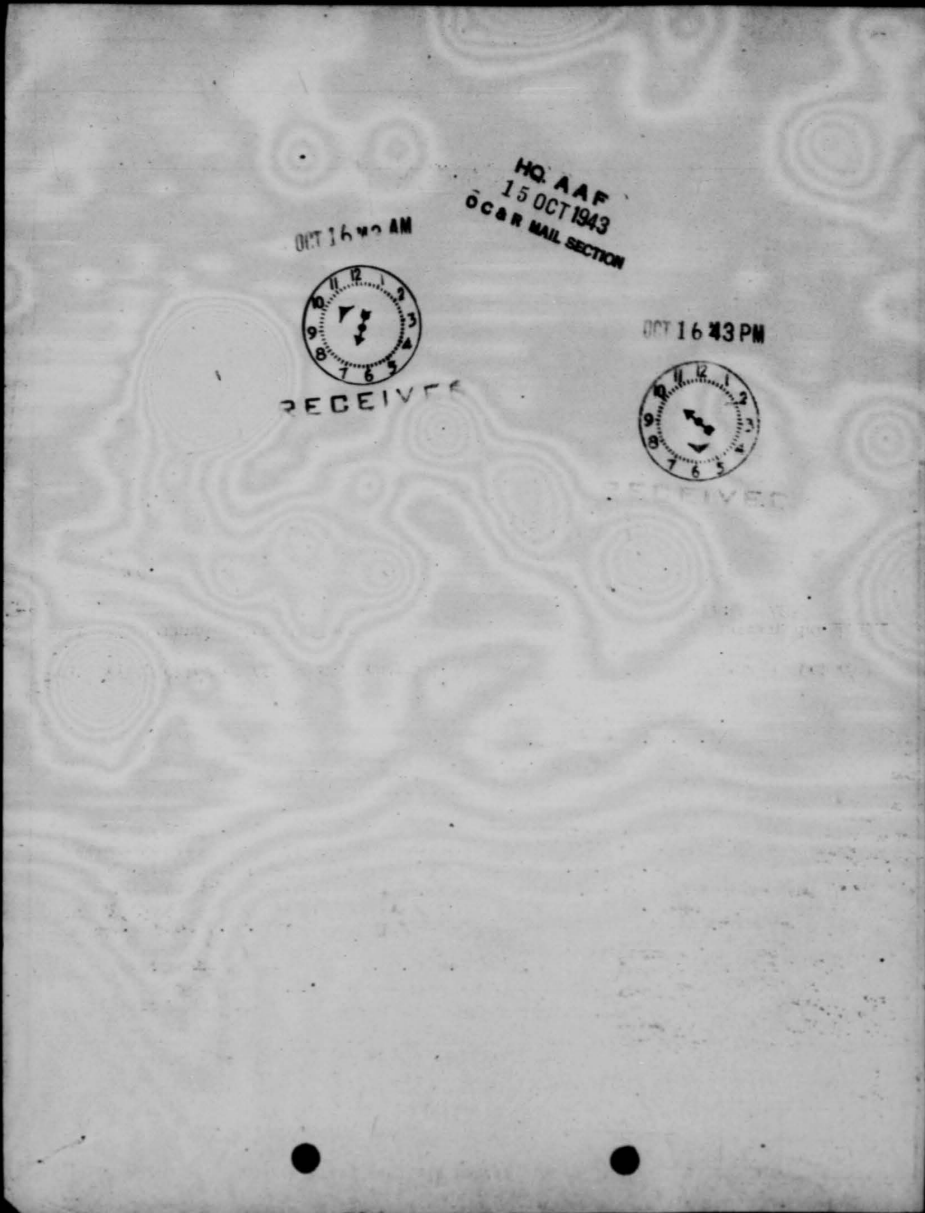
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3-1109 A.F.



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19 Jan. & 20 June 1973
By: *Edg* J.C. Date: *2/14/77*

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TO: Deputy Chief of Air Staff, General Hall
FROM: Air Communications Officer

Date 15 Oct 43

Comment No. 2
JHM:mvv 4335

Noted.

H. M. McCLELLAND
Brig Gen, USA

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airAS 471.6 (338)

DECLASSIFIED

Major Fix/slj/5692
Room 4E 1086
wrtn 18 Oct 43

DECLASSIFIED
DATE 3/4/77
BY SP-6 JAC/ML

*Fixed
Bmg*

AFMDB

MEMORANDUM FOR GENERAL GILAS:

Subject: Large Fragmentation Bombs

1. With reference to General Arnold's inquiry about General Kenney's preference for the 1000 lb. wire-wrapped bomb to the 100 lb. and 300 lb. sizes, the following information is submitted: General Kenney has been striving for an air-burst fuse that will affect by both blast and fragments airplanes and other targets that are well protected by revetments. To get the maximum effect from the bomb, a height of 25-50 feet above the ground is desirable. However, as the special fuses that will give such functioning are not available, an interim measure was developed in Australia. This is a combination of the regular demolition bomb nose fuse and the mechanical time fuse used in bombardment flares. Because of the tolerances inherent in the design of such a fuse, and the uncertainties of determining the exact height of the airplane above the target, actual bursts are obtained anywhere from ground impact up to 600 or 700 feet. The larger bomb size, 1000 lb., was selected so that some effectiveness can be obtained from the higher bursts, and to insure sufficient blast effect with proper bursts to break spars in airplane structures, damage instruments, etc. Wire wrapping of these bombs is done, also, to obtain more fragments from the rod and wire wrapping, and to increase the size of the fragments of the case.

2. The large fragmentation bomb which has just been developed will be a valuable addition to attack such targets, because of the large fragments that are dispersed at high velocities. General Kenney's comment on the new bombs, as contained in his cable A1666, dated 4 September are, "There is a requirement for large fragmentation bombs, and the 80 and 260 lb. types should answer this requirement and decrease the need for wire and rod wrapping of bombs in this theater."

H. A. CRAIG
Brigadier General, U. S. Army
Asst. Chief of Air Staff
Operations, Commitments and Requirements

*Cabled Kenney
to ask what he
wanted & why
Then explained - FD X -
does more for blast than
wire wrapping*

*Kenney has some in his
theater*

DECLASSIFIED

DA 471.6 (337) B

*File
10/12/76*

DA 471.6 (337) B

~~SECRET~~

DECLASSIFIED
000 hrs.
& 30 June 1974
By *SP/IC* LC Date *3/10/77*

0085 4771.6 (336)B

AAF 471.6

3d Ind.

(AFMAG)

HEADQUARTERS, Army Air Forces, Washington 25, D.C. 13 December 1943

TO: Commanding General, Army Air Forces Materiel Command, Wright Field, Ohio.

Secret classification authority has been affixed to the attached letter and it is returned herewith.

By command of General ARNOLD:

Signed

H. H. HEWITT,
Lt. Col., A. G. B.,
Asst. Air Adjutant General

*File 4771.6
01/2/1/1/23*

OFFICE SYMBOL	<i>4771.6</i>	1	2	3	4	5	6	7	8	9	10
SIGNATURE OF RESPONSIBLE OFFICER											
INTERNAL OFFICE COORDINATION											

DECLASSIFIED

4771.6 (336)B

DECLASSIFIED

Request for Authority for Secret Classification of Correspondence.

DECLASSIFIED
DDO Int.

31 Dec 4 22 June 1974
By: JBC LC Dec 2/4/77

2nd Ind.

FAB:mal:53

Hq., Materiel Command, Wright Field, Dayton, Ohio.

6 DEC 1943

To: Commanding General, Army Air Force, Washington 25, D. C., Att; Assistant Air Adjutant General.

1. In accordance with request contained in first indorsement to basic communication, the following letter is returned for the purpose of affixing the authority for its secret classification:

a. Secret memorandum to the Materiel Command, from Brigadier General H. A. Craig, Acting Deputy Chief of Air Staff, Washington, D. C., dated 16 October 1943, subject: "Guided Missiles and the Counter Measures Therefor."

2. After the authority for classification has been added to the inclosed letter, it is requested that it be returned to the Materiel Command.

For the Commanding General:

F. O. CARROLL,
Brig. General, U.S.A.,
Chief, Engineering Division.

1 Incl.
Incl. 1 - Ltr. referred to above.

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~~DECLASSIFIED~~

AFDAS
HAG/gwd
Ext. 72062

DECLASSIFIED
DOO US.

8 Jan. & 20 June 1974
By FLC LC, Date 3/11/77

16 October 1945.

MEMORANDUM FOR THE ASSISTANT CHIEF OF AIR STAFF,
MATERIEL, MAINTENANCE AND DISTRIBUTION:

Subject: Guided Missiles and the Counter
Measures Therefor.

Brigadier General H. M. McClelland, the Air Commu-
nications Officer, has been designated as the responsible officer
in this Headquarters for monitoring the project for the
development of guided missiles and the counter measures
therefor.

Signed

Dispatched
17 Oct 1945
AAG

H. A. CRAIG,
Brigadier General, U.S.A.,
Acting Deputy Chief of Air Staff.

Some memorandum to:
CG, Proving Ground Command,
CG, Materiel Command,
CG, AAFSAT,
Gen. Hubank, AAF Board,
AG/AS, O.C. & H.

Return to Annals
R. 3E-1049

File
in 13 Oct 45

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~~DECLASSIFIED~~

Copy for Miss Loggans
Annals 471.6 (336) D

471.6
336 B

DECLASSIFIED
DOD 105
1 Jul 87

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DECLASSIFIED

AFMAG:
WDG/hbr - 2246

AAF 471.6

1st Ind.

(AFMAG)

WD, Headquarters, Army Air Forces, Washington, 25, D. C., 25 October 1943.
TO: Commanding General, AAF Materiel Command, Wright Field, Dayton, Ohio.

The communication referred to should be returned to this headquarters for the purpose of affixing the authority for its secret classification.

By command of General ARNOLD:

Signed

H. H. HEWITT,
Lt. Colonel, A.G.D.,
Assistant Air Adjutant General.

471.6 (336)

Dispatched
25 OCT 1943
AM

File
cc 10/25/43

~~SECRET~~

918 471.6 (336)

DECLASSIFIED

DECLASSIFIED
DDO 612

By B/CC 3/11/77

Computation of Large Fragmentation Bomb Requirements.

Deputy Chief of Air Staff, General Perrin.

9, Oct. 1943

Air Ordnance Officer.

1
HEP/mhb/T23h2

1. Reference telephone conversation on 9, October, 1943, between Gen. Perrin and Colonel Porter, (AFWAC), the following data on the computation of large fragmentation bombs is furnished:

a. Basis used (submitted by AC/AS, CGAR):

For 265-lb. Frag. Bomb.

Twelve (12) months' operational requirements only (no stockage) for planes scheduled to be in active theaters during the twelve (12) months of 1944. Five percent (5%) of total bombing missions to employ this type carried at 100-lb. stations. Present "Tab B" mission rates were used except for the 8th and 12th Air Forces, for which the new basis for supply rates, already approved by AC/AS, CGAR, were used.

For 80-lb. Frag. Bomb.

Same as for 265-lb. fragmentation bomb except they were considered as six bombs in a 500-lb. cluster to be carried from 500-lb. bomb stations, and on only two percent (2%) of total bombing missions instead of five percent (5%).

b. On the foregoing basis, the following requirements were obtained:

Air Force	265-lb.	80-lb. in cluster for 500-lb. station
5th	52,022	10,777
7th	6,844	1,534
8th	168,093	32,365
9th	27,708	4,097
10th	8,602	1,548
11th	4,360	87
12th	143,214	21,874
13th	18,665	3,494
14th	6,436	1,469
TOTAL	435,944 (bombs)	78,005 (clusters)

2. These computations were made at the request of AC/AS, CGAR as an aid in determination of the actual requirement. AC/AS, CGAR has not yet been furnished the

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Computation of Large Fragmentation Bomb Requirements.

Deputy Chief of Air Staff, General Perrin
Air Ordnance Officer.

9, Oct. 1943

1
HCP/ahh/723h2
(continued)

results of this computation.

3. When concurrence of the AS/AS, OC&R is obtained, these requirements will be entered in the Army Supply Program.

H. C. PORTER,
Colonel, Ord. Dept.,
Executive, AFMAO.

TO: Asst. Chief of Air Staff, OC&R.

Date: 14 Oct 1943

FROM: Chief of the Air Staff.

Comment No. 2

1. General Arnold wants to know why General Kenney preferred to use the 1,000-lb. wire-wrapped bomb rather than the 100-lb. or 300-lb. bomb. It is noted that you are buying a large quantity of the 265-lb. fragmentation bomb. Check this at once with General Kenney to determine whether or not you are buying the proper sizes of bombs.

471.6
334

BARNEY H. GILES,
Major General, U. S. A.
Chief of the Air Staff.

Dispatched
15 OCT 1943
AM3

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Att no 471.6 (334)

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Class. & Ext. Date 3/11/77
By TJK LCI Date

Marker Bomb for Bombardment Objectives

12 Oct 43

AG/AS, MMRD
Air Ordnance Officer
Deputy Chief of Air Staff

1
ESP/ew/6371

1. This is fine.
2. Let's get something out without a year's test.

Dispatched
13 Oct 1943
AAG

EDWIN S. PERRIN,
Brigadier General, U.S.A.,
Deputy Chief of Air Staff.

1 incl withdrawn

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10/14/43

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9 JAN 80 BY SP4 JTC/ML
100 3/4/87

Guided Missiles and the Counter Measures Therefor.

Brig. General H. M. McClelland, Air Communications Officer
Deputy Chief of Air Staff.

15 Oct. 1943

HAC/gmd/72062

1. Reference is made to EBR, dated 29 September, subject: "Controlled Missiles," in which the Air Communications Division is designated as the responsible agency for monitoring the project for the development of guided missiles and counter measures.

2. You are designated as the responsible individual charged with the development of guided missiles and the counter measures therefor.

3. Steps have been taken to provide you with additional qualified personnel to assist you in expediting the development of this project.

4. As the responsible officer, charged with the development of this project, you will coordinate the various agencies that are now engaged in the development or production of parts for the complete missiles. You will issue appropriate directives to obtain coordinated development, procurement and delivery of the various parts for the completed missiles.

ODD 471.6 (336)

H. A. CRAIG,
Brigadier General, U.S.A.,
Acting Deputy Chief of Air Staff

Incls. n/c

Dispatched
17 Oct 1943
AAG

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CONFIDENTIAL

Information Concerning the "Luminous Discs"

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DOO INT.
SEC. 1.4 & 1.5 June 1974
LC Date 3/11/77

471.6

TO: Air Chemical Officer
FROM: Deputy Chief of Air Staff

DATE 25 Oct 43
COMMENT NO. 3
ESP/ava/6371

332

Noted by General Arnold.
Request in paragraph 5, comment #2 is approved.

Incl n/s

Dispatched
28 OCT 1943
AM

EDWIN S. PERKIN,
Brigadier General, U.S.A.,
Deputy Chief of Air Staff.

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GK
10/27/43

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CONFIDENTIAL

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CONFIDENTIAL
Incendiary Bombs

DECLASSIFIED
DDO 100

3 Jan. 8, 20 June 1974
By *SP-6 J.C. Doss* Jul 77

TO: General Ferrin
FROM: Asst. Chief of Air Staff, OCAR

11 October 1948

Command No. 2
LST/1h/3487

Forwarded.

1 Incl:
n/s

H. A. CRAIG
Brig. Gen., U.S.A.

47716

331

DECLASSIFIED

*File
in 31 Jan 49*

Air Ord 4716 331

DECLASSIFIED

DECLASSIFIED

DDO ltr.
30 Jan. & 20 June 1974
By: *SPC* LC Date: *2/11/77*

Guided Missiles and the Countermeasures Thereof

Air Communications Division

10-7-63

Deputy Chief of the Air Staff

WHH:JT 5296 ⁴

1. Reference is made to Comment No. 1, RMR from this office.
9-29-63.

2. General Gilen has no objection to the transfer of responsibility for controlled missiles from the Air Communications Division to the office of AG/AS, HMB. He directs, however, that some one individual in that office be named as the project officer and that the name of that officer be reported to him hereon.

Incl.
n/c

WILLIAM E. HALL,
Brigadier General, U. S. Army,
Deputy Chief of the Air Staff.

cc - HMB, OCA, ENG

Dispatched
7 OCT 1963
AMG

① 471.6 (359) C

*File
gsk
10/11/63*

DECLASSIFIED

Air as 1710 (329) C

DECLASSIFIED

TO: Chief of the Air Staff
THRU Asst C/AS, M M & D
FROM: Air Communications Officer

DATE 1 Oct 1943

COMMENT NO. 3
HEM:jms - 6324

1. Attention is invited to preceding Comments #1 and #2, and in particular to the last sentence of Paragraph 1, Comment #2.

2. The Air Communications Officer has received no instructions contrary to the proposal contained in Paragraph 2, Comment #1, which was concurred in by the Assistant Chief of Air Staff, Operations, Commitments and Requirements. It is desired to point out that the Air Communications Officer does not have personnel qualified or in sufficient numbers to be responsible for other than the electronic control projects and countermeasures therefor using electronic means. Therefore, it is recommended that the proposal contained in Paragraph 2 of Comment #1 be approved.

H. M. McCLELLAND
Brig. General, U. S. A.
Air Communications Officer

Incl: n/c

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Controlled Missiles

Deputy Chief of Air Staff
Room 3E 983

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AFMA-5A
13 Oct. 1943
1

3/4/77
3/4/77
3/4/77

Office, Assistant Chief of Air Staff, MMAD

JEA/mpa/74126

1. With reference to Routing and Record Sheet to Assistant Chief of Air Staff, MMAD, dated 30 September 1943, subject as above (MEM:jcs:5246) and Comment No. 2 thereto from this office dated 5 October 1943, the Materiel Command advises that the development and procurement of counter measures to enemy controlled missiles such as radio controlled glider bombs through the use of electronics are being pursued at the Aircraft Radio Laboratory at Wright Field which is under the jurisdiction of the Signal Corps.

2. The Materiel Command urgently requests that in order to expedite this program, a directive similar to the one given them be sent from the Chief, Signal Officer, Washington, D. C., to the Aircraft Radio Laboratory, Wright Field.

471.6
359 B

W. F. VOLANDT
Colonel, Air Corps
Chief, Procurement Branch

TO: AC/AS, Materiel, Maintenance & Distribution.

DATE 18 October 43

FROM: Chief of the Air Staff

COMMENT NO. 2
MAL/mdg/5265

In view of the foregoing, it is directed that an appropriate request for this action be drafted in your division and returned to this office for dispatch to the Chief Signal Officer over signature of a Deputy Chief of Air Staff.

Dispatched
18 OCT 1943
AAG

MILLARD A. LIBBY,
Colonel, G. S. C.,
Secretary of the Air Staff.

SECRET
By Authority of
The Commanding General
Army Air Forces
13 Oct 43 W.F.V.
File
18 Oct 43

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SECRET

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DECLASSIFIED
GPO 1975

8 Dec 8 30 1974
By: *3216* LC, Date: *3/1/77*

Controlled Missiles

Air Communications Division

Deputy Chief of the Air Staff

9-29-43

WHH:JT 5246 ¹

1. General Giles directs that your division assume complete responsibility for all phases of controlled missiles, such as radio controlled glide bombs.
2. This responsibility includes requirements, development, experiment and procurement.

Dispatched
1 OCT 1943
AK3

WILLIAM E. HALL,
Brigadier General, U. S. Army,
Deputy Chief of the Air Staff.

cc - CGR, HND, DMC

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DECLASSIFIED
DDO RFS

1 Jan. & 22 June 1981
By: *Blace* J.C. Dunham *Jul 67*

471.6

9-23-43 E. H.

Bombs, Incendiary, Shipment to Eighth Air Force.

Thru: Deputy Chief of Air Staff, Brig. Gen. E. S. Ferrin
AG/AS, H.H.A.S. Attn: Col. J. W. Seeman
AG/AS, H.H.A.S., Air Chemical Officer

23 Sep 43

7 1
AFDCB-5/JLR/mw/T275

It is requested that the attached copy of letter in connection with the shipment of incendiary bombs to the United Kingdom be noted and returned to this office.

JOHN L. BRADON, JR.,
Major, C.W.S.
Supply Liaison Officer
Office, Air Chemical Officer

1 Inal:
by ltr. to CG-CMS
dt4 23 Sep 43.

TO: Air Chemical Officer, AG/AS, H.H.A.S.
FROM: Chief of the Air Staff.

DATE 29 September 43

COMMENT NO. 2
MAL/mw/5265

Noted and returned as requested.

Inal. n/c

MILLARD A. LIBBY,
Colonel, G. S. C.,
Secretary of the Air Staff.

Dispersed
23 SEP 1945
AMG

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(327)

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AG/AS 471.6 (327)

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DECLASSIFIED
DDO #12
& 21 April 1994
BY: *ZK* 24/6/97

471.6 (325)

TO: AC/AS, OCMR
FROM: Deputy Chief of Air Staff

Dispatched
24 SEP 1943
283

DATE 23 Sep 43
COMMENT NO. 1
EW/ova/637A

Noted by General Miles.

DECLASSIFIED
~~SECRET~~

EDWIN S. PERKIN,
Brigadier General, U.S.A.
Deputy Chief of Air Staff

File 20 Sep 43
air 471.6 (325)

DECLASSIFIED
GPO 875

Jan & 20 June 1974
JEC LG, Dept 2/14/77

[Handwritten signature]

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~~CONFIDENTIAL~~

DEMONSTRATION — CONTROLLED MISSILES
Maroc Dry Lake
Sunday, October 10, 1943

- 9:00 A.M. to 9:30 A.M. - Release of two high angle bombs "Ason" - controlled in azimuth only. Release from 15,000 feet or higher. Target: A circle with cross-hairs outlined on the ground.
- 9:40 A.M. to 10:15 A.M. - One (1) PQ-12 airplane with live 500-lb. bomb, remotely controlled. 2,000 to 3,000 ft. altitude of approach, with final run made at low altitude. Mother ship three to four miles away. Target: Fixed ground wood target.
- 10:30 A.M. to 11:10 A.M. - One (1) PQ-12 airplane with live 500-lb. bomb, flown in formation with a PQ-8 target airplane, both airplanes being remotely controlled and mothered by another airplane two to three miles back. On signal the bombs in the PQ-12 will be remotely detonated for purposes of seeing its affect on the PQ-8 airplane. Altitude - 1000 feet or lower.
- 11:30 A.M. to 12:00 P.M. - Release of two high angle bombs "Ason" - controlled in azimuth only. Release from 15,000 feet or higher. Target: A circle with cross-hairs outlined on the ground.
- 12:00 P.M. to 1:30 P.M. - Change location and lunch.
- 1:30 P.M. to 2:00 P.M. - Release of two (2) radio controlled glide bombs, using smoke for means of sighting. Bomb to be a 2,000-lb. bomb. Release from 15,000 ft. or higher - Mother ship to be four to five miles away; target to be built up wooden target.

471.6
323
B

Release of two (2) pre-set glide bombs (no control), 2000-lb. bomb size will be made if desired. However, approximately two hours will be required for the airplane to return to base and reload and again reach altitude for release.

REVIEW: - Discussion for the purpose of reviewing results and answering questions, also for consolidation of ideas as to future programs.

CONFIDENTIAL
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8/10/51/43*

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mar*

air as 471.6 323 B

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DECLASSIFIED
E.O. 13526
DATE 6-2-1998 BY *SP/CS* 3/1/97

Glide Bombing Training

Deputy Chief of Air Staff (Attention: General Vandenberg)

14 Sept. 1943

Asst C/AS, Training

1
AFACT-4-PCA/mld/71578

1. Confirming discussion in your office on 11 September 1943, with Colonel Ashworth of this office and Lt. Colonel Gibson of AC/AS, OCMR, Requirements Division, Bombardment Branch, it was decided to send twenty (20) replacement crews with 20 final type B-17's on 15 September and 20 replacement crews with 20 final type B-17's on 18 September from the 21st Processing Wing to AFSAT for glide bombing training.

2. Eight (8) of the crews and aircraft were available immediately. The remaining 32 aircraft were borrowed from the allocation to the 401st Bombardment Group and are to be replaced by the next 32 aircraft for replacement crews.

3. AFSAT will be responsible for the glide bombing training per a directive prepared by AFRDB (Colonel Gibson) for General Giles' signature.

ROBERT W. HARPER
Brigadier General, U. S. A.
Assistant Chief of Air Staff,
Training

AFRDB _____

TO: AC/AS, Training.

DATE 16 Sep 1943

FROM: Secretary of Air Staff

COMMENT NO. 2
WRB/ia/71589

Comment No. 1 has been noted by General Vandenberg.

Dispatched
17 SEP 1943
-AAG

WILLIAM R. BURT
Lt. Colonel, Air Corp
Asst Secretary, Air Staff

Handwritten: 471.6 (321) 0

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Handwritten: file 471.6 (321) 0

ADDRESS REPLY TO
HEADQUARTERS OF THE ARMY AIR FORCES
WAR DEPARTMENT
WASHINGTON, D. C.

~~SECRET~~
DECLASSIFIED

WAR DEPARTMENT
HEADQUARTERS OF THE ARMY AIR FORCES
WASHINGTON

11 September 1943

*Gen Arnold
note
To*

DECLASSIFIED
DATE 3/16/77
BY SP-3/CC

*Noted by
H.H.A.
Van
Gale
mar*

MEMORANDUM FOR General Giles
Subject: Glide Bomb Program.

1. Pursuant to General Arnold's directive to use glide bombs in the European Theater, the following action has been taken:
 - a. AAFSAT and Eglin Field were both contacted the morning of 10 September and acquainted with the fact that forty bombardment crews must be trained and enroute to UK prior to 1 October.
 - b. General Peabody at AAFSAT was acquainted with the requirements of an eighteen-planes test program to determine the tactical employment and necessary formations to successfully drop glide bombs.
 - c. A directive to AAFSAT was prepared 10 September after a series of conferences with General Vandenberg and Training, and as based upon Training's recommendations, the flow of replacement crews with final type airplanes to AAFSAT was set up.
 - d. MMED was contacted to provide 75 glide bomb kits and 300 glide bombs for AAFSAT by Sunday night, 12 September, if possible. All action possible has been taken by MMED, and they believe at this date that they can meet that early delivery date. They have also agreed to send several personnel familiar with the installation of the glide bomb kits to AAFSAT to assist in the modification of the forty final type airplanes that are to report to AAFSAT to receive the training.
 - e. General Gardner at Eglin Field was also asked to render all possible assistance as to both operational and maintenance personnel.
2. It is believed at this time that forty trained crews can be trained and depart this country prior to 1 October. Although difficulties may arise, it is believed that this date can be met.

air as 471.6 (321) a

H. Craig
H. A. CRAIG,
Brigadier General, U. S. A.,
Assistant Chief of Air Staff,
Operations, Commitments & Requirements.

*File
air 471.6
218 sept 43*



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SECRET

348 Gen Vandenberg

air as 471.6 (321) a

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DDO MS

31 June 1975
J.C. Deane 3/16/77

Glide Bomb Training Program.

AP 6-471.6 (321) a

To: AC/AS, Operations, Commitments and Requirements,
Attention: Requirements Division.
From: Deputy Chief of Air Staff.

Date: 11 Sept. '43

Comment No. 2
HV/gnd/75022

Directive which was attached has been signed this date, and dispatched.

H. S. VANDENBERG,
Brigadier General, U.S.A.,
Deputy Chief of Air Staff.

Dispatched
11 Sept 1943
HMS

File
271-6 (321) a
12 Sept 43

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Copy for Miss Logans
Aug 26 1943 271-6 (321) a

DECLASSIFIED

DECLASSIFIED
000 471
8/10 & 20 June 1971
By: IS/c
Date: 2/4/77

Incendiary Bombs.

AC/AS, Material, Maintenance and Distribution.

Deputy Chief of the Air Staff.

1 September 1943

3

RSP/ams/6571

1. It is felt that this bomb shows enough promise to proceed with procurement of sufficient bombs to meet all theater requirements.
2. Please advise this office of your action.

MIRWIN S. PERRIN,
Brigadier General, U.S.A.,
Deputy Chief of Air Staff.

Incl: n/s.

Dispatched
1 SEP 1943
AMS

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9/2/43

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DECLASSIFIED

DECLASSIFIED
DOO #1
19 Jan 62
24/27

To: Deputy Chief of Air Staff

Date: 28 Aug 43

From: AC/AS, MM&D, Air Chemical Officer

Comment No. 2
FM/bjl/5293

1. 500 lb. incendiary bombs are not immediately available for supply since they are still under development. Every effort is being made to complete the development at the earliest possible date. The optimum fuse and burster arrangement has not yet been determined. Field tests have not been completed as of this date.

2. However, on August 26th representatives from the Office of Air Chemical Officer and of the Office of the Asst. Chief Air Staff, OCAS, (Bombardment), witnessed tests, the results of which appeared to justify a conclusion that the bomb in its present form will be satisfactory to use in operations against the enemy. Further development may indicate improvements but the bomb is so good as it now is and the desirability of it being furnished to theaters is so great that the delay inherent in arriving at perfection should not be accepted. Therefore, action is being taken to secure a limited procurement of 25,000 bombs some of which will be used by the Chief, Chemical Warfare Service to complete the development - the remainder to be made available to this office for supply to active theaters (first priority Eighth Air Force). This action is being pressed. See copy of communication to the Army Service Forces attached hereto.

3. Until the development work is completed and standardization of the bomb effected, no accurate forecast as to when this bomb will be available in quantity can be made. It is not expected that large scale procurement can possibly be obtained before the end of 1943.

1 Incl: IAW this office to ASF

DECLASSIFIED

E. MONTGOMERY
Colonel, CAS
Air Chemical Officer

See 45871.6 (215)

RECORDED

DECLASSIFIED
GDS 811

DATE 23 March 1981
BY SP-10/CC AC Date 3/11/77

Conference re Development of Bombs and Fuses

AC/AS, M&M

Attention: General Echols and Col. Porter

Deputy Chief of Air Staff

27 August 1943

1
ESP/eva/6371

1. At a conference this morning, General Arnold expressed dissatisfaction with the speed of development of special type bombs and fuses for use against the Japanese in "foxhole" warfare. He is also dissatisfied with the lack of exchange of information regarding developments and tactics between theaters.

2. In accordance with the above, it is directed that a conference be called in Washington at the earliest practicable date to include representatives of the Proving Ground Command, School of Applied Tactics, Materiel Division, Ordnance Department, Chemical Warfare Service, AC/AS, O&A and AC/AS, M&M.

3. The conferees should be advised of the topics to be discussed. The topics will include:

- a. Status of development and adaptability of all types "proximity fuses" usable in bombs.
- b. Development and adaptability of anti-personnel "foxhole" bombs, i.e., explosive, incendiary, oil, phosphorous, etc.
- c. Development of 3, 5, 10 and 20 minute delay fuses.
- d. Means of communicating information on improvisations, developments, tactics and tactical information between theaters, and between this Headquarters and theaters.

h. Prior to the conference, M&M should query all theaters to obtain information on special adaptations, improvisations, tactics and difficulties with bombs and fuses.

5. Notify this office of date and time of the conference in order that General Giles may attend.

COPY TO
AC/AS, O&A

Dispatched
27 AUG 31943
AES

EDWIN S. PERRIN,
Brigadier General, U.S.A.,
Deputy Chief of Air Staff.

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AFG-4716

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DOO WFO

On 2/6/77
3/4/77
3/4/77
3/4/77

In incendiary Bombs

AG/AS, MEMD

Deputy Chief of Air Staff

18 August 1943

1
EW/ova/6371

It is requested that this office be furnished promptly with availability data on 500# incendiary bombs.

EDWIN S. PERKIE,
Brigadier General, U.S.A.,
Deputy Chief of Air Staff.

Dispatched
19 AUG 1943
AAG

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DDO 173

8 Nov 64 20 June 1981
7316 100 Date 3/11/77

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Allotment of REX (Facilities REX Expansion).
AR/AS, Operations, Commitments & Requirements.
Requirements Division.
Chief of the Air Staff.

6 August 1943

HAL/mdg/5265

2

To note the foregoing.

Incl. n/c

MILLARD A. LIBBY,
Colonel, G. S. C.,
Secretary of the Air Staff.

Dispatched
6 Aug 1943
MLB

AR 173
6-3-6

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File
in 6 Aug 43

air 28471.6 (3/6)

DECLASSIFIED
DATE
BY
2/11/87

DECLASSIFIED
SECRET

In incendiary Bombs.

General Perrin.

2 August 1943

Asst C/AS, OCMR, (Requirements Bombardment Branch).

1
Major Fix/Jem/5692

In accordance with General Arnold's request for a report in connection with cable COOIK W 119 YK from China on incendiary bombs, the attached RAR is submitted for your approval and signature.

M & E Sec. _____

ALFRED R. MAXWELL
Colonel, Air Corps

1 Incl:
RAR to General
Arnold.

211-2-3-1-1-3-5

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BK
7/9/43

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2- 211-2-3-1-1-3-5

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DDO 182

by *SPIC* on *10 Dec 1974*

DECLASSIFIED
SECRET

Incendiary Bombs.

General Arnold.

2 August 1943

General Ferrin.

1
Major Fix/Jam/5692

1. A special investigating committee has been appointed by General Stratemeyer to examine the present incendiary situation, and to determine the suitability of present munitions, and those under development, to meet the tactical requirements of each of the combat theaters. This cable from General Chennault was requested by the committee, as a statement of intended use, type of targets, and desired characteristics of incendiary bombs for his Air Force. Every other combat Air Force has submitted similar information.

2. Extensive comparative tests have just been completed on buildings representative in every detail of Axis domestic structures. The committee will analyze the test results, in terms of the combat usage and expressed requirements.

3. The development of improved incendiaries has had highest priority, and the immediate future should see some of the developments that have been pending reach a production state. The incendiary problem is being followed closely by Requirements Division, Operations, Commitments and Requirements, who are represented on the committee. I intend personally to check to insure the necessary progress is made in as short a time as possible.

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DDO 105

8 Jan. & 30 June 1974

by *Ex/c* LC Date *2/16/77*

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DECLASSIFIED
1st Ed.

AFMA-28

WD HQ ARMY AIR FORCE, Washington, A. C.

TO: The Chief of the Air Staff.

1. Conclusions contained in basic memorandum are thoroughly concurred in by this office. The present status of inventories for use by the Army Air Force indicates that the highest priority should be given to the development and production of suitable inventories which our Forces can use efficiently and, therefore, the meeting of the Committee should be held with the least delay.

G. F. DENNIS
Major General, U.S.A.
Asst. Chief of Air Staff
Material, Maintenance and Distribution

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DOO 412by JJK 30 Dec 1974
3/4/77~~SECRET~~Col. Gross
Ex. 3020

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JUL 6 1943

MEMORANDUM FOR THE CHIEF OF THE AIR STAFF:

Subject: Incendiary Bomb Program

I. Discussion

1. Status. The present position of the Army Air Forces for active employment of incendiary munitions in joint precision bombing attack with demolition bombs against specific industrial objectives is not satisfactory, because of the lack of suitable incendiary bombs. A small incendiary, the M50, 4 lb. magnesium, appears a satisfactory munition for area bombing, and the M47, 66 lb. oil bomb can be used for precision bombing, but cannot be carried efficiently in heavy bombardment planes. (On present basis a B-24 load is 1800 lbs., B-17 1500 lbs.) There are other small incendiaries available, which present tests disclose are not satisfactory in their present form. Also some of the bombs that have been shipped to the combat theaters have been unsatisfactory in having too many duds, in some cases as high as 50%.

2. Action taken. A meeting has been held with representatives of Chief, Chemical Warfare Service, Army Service Forces, and Chief of Ordnance, in which the present situation was reviewed. The requirements of the Air Forces for incendiary bombs of precision character were re-emphasized, and the necessity for immediate action to produce suitable munitions was outlined vigorously. The following specific action has been taken.

a. As a temporary expedient, non standard cluster adapters will be developed to improve the leading efficiency of M47 bombs. A satisfactory fuse for the bomb is in production, which will permit the use of the bomb in clusters. Use of clusters will increase the load that can be carried to about 2800 lbs. for heavy bombardment planes.

b. Development of large incendiaries about 500 lbs. size having ballistic characteristics comparable to demolition bombs will be expedited with highest priority.

c. Investigation is being made of aimable clusters, so that small incendiaries can be used in precision bombing.

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II. Action Recommended

The Commanding General of the Army Air Forces directs that the following committee thoroughly investigate all aspects of the present situation as relates to incendiary bombs being developed by the Chemical Warfare Service and the extent to which they meet actual requirements. A thorough study of the incendiary bomb tests at present being conducted at Baguay Proving Ground will be made. Specific recommendations will be made to this office, attention: The Assistant Chief of Air Staff, OCSA, covering the following items:

- a. What bombs should be immediately eliminated from production
- b. Bombs to be continued in production
- c. Disposition of bombs now in stock, production of which is no longer to be continued
- d. New types of incendiary bombs which should be developed
- e. Analyze present incendiary bomb projects and recommend elimination of projects considered of insufficient military value to justify continuance

The chairman of this committee will request the Chief, Chemical Warfare Service, to designate a representative to serve on this committee. The following members from within the Army Air Forces are suggested:

Colonel E. Montgomery
Air Chemical Officer (Chairman)

Major G. J. Fix, A. C.
Requirements Division, OCSA

Colonel D. B. Eichl, A. C.
Armament Section, Material Division, HMBD

Lt. Col. J. E. Cruick
Asst to Air Ordnance Officer.

12/July/43
Approved
SJS.

HANNY M. GILES
Major General, U. S. A.
Asst Chief of Air Staff
Operations, Commitments and
Requirements

DECLASSIFIED

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CONFIDENTIAL
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DECLASSIFIED
DOB 1/3.

Rev. 6 20 June 1971
By: *SLC* Date: *2/16/77*

Aimable High Altitude Incendiary Bombs

**Assistant Chief of Air Staff, Materiel, Maintenance, and
Attn: General Copeland Distribution
Chief of the Air Staff**

1 July 1943

GES/hd

1

1. It is desired that you submit a report hereon to me stating what is being done to expedite the manufacture of a satisfactory incendiary bomb that can be aimed and dropped from high altitudes.
2. I have just been advised that a meeting was held in this headquarters recently in which this subject was discussed. You will contact Colonel Maxwell, O. C. & R. and obtain information from him as to what was decided at that recent meeting.
3. To date, if I am correct, we do not possess in the Army Air Forces an aimable high altitude incendiary bomb. What are we doing to correct this? Expedite reply.

GEORGE E. STRATEMEYER
Major General, U.S.A.
Chief of the Air Staff

Dispatched
1 JUL 1943
AAG

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(313)

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7/1/43*

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CONFIDENTIAL

Chas 1171.6 (313)

DECLASSIFIED

AFHQ-ORG WFO-ol 3175
reurt-3111- WFO-Jb 5791

JUN 5 1943

SUBJECT: Report of Trip to North African Theater

TO: Chief of Ordnance

Attention: Major General Levin H. Campbell, Jr.

1. Receipt is acknowledged of report dated March 20, 1943 of Major J. W. Sills and Mr. Errol J. Gay covering their trip to the North African Theater.

2. This report is most thorough and interesting and will prove of material help to the Army Air Forces in carrying out its mission in North Africa and in similar terrain elsewhere. Steps are being taken to make immediate use of the constructive recommendations contained in the report.

3. Your cooperation in furnishing the Army Air Forces with this report is deeply appreciated.

For the Commanding General:

E. J. Hanley, Jr.
Brig. Gen. U. S. A.
Deputy Chief of Air Staff.

Dispatched
Jun 5 1943
AM

File 6/5/43
AAB 471.6(3.04)

DECLASSIFIED
DD Form 129
1 June 1954

File
3/10/54

SECRET

Message No. W41, May 22, 1943 from London concerning Supply of GWS Items.

A.C. A.S., Material, Maintenance & Distribution -
ATTENTION: General Whitten.
Deputy Chief of the Air Staff.

28 May 43

W41/mg/5265

General Hanley directs that message from London referred to above be replied to this date stating such of the above information as is appropriate.

Dispatched
MAY 28 1943
AMG

MILLARD A. LIBBY,
Colonel, G. S. C.,
Secretary of the Air Staff.

air 471.6
(311)

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DDO Hqs.
1 Jan & 20 June 1974
W. J. K. L.C. Date 2/1/77

Message No. 541, May 22, 1943 from London concerning Supply of GWS Items.

Deputy Chief of Air Staff, General Hanley.

May 25, 1943.

Ass't. Ch. of Air Staff, M, M, & B., Air Ordnance Officer.

1
OGL/mhh
Ext. 71579

1. With reference to Memorandum from the Cable Secretary, May 24, 1943, requesting certain facts concerning subject message, the following has been received in this office from the Ordnance Section, Office in Charge of Overseas Supply, WPCOH, as of May 25, 1943:

a. Since May 1, 1943, two vessels carrying incendiary bombs have departed WPCOH for England. No report of arrival has been received. Their contents were as follows:

Ship No. MH66	1,710, 100 lb. M7A1 gasoline filled bombs.
Ship No. MH66	350, 500 lb. M4 incendiary clusters, (these contain M9, 4-lb. oil filled bombs).
Ship No. MH66	1,164, 500 lb. M1 incendiary clusters, (these contain M50, 4-lb. M9 filled bombs).
Ship No. MH66	588, 100 lb. M1 incendiary clusters, (these contain M50, 4-lb. M9 filled bombs).
Ship No. MH510	10, 500 lb. M4 incendiary clusters.

b. At present the following quantities have been offered to the Port pending availability of bottoms:

17,000, 100 lb., M7A1 gasoline filled bombs, of which 16,600 have been suspended from loading pending results of further drop tests on these lots. They are to be released again as soon as the tests are completed.

1,500, 500 lb., M4 incendiary clusters.
1,436, 500 lb., M1 incendiary clusters.

c. In order to assure that the foregoing GWS items go on the next available boat, this office has requested WPCOH to hold up approximately 2,500, 1,000 lb., GP bombs (Ordnance Items) which were scheduled to go. This was done because sufficient of these are already available in U.K.

2. The Port of Embarkation expects to have more shipping made available in the near future and this will relieve the temporary lack of bottoms.

DECLASSIFIED

E. C. COPLAND,
Brig. Gen., U.S.A.
Air Ordnance Officer.

~~SECRET~~

air 44 471.6 (311)

~~CONFIDENTIAL~~

Written 5-3-43
CGL/wjl/W2345

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AFDAO

MAY 13 1943

DECLASSIFIED
DD FORM
1 JUN 60 (Rev. 1952)

AAF 471 (5-3-43)

3/11/77

SUBJECT: Reduction in Army Air Forces Bomb Requirements and Stabilization of Requirements.

TO: Commanding General, Army Service Forces, Washington, D. C.

1. As requested in your undated memoranda, SPAM, subjecter "Reduction in AAF Bomb Requirements" and "Stabilization of Requirements," revised estimates, as of March 1, 1943, of bomb requirements of the Army Air Forces for the years 1943 and 1944, as previously submitted to your Headquarters, have been thoroughly re-examined. The result of this re-examination substantiates these previous estimates, which are based on long-term planning. The following is an indication of the breakdown of these requirements:

<u>1943</u>	(Estimated 166 Combat Groups in Theaters by October, 1943)
	Authorized (WDGS) theater stock levels 462,000 short tons
	Required (WDGS) for intransit reserve 103,000 short tons
	Estimated expenditures 461,000 short tons
	Total 1943 Requirements----- 1,026,000 short tons

<u>1944</u>	(Estimated Maintaining 166 Combat Groups in Theaters in 1944)
	Estimated expenditures 673,000 short tons
	Provision for additional groups not assigned to theaters under present plans 348,000 short tons
	Total 1944 Requirements----- 1,021,000 short tons

2. The additional provision during 1944 of 348,000 short tons above the presently estimated expenditures for that year would permit the addition of approximately thirty (30) heavy bomber groups to theaters without necessitating any increase in stated requirements. At this time, approval has been requested for an additional nine (9) heavy bomber groups for 1944, which, if approved will leave a planning margin of twenty-one (21) groups without disturbing the estimated requirements.

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Ltr to CG, AAF, file AAF 471 (5-2-43) (Cont'd)

3. The estimate of total tonnage required should remain stable for a considerable time, although some changes in types of bombs may become desirable, as tactical experience indicates the need for amended plans, which changes cannot be anticipated at present. For example, a definite large requirement for fragmentation bombs was proved in the field only in recent actions in the Southwest Pacific and Northwest African theaters. In this connection, a new study of fragmentation bomb requirements, using this recently obtained data from the field, is now in progress in this Headquarters. It is being made with a view to furnishing you relatively stable requirements of these items for 1943 and 1944 in order that most efficient use may be made of your facilities and permit the establishment of a reasonable production schedule.

4. With reference to paragraph 3 of your memorandum, regarding discontinuance of operations of many manufacturing facilities, it is understood that a portion of these will be required for manufacturers of toluol needed in the 100 octane aviation fuel program.

For and in the absence of General ARNOLD:

WILLIAM S. HALL,
Brigadier General, U.S. Army,
Deputy Chief of Air Staff.

Dispatched
MAY 13 1943
AAG

File
cc 5/14/43

~~CONFIDENTIAL~~

Att ds 471.6 (310)

DECLASSIFIED
EOP No.
8 Jan 4 20 June 1974
By TS/CC J.C. Date 3/4/73

SECRET
DECLASSIFIED

WAR DEPARTMENT
HEADQUARTERS ARMY AIR FORCES

APPROVED
Major Flix/Jam
Memo 42-3086
Ext. 5692
BY AUTHORITY OF THE April 26, 1943
ARMY AIR FORCES
DATE INITIALS
APR 27 1943

47116 (307)

MEMORANDUM FOR ASSISTANT CHIEF OF STAFF, OPERATIONS DIVISION:

SUBJECT: Use of Long Delay Fuses.

1. The use of long delay fuses in the European theater is contemplated in the immediate future. Delays varying from 30 minutes minimum up to approximately 72 hours maximum will be used. Fuses of similar type are being used now by the Fifth Air Force in Australia and the Twelfth Air Force in North Africa.
2. The reasons for use of these fuses against continental targets are:
 - a. A fuse of approximately 30-60 minute delay will be used to permit minimum altitude bombing on the same target by a large number of planes operating together.
 - b. The longer delays will be used to deny areas for extended periods. Each long delay fuse will incorporate an anti-withdrawal device to impose difficulties on bomb disposal activities.
3. It is planned that these bombs will be used against targets of strictly military importance, such as industrial plants of all types, railroad marshalling yards and transportation centers, airbases, etc. The maximum effectiveness of this type of munition comes from the doubt and uncertainty arising from the unexploded bomb, which goes off unexpectedly later. However, in many cases highly trained, specialized bomb-disposal personnel can cope with this fuse, and render the bomb harmless.
4. It is believed that to broadcast a warning to occupied countries that long delay fused bombs will be used, as suggested in the cable from Switzerland, would nullify materially the initial results from use of these bombs by permitting the enemy to increase and prepare his bomb disposal units. It is recommended that any warning sent out prior to extensive usage of these bombs be vague and unrevealing. After this type of fused bomb has been used widely, and no help will be given the enemy through mention of it, our propaganda to the peoples of the occupied countries can capitalize on the use of this delay in an endeavour to save lives.

For the Commanding General, Army Air Forces:

Dispatched
APR 27 1943
AAG

JOHN E. COOLEY,
Colonel, A.S.D.,
Assistant Air Adjutant General.

File 42-3086
DECLASSIFIED

Serial 47116 (307)

DECLASSIFIED
DDO IWS
8 Jan. & 20 June 1978
By *BS/c* LC. Date *3/11/77*

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DECLASSIFIED

Bombs, Incendiary, Magnesium, Four Found-M-50.

Colonel Edward Montgomery.

27 April 1943.

THRU AG/AS, Operations, Commitments and Requirements.
AG/AS, Material, Maintenance and Distribution.

XXXXX

TJM/eva/6371

1

From: Deputy Chief of Air Staff.

1. For your information, follow up and action.
2. Perhaps this paper should be returned by you to General Tansy.

Dispatched
APR 28 1943

Incl: SECRET memo for Gen.
Hull from Gen. Tansy
above subj dtd 4/23/43
w/1 Incl--Tab "A"; also
rtng slip to Gen. Arnold
initialed by Col. Carmichael.

T. J. HANLEY, JR.,
Brigadier General, U.S.A.,
Deputy Chief of Air Staff.

*File
cc 4/28/43*

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AS
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4/28/43

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DECLASSIFIED
DOD Ref.
8 Mar. & 20 June 1975
By: *ES/CC* LC Date: *2/14/77*

April 20, 1943.

MEMORANDUM FOR: Commanding General, Proving Ground
Command, Eglin Field.

Subject: Special Fuses.

1. The Chief of Ordnance has informed the Commanding General, Army Air Forces, that, in accordance with a request dated April 8, 1943, the Ordnance Department is arranging with N.D.R.C. to furnish Eglin Field with 500 special fuses for testing purposes.

2. These items are special test devices and are not to be regarded by Eglin Field as service type fuses.

By command of General ARNOLD:

T. J. HANLEY, JR.,
Brigadier General, U.S.A.,
Deputy Chief of Air Staff.

Incls: Cy CONF. memo for Gen. Arnold from Gen. Barnes dtd Apr. 15, 1943, this subj, w/2 incls. Cy CONF memo to Gen. Barnes from Gen. Hanley dtd Apr. 20, 1943, this subj.

Cpys: General Giles
General Meyers

Dispatched
APR 21 1943
AAG

*file
4/21/43*

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Merten/ga/lb

6411

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E.O. 13526

By: ES/c Date: 3/11/27
by: ES/c Date: 3/11/27

171

In reply
refer to

WAR DEPARTMENT

OFFICE OF THE CHIEF OF ORDNANCE

OO. No. 334.8/6602 (c)

WASHINGTON, D. C.

April 15, 1945.

MEMORANDUM FOR General H. H. Arnold

Subject: Special Fuses

1. At a conference on April 8 at the National Bureau of Standards, in which Gen. Gardner and Col. Huff inspected fuses being developed by Division 4 of W.D.R.C., it appeared that certain "special fuses" with black powder spotting charges would be very useful to Eglin Field for certain testing programs. Request was made to Dr. Ellett, Chief of Division 4 of W.D.R.C. and Lt. Col. H. S. Merten, Ordnance Liaison Officer, to arrange to furnish Eglin Field 500 special fuses, if requested by AAF and approved by Ordnance Department, ASF.
2. In accordance with your memorandum of April 8, this office is arranging for W.D.R.C. to furnish the items requested.
3. These items are special test devices, and are not to be regarded by Eglin Field as service type fuses.

G. M. BARNES
Maj. Gen., Ord. Dept.
Chief, Technical Division.

2 Incls.

- 1 - Memo to Gen. Arnold
fr. Gen. Gardner 4/8/45
- 2 - Memo to Ch. of Ord.
fr. Gen. Arnold 4/8/45

4/19/45

Gen. Hanley:
Par. 3. O.K.
Notify them.

H.H.A.

DECLASSIFIED

CONFIDENTIAL

CONFIDENTIAL
DECLASSIFIED

DECLASSIFIED
DDI 105
1 Jan & 20 June 1974
W. J. C. M. C. Dec 3/1/77

April 8, 1943.

MEMORANDUM TO: General Arnold.

1. Colonel Huff and I have consulted personnel of Ordnance, Navy and Division 4, NDRC who are controlling the development of the weapon you asked me about yesterday. We have looked at the device and we have learned the following which seems to be reliable information:

a. The equipment the Navy now has is not usable with bombs or rockets.

b. NDRC, monitored by Army Ordnance, is adapting the same basic item to the bomb for both Army and Navy. It is not ready for use. It is in production for rockets.

c. NDRC will give us 500 items suitable for our Proving Ground study of tactics and technique with inert bombs only upon your request. Attached is letter which needs your initials requesting same. If we don't work too fast, finished items may be ready by the time we find suitable technique.

Grandison Gardner,
Brig. General, Air Corps.

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DOO 112
9 Jan & 20 June 1974
By SP/ce JG, Doc. 3/11/77

April 8, 1945

MEMORANDUM TO: Chief of Ordnance
(Attention: Technical Division)

Will you please furnish Air Forces with 500 special fuses to assist in tactical appraisal of new plane to plane bombing techniques?

H. H. ARNOLD,
General, U. S. A.

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DDO lns.

8 Jan. & 30 June 1974
By: *SS/CC* J.C. Davis, *JLD*

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Morton/go/lb
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171

TO INSURE PROMPT ATTENTION
IN REPLYING REFER TO:
171 06 NO. 334
ATTENTION OF 6602 (c)

WAR DEPARTMENT
OFFICE OF THE CHIEF OF ORDNANCE
WASHINGTON, D. C.

April 15, 1943

MEMORANDUM FOR General H. H. Arnold

Subject: Special Fuses

1. At a conference on April 8 at the National Bureau of Standards, in which Gen. Gardner and Col. Huff inspected fuses being developed by Division 4 of W.D.R.C., it appeared that certain "special fuses" with black powder spotting charges would be very useful to Eglin Field for certain testing programs. Request was made to Dr. Ellett, Chief of Division 4 of W.D.R.C. and Lt. Col. H. S. Morton, Ordnance Liaison Officer, to arrange to furnish Eglin Field 500 special fuses, if requested by AAF and approved by Ordnance Department, ASF.
2. In accordance with your memorandum of April 8, this office is arranging for W.D.R.C. to furnish the items requested.
3. These items are special test devices, and are not to be regarded by Eglin Field as service type fuses.

[Signature]
G. M. BARNES
Maj. Gen., Ord. Dept.
Chief, Technical Division

- 2 Incls.
- 1 - Memo to Gen. Arnold
fr. Gen. Gardner 4/8/43
 - 2 - Memo to Ch. of Ord.
fr. Gen. Arnold 4/8/43

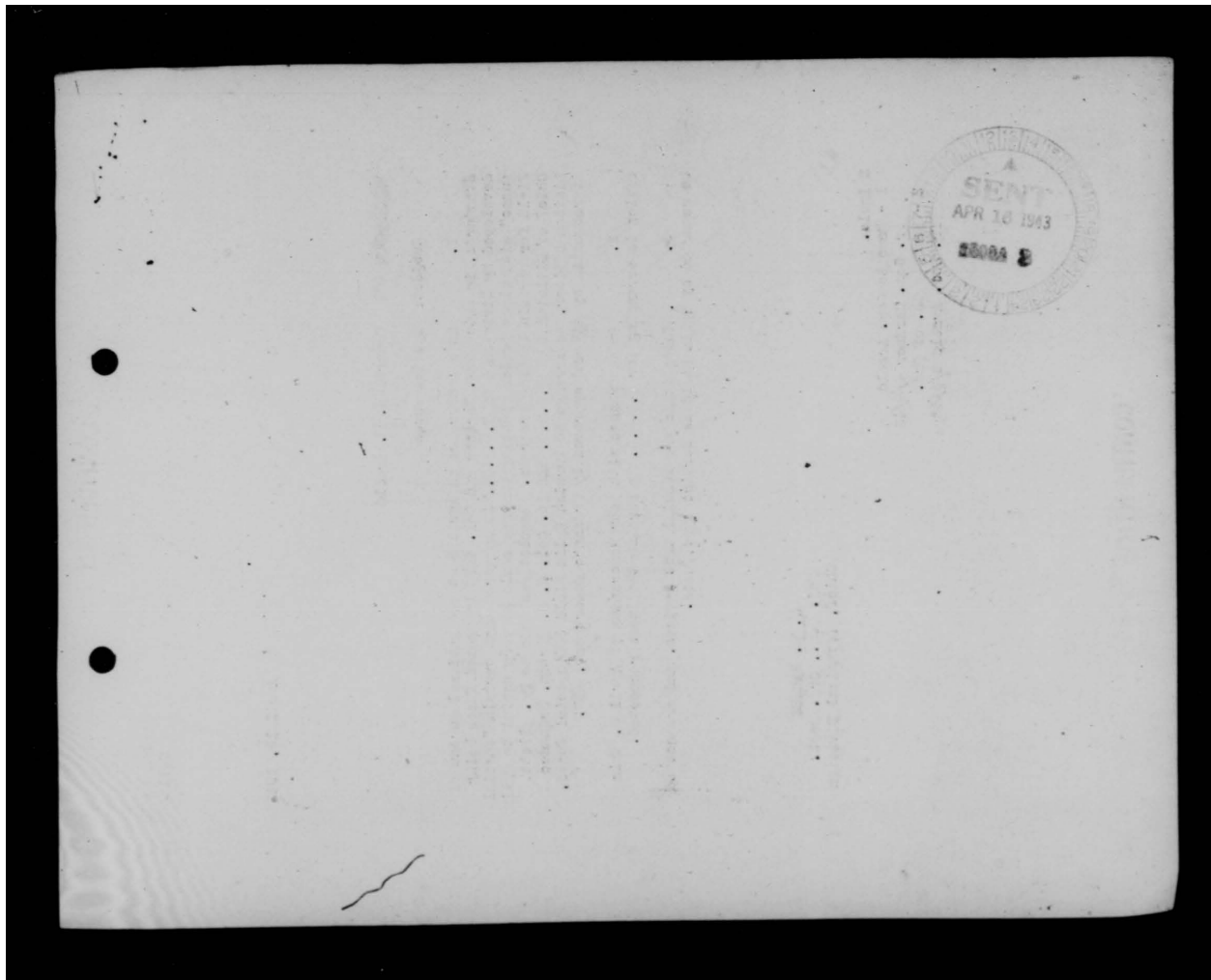
4/19/43 *per. [Signature]*
Par. 3. OK.
notify them
[Signature]



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P-1610

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~~CONFIDENTIAL~~

Dr. 38/CC 20 June 1978
Mr. Don. 3/16/7

April 8, 1943

MEMORANDUM TO: General Arnold.

1. Colonel Huff and I have consulted personnel of Ordnance, Navy and Division 4, NDRC who are controlling the development of the weapon you asked me about yesterday. We have looked at the device and we have learned the following which seems to be reliable information:

a. The equipment the Navy now has is not usable with bombs or rockets.

b. NDRC, monitored by Army Ordnance, is adapting the same basic item to the bomb for both Army and Navy. It is not ready for use. It is in production for rockets.

c. NDRC will give us 500 items suitable for our Proving Ground study of tactics and technique with inert bombs only upon your request. Attached is letter which needs your initials requesting same. If we don't work too fast, finished items may be ready by the time we find suitable technique.

Grandison Gardner,
Brig. General, Air Corps.

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EOD: N/A
By: JSL/c AC: Date 3/4/87

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April 8, 1943

MEMORANDUM TO: Chief of Ordnance
(Attention: Technical Division)

Will you please furnish Air Forces with 500 special fuses to assist in tactical appraisal of new plane to plane bombing techniques?

H. H. ARNOLD,
General, U. S. A.

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100-415

By *DSG* on 27 June 1978
Date *3/11/77*

DECLASSIFIED

Trip to North African Theatre, January 20 - February 27, 1943.

A.G. A.S., Material, Maintenance & Distribution.

21 May 43

Deputy Chief of the Air Staff.

Mil/mdg/5265

1. General Hanley desires that an appropriate letter be prepared for his signature to the Chief of Ordnance thanking him for his courtesy in furnishing us with copy of the attached report.

2. For further report of action taken with respect to recommendations stated in Section G - Air Transport Command.

Dispatched
MAY 21 1943
AAG

WILLARD A. LIBBY,
Colonel, G. S. C.,
Secretary of the Air Staff.

Incl. n/e

*File
by
3/22/43*

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air as 471.6 (304)

TO: Deputy Chief of the Air Staff

FROM: Aviation Petroleum Branch

May 15, 1943.
Comment No. 2
V.S.O.C/lw. 79744

1. Summary to Section C - Petroleum Products- Par. 1 and 2 Page A
 - a. Sixty five percent of total daily supply tonnage for North African theatre is petroleum products. This accurately checks British estimate of sixty seven percent.
 - b. Petroleum Section AFHQ set up under G.A. of the Staff. Section headed by Colonel Bagel.
 - c. Action: None indicated.
2. Summary to Section C - Petroleum Products, Par. 3, Page A.
 - a. Storage and Transportation. Reports indicate that North African storage and transportation problems are difficult.
 - b. Action: Efforts are being made to send AFHQ three small tankers of approximately 3,000 barrel capacity each for moving fuel from Gann and Algiers forward to Phillipville and Bane. Storage has been installed approximately twenty five miles inland from Phillipville and connected to unloading facilities there by pipe line.

Deputy Chief of the Air Staff

May 15, 1943

Aviation Petroleum Branch

2

(cont.)

- c. Further recommendation cannot be made at this time as information presented is insufficient.
3. Summary to Section C- Petroleum Products, Par. 5, Page A.
 - a. Supply Situation: Losses in trans-shipment of aviation gasoline from the United Kingdom have been high.
 - b. Action: Shipment of petroleum products from U.K. was discontinued about April 1, 1943 and all petroleum is now shipped from U.S. in both packaged and bulk cargoes.
 - c. Supply Conditions: British 5 gallon "flinnies" have suffered 40-60% losses in shipment.
 - d. Action: Lt. Col. Hume, now of this branch, when in North Africa in February with Commander Walstrom, discussed this matter with Colonel Vogel, Petroleum Section AFHQ and the British officer representing the R.A.F. British pointed out their main difficulty was lack of water separators or other type strainers for filtering aviation fuel as serviced to their planes. Army Air Forces had agreed to supply necessary separators and /or strainers and it was understood that all shipments in "flinnies" be discontinued. It is understood this action was taken and the canning plants at Phillipville and Rome will be used for filling returnable cans which are now shipped full from the U.S.
 - e. It is recommended that check be made with Col. Vogel to see if use of 'flinnies' has been discontinued.
4. Summary to Section C -Petroleum Products, Par. B, Page A.
 - a. Petroleum Section, A.F.H.Q. needs advice on permissible storage time of hi-octane gasoline in 55 gallon drums, in 5 gallon cans.
 - b. Action: It is not possible to set a definite time limit for storage of aviation fuel in 55 gallon drums or 5 gallon cans. The Petroleum Section AFHQ is attempting to rotate their can and drum stocks.

Deputy Chief of the Air Staff

Aviation Petroleum Branch

2
WB O'C IN 7974A

Cont.

5. Summary to Section C- Petroleum Products- Par. 10, page A
 - a. Consumption of 100 octane gasoline: AEC has used 100 octane to bring 70 or lower O.N. gasoline up to 80 octane for truck use. 100 octane gasoline has been mixed with lower O.N. gasoline to make 87 octane for M-J medium tank.
 - b. Action: Eighty octane motor fuel is now available at all major stations for trucks.
 - c. Ordnance Dept. now revising M-J tank to use 80 octane instead of 87-91 octane.
 - d. Recommendations: That 100 octane gasoline be rigidly conserved. That use of 100 octane to improve truck be discontinued. That change over of M-J tanks to 80 octane fuel be expedited.
6. Summary to Section C- Petroleum Products, Par 11 and 13, Page A
 - a. Specifications and technical literature: Shipments of gasoline very considerable.
 - b. Action: Laboratory testing equipment in field necessarily meagre. Copies of specifications of aviation products have been furnished to Petroleum Section AFHQ.
 - c. Recommendations: That field testing be limited to checking detailed specifications of grade in question. That information and precautionary instructions should be given to guard against improper conclusions from incomplete tests.
7. Report is returned herewith.

D.G. LINSLE
Col. A.G.

Am 471, 83

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DOD Hqs.

Approved by *FEIC* on *3/11/77*

Trip to North African Theatre, January 20 - February 27, 1943.

Colonel D. G. Lingle, Chief Aviation Fuel Branch,
Room 2548, Munitions Building,
Deputy Chief of the Air Staff

8 April 43

1
MAL/mdg/5265

1. The Acting Chief of the Air Staff (General Hensley) directs that you carefully review these portions of the attached report specifically concerned with aviation gasoline storage and delivery methods taking necessary action thereon.
2. Return of this report is desired with your comments and report of corrective measures initiated.

Dispatched
Apr 9 1943
AAG

HILLARD A. LIBBY,
Colonel G. S. C.,
Secretary of the Air Staff.

Att: Report.

Del 4/28/43 504

*File
cc 4/10/43*

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DECLASSIFIED
GPO Proc.

1000
20 June 1954
J.C. Doe 3/4/57

In incendiary Bomb Situation.

Assistant Chief of Air Staff, Material, Maintenance and Distribution. ATTENTION: General Meyers.

21 April 1943.

Deputy Chief of Air Staff.

T.M./eva/6371 ¹

1. Reference your comment #5 on H&M dated April 16, 1943, subject, "Incendiary Bomb Situation," in which you state that priorities have prevented shipment of any of the latest type 100-pound incendiary bombs to the India-China Theater and recommend necessary action be taken.

2. Your recommendation is approved but the necessary action should be taken by your division.

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Dispatched
APR 22 1943
AAC

T. J. HANLEY, JR.,
Brigadier General, U.S.A.,
Deputy Chief of Air Staff.

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DECLASSIFIED
DDG #15

14 APR 23 1943
BY: ~~ES/EC~~ *2/11/87*

Inciendary Bomb Situation.

Assistant Chief of Air Staff, Materiel,
Maintenance and Distribution.

22 April 1943

Deputy Chief of Air Staff.

T.H./eva/6372

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4/11/6
303

1. The Commanding General is not satisfied with the incendiary bomb situation. Colonel Montgomery is now willing to accept the experience of the theater. He told General Arnold that he did not believe the reports from General Haynes that the phosphorus bomb was good in Burma and he did not believe the reports from United Kingdom that our oil bomb is not any good against stone buildings.
2. It is directed that steps be taken at once to test our bombs against the types of buildings existing in all theaters and to provide the United Kingdom and India-China with the type of bomb requested by the theater as a temporary expedient until we can get something better. If we have phosphorus bombs, send them at once; if we have not, let's develop them along the lines General Haynes has indicated.
3. It is all right for the service representatives to experiment and develop, but they must not do this at the expense of getting incendiary bombs suitable to the theater commander available in the theater.
4. Please give me a report when some project is under way in this connection.

Dispatched
Apr 23 1943
AMT

T. J. HANLEY, JR.,
Brigadier General, U.S.A.,
Deputy Chief of Air Staff.

Incl: n/c.

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Apr 23 4/21/6 *303*

~~SECRET~~

DECLASSIFIED
DATE 02/28/2001 BY 3467
Dr. F. J. C. [unclear]

In incendiary Bomb Situation

Deputy Chief of the Air Staff

4/16/43

Deputy Assistant Chief of Air Staff, M.M. & D.

JHD:mmm 3153⁵

1. Buildings of typical Burmese construction, and under conditions of excessive moisture such as exist in that theater, will be included in the test project of incendiary bombs at Dugway Proving Ground as far as this is practicable. Also, the program of tests will contemplate a comprehensive investigation of the possibilities of the bombs setting fire to such structures.

2. In connection with comment #1 by General Arnold, bombs which were made available to the Tenth Air Force, and which are probably referred to, were bombs which were shipped to Burma as an emergency measure as they were the only incendiary bombs then available for shipment. They were known to be unshiftable. The bombs were shipped empty and filled in the theater. The filling was gasoline in which unvulcanized rubber was to be dissolved. The unvulcanized rubber was shipped from this country and I am advised that due to the period of transportation the rubber was partially vulcanized. Furthermore, in using such rubber a long time would be required before it would become satisfactorily dissolved and that during this time the bomb must be agitated at regular intervals. This may not have been understood. At best this rubber-gasoline filling was not and is not considered to be a satisfactory filling.

3. The present 100-pound solid oil filled bomb filled with the latest formula of solid oil is considered by the Chemical Warfare Service to be satisfactory. Reports from Africa indicate that this bomb is a good bomb and sets fires in a satisfactory manner. I believe that it will be the best bet against the type of construction indicated as existing in Burma and that it will set fire to that type of construction if it is not too wet. If it is too wet, of course, it just will not burn.

4. Priorities have prevented shipment of any of the latest type 100-pound incendiary bomb to the Burma Theater. Recommend necessary action.

B. E. METERS,
Brig. General, U.S.A.,
Deputy Asst. Chief of Air
Staff, M. M. & D.

Incl.
n/c

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DOD Pro
9 Jan. & 20 June 1975
By: ES/2 LC. Date: 7/11/77

In incendiary Bomb Situation.

TO: Assistant Chief of Air Staff, Materiel, Maintenance & Distribution.
FROM: Deputy Chief of the Air Staff.

Date 4/10/43
Comment No. 6
EJH/cms/6371

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It is requested that the targets at the Dugway Proving Ground, Utah, include buildings of the typical Burnese construction, under conditions of excessive moisture such as exist in that theater. These buildings stand well off the ground and bombs pass through them completely, exploding harmlessly in the mud underneath.

(303)

Dispatched
APR 11 1943
AAG

T. J. HANLEY, JR.,
Brigadier General, U.S.A.,
Deputy Chief of Air Staff.

Incl: n/c.

File
at 4/11/43

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Incendiary Bomb Situation

General Hanley

April 8, 1943

General Meyers

3
AFAMC-2
EHE:dh 3153

1. Attached is copy of memorandum, same subject as above, submitted to General Arnold.

Encl.
Memo to Gen. Arnold 4-8-43
same subj.

B. E. MEYERS
Brig. General, U.S.A.
Deputy Asst. Chief of Air
Staff, H. H. & D.

~~SECRET~~

✓ Air 471.6 (303)

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DECLASSIFIED
DATE
BY *BJC* 3/11/97

Incendiary Bomb Situation.

TO: Assistant Chief of Air Staff, Materiel, Maintenance
and Distribution.
FROM: Deputy Chief of the Air Staff.

Date 8 April 1943
Comment No. 2.
TJH/ams/6371

For preparation of the desired report.

T. J. HANLEY, JR.,
Brigadier General, U.S.A.,
Deputy Chief of Air Staff.

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*Delivered by Messenger
4/17/43 9:15 AM
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1/8/43*

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DOO lrs.

APR 4 20 June 1974
BY: BJC LC Date: 2/4/77

In incendiary Bomb Situation

General Hanley

4/7/43

General Arnold

1

1. During my visit to the Tenth Air Force last January I was informed that incendiary bombs available there were entirely unsuited. The pilots said the bombs hit the targets all right but caused few if any fires. Later on the same information was received from General Chennault's Air Force. In a recent message from General Baker the same complaint is made about incendiary bombs being used against buildings on the Continent.

2. From the above it is quite apparent that the whole incendiary bomb situation must be gone into very carefully and special types of bombs be made for use against different types of construction. I have already expressed the desire that this be done, but as yet have received no reports from anyone as to their progress.

3. It is desired that report be submitted to me without delay covering:

- a. Experiments being made with new types of incendiary bombs.
- b. What tests are being made with these bombs against types of construction which will be encountered in the various war theatres.
- c. What steps are being taken to provide the various operating units with satisfactory incendiary bombs.

H.H.A.

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DDI 123

APR 20 1943
BY *BJC* LC Date *3/11/77*

APR 2 1943

MEMORANDUM FOR THE CHIEF OF THE AIR STAFF:

Subject: Status of Glide Bombs.

I. Discussion.

1. Current Plans. All current plans contemplate the initial use of the simple stabilized glide bomb in the United Kingdom. See correspondence with theatre in Tab A. Glide bombs show sufficient promise to warrant their not being used in small and inconsequential numbers. Therefore, initial missions should be attempted with no less than one hundred sorties.

2. Utility. The glide bomb in its present form is an area weapon, its principal advantages consisting in the fact that the point of release is outside the normal range of close-in antiaircraft batteries. It has been suggested as a possible weapon for use against submarine pens and large industrial targets. Due to its flat trajectory, when used against building areas almost every bomb should find some building. Due to its release point being quite distant from the target, it should serve to disperse antiaircraft defenses and possibly to cause major revision in German close-in defense dispositions. For further details of glide bomb characteristics see Tab B.

3. Ballistic tests. Ballistic tests of the simple stabilized glide bomb have been completed and the results evaluated. These results indicate an average range error of 9,300 feet from the mean point of impact and an average deflection error from the mean point of impact of 7,500 feet when released from an altitude of 16,000 feet. At this altitude the point of release is 19 miles from the target. At 5,000 feet and 10,000 feet altitude, the points of release are approximately $5\frac{1}{2}$ miles and $11\frac{1}{2}$ miles respectively from the target with corresponding mean range errors of 4,200 feet and 7,000 feet. It is thought that attacking during periods of little atmospheric turbulence may reduce the mean range error.

4. Shipments to date. a. Five hundred external racks suitable for glide bombs are being shipped to the United Kingdom. These wing racks are the same as those used for carrying four thousand pound bombs. Two glide bombs can thus be carried per B-17.

b. Two hundred sets of glide bomb wings, each with its control mechanism, have been shipped to the 8th Air Force. Almost all have been received in the United Kingdom.

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g. Lt. Col. Paul Helmick, the pilot who flew all the missions during ballistic tests, is in the United Kingdom. He was accompanied by the following experienced glide bomb personnel:

- Captain Tillman, Bombardier
- Lieutenant Pierce, Specialist in control mechanism
- Sergeant Rudder, glide bomb mechanic

g. Three Boeing Company engineers, specialists in external rack installations, are in the United Kingdom to help install these racks.

g. The above-mentioned personnel should be able to take care of setting up and adjusting glide bombs for four groups and at the same time assist in training other personnel in the various phases involved in stabilized glide bomb operations.

5. Production Situation. Present production of glide bomb assemblies at 1,000 per month (potential capacity of 4,000 per month) is being continued until an evaluation of this weapon has been made. This evaluation should be made as soon as possible, in order to stop production and avoid accumulating a large stock in case the glide bomb fails to have application. Four thousand glide bomb assemblies are on hand and continued output presents an increasing storage problem. Since, as now visualized, this weapon has its current application mainly against European targets, it is necessary that an estimate of the requirements of the United Kingdom for these bombs be secured with least possible delay.

6. Future Development. The glide bomb was originally intended as a precision weapon, using radio, television or some form of target seeking device based on heat, light, sound or radar principles. Some of these developments show promise, especially for use against marine targets but precision controllable bombs, neither glide or power driven (controllable aircraft carrying bombs) will be in quantity tactical use before 1944 at the earliest.

II. Action Recommended.

1. Prompt evaluation by the Commanding General, European Theatre of Operations, of the utility of simple stabilized glide bombs in his theatre, bearing in mind the lack of precision of the weapon and also its effect on enemy aircraft defenses.
2. Estimation by the Commanding General, European Theatre of Operations, of the needs of the United Kingdom for glide bombs, and assignment of shipping priorities for these quantities.

See Stratemeyer took this to Gen Eaker to be delivered to Gen Andrews.

2 Incls:
Tabs A & B.

apr. 5/45.

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O. A. ANDERSON,
Brigadier General, U. S. A.
Assistant Chief of the Air Staff, Plans.

DECLASSIFIED

DECLASSIFIED
DOD 5100
1 Jan 80
BY: *FE/CC* 3/11/77

HEADQUARTERS ARMY AIR FORCES
OFFICE OF THE AIR ORDNANCE OFFICER
WASHINGTON

ROC/LFP:amw

MEMORANDUM

TO: Deputy Chief of Air Staff. - Attention: General Hanley.

1. Reference Algiers cable number 7829, March 20, 1943.

2. The standard American General Purpose bombs now on hand and in route to Northwestern Africa Theatre are the 50 per cent H.E. charge weight ratio bombs. Air Marshall Tedder was undoubtedly referring, in his cable, to the British General Purpose bomb which are the 30 per cent H.E. charge weight ratio bombs. Standard fuses for the American General Purpose bombs are the Nose, M103 with an adjustable setting pin to obtain instantaneous or .1 second delay, and tail fuse with .025, .1 and .01 second delay. A small quantity of the special purpose tail fuses 4 sec. and 11 sec. delay are available for low level water and land bombing respectively. Further supply of these items is being made on each successive convoy to this Theatre.

DEC 25 1971
(740)

R. C. Coupland
R. C. COUPLAND
Colonel, Ord. Dept.,
Air Ordnance Officer.

1 Incl;
Memo. to Col. Coupland
dtd. 3-22-43.

Incl. returned to Col. Securer, Public Safety

DECLASSIFIED
~~SECRET~~

DEC 25 1971 *(740)*

HENRY HARLEY ARNOLD

MILITARY

DECIMAL

SAS 471.6

(441-503)

Box 134 Folder 6

DECLASSIFIED
ON 2000 Nov 14
BY SP-11/11/00
DATE 11/14/00

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BY: [illegible]
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DOD Itra.
8 Jan. & 20 June 1974
HQS/AFSC, Date 3/1/77

AF330-20

4 OCT 1948

MEMORANDUM FOR DEPUTY COMMANDING GENERAL, ARMY AIR FORCES

SUBJECT: Capabilities of Army Air Forces Bombing Groups

1. GFB is conducting "an unofficial study to determine comparable weights of bombing efforts of Russian and British Air Forces versus United States Air Forces".
2. The attached study of AAF capabilities showing - tons of bombs per group per month for various radii of action - has been prepared for use by GFB.
3. The B-36, monthly tonnage capabilities, sortie rates and bomb loads used in the study were developed in coordination with AG/AS A-3.

1 Incl:
SO-28-1463 (copy 3) Secret

CHARLES B. THORNTON
Colonel, Air Corps
Chief, Office of Statistical Control

If inclosure is withdrawn, the classification of this correspondence will be downgraded to Restricted in accordance with paragraph 2b, AR 380-5.

DECLASSIFIED

~~SECRET~~

471.6 (500)

DECLASSIFIED
DAGD Mra.
8 Jan. & 20 June 1974
By *SP/1* L.C. Date *3/11/77*

DECLASSIFIED

DECLASSIFIED authority of
Commanding General AAF
25 Jul 45 *ELB*
Date Initials

25 JUL 1945

MEMORANDUM TO CHIEF OF AIR STAFF:

SUBJECT: High Explosive and Incendiary Bomb Requirements

1. Reference inquiry from Mr. Nathan of the Office of War Mobilization and Reconstruction, Mr. Madigan of the Under Secretary of War's Office, and Colonel McManis of the Joint Production Survey Committee, this study, "High Explosives and Incendiary Bomb Requirements" has been prepared. Attached as Tab A is Interim Report on Bomb Requirements.

2. Assistant Chiefs of Air Staff-3, 4, and 5 met to review this Interim Report, its assumptions and conclusions. The Assistant Chiefs recommend that this Interim Report be regarded as an interim study and that further studies outlined in paragraph 6 be directed and that a final report be rendered upon the completion of the additional studies.

3. The Assistant Chiefs of Air Staff recommend that the following new ground rules be established:

- a. Theater stock levels in the Pacific areas be reduced to two months' supply from the present assumption of five months.
- b. Theater stock level for China be reduced to three months' supply from the present six months.
- c. The Zone of Interior stock level for incendiary bombs be omitted entirely.
- d. The United States Zone of Interior stock level for high explosive bombs be reduced from a three months expenditure level of approximately 582,000 tons to a lower level of 200,000 tons.

4. The Assistant Chiefs of Air Staff recommend:

- a. The maximum high explosive bomb output tonnage be set for interim purposes at 184,000 tons per month.
- b. The maximum incendiary bomb output tonnage be set at 80,000 tons a month.
- c. Reduction from these interim limits be determined by the studies suggested in paragraph 6.
- d. The integration of capacities and outputs be determined as a result of studies by types of bomb suggested in paragraph 6.

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3. The Assistant Chiefs of Air Staff reaffirm the proposed ground rules that new production facilities should not be authorized unless they produce actual bombs by the end of 1945. Any exception to this ground rule should be made only on the approval of the Commanding General or the Deputy Commanding General.

6. The Assistant Chiefs of Air Staff-3, 4, and 5 recommend that representatives of their offices meet with representatives of the Division of Statistical Control and the Office of Program Monitoring to review the current planning factors applicable to the VSB with special consideration to the maximum average bomb tonnage per sortie that can be carried. When this group establishes final ground rules and types of bombs and loadings, Assistant Chief of Air Staff-4 should submit detailed requirements by types of bombs to the Army Service Forces thereby integrating required bomb capacity with required outputs. It is expected that this detailed study will lead to a reduction in over-all output requirements.

7. Recommendations:

- a. The attached Interim Report be approved. (Tab A).
- b. Approve recommendations in paragraphs 2, 3, 4, 5 and 6. Action MR's to implement these recommendations are attached for signature. (Tab B).
- c. Interim Report and statement of proposed studies be submitted to the Joint Production Survey Committee for review and transmittal to the White House. Memorandum of transmittal is attached hereto (Tab C).
- d. A copy of the Interim Report and statement of proposed studies be furnished Mr. Madigan of the Office of the Under Secretary of War. Memorandum of transmittal is attached for signature. (Tab D).

HOYT S. VANDENBERG
Lt. General, U.S.A.
Assistant Chief of Air Staff - 3

DECLASSIFIED
~~SECRET~~

DECLASSIFIED
DOD ITR
8 Jan, & 20 June 1974
By: [Signature]

DECLASSIFIED

Maj Weinbrenner/ww/no/72485
Wrtm 19 May 1945

25 MAY 1945

MEMORANDUM FOR GENERAL SOMERVELL:

Subject: Incendiary Bombs, AN-M54

1. Reference is made to your memorandum dated 16 May 1945, copy of which is attached.

2. The desirability of using the AN-M54 incendiary bombs now in storage has been thoroughly investigated. It is not believed advisable to recluster these bombs and ship them to a theater for the following reasons:

a. Exhaustive tests have been conducted by the Chemical Warfare Service on the effect of incendiaries against typical Japanese structures. It was found that the AN-M54 bombs penetrate through Japanese structures to an excessive degree. Also, these tests have shown that the AN-M54 bombs are markedly inferior to other available incendiaries, such as the AN-M69.

b. Because of the high cost and effort required to transport bombs to a theater and then to drop them on the enemy, it is believed that only the best bombs should be used.

3. The AN-M54 bombs have been in storage for a considerable period of time, and it is quite probable that the percentage of duds would be quite high. However, because of the reasons listed in paragraph 2 above, it is not believed worthwhile to even check these bombs for percentages of malfunctions.

4. It is recommended that the AN-M54 bombs now in storage be declared obsolete, and salvaged.

1 Incl:
Memo to Gen. Arnold
dtd 16 May 1945.

Signed

IRA C. BAKER,
Lt. Gen., U. S. Army,
Deputy Commander, Army Air Forces

25 MAY 45
AFSA

DECLASSIFIED

SAS 471.6 487

SAS 471.6 (487)

ADDRESS REPLY TO
COMMANDING GENERAL, ARMY AIR FORCES
WASHINGTON 25, D. C.

~~SECRET~~
DECLASSIFIED



ATTENTION:

HEADQUARTERS, ARMY AIR FORCES
WASHINGTON 25

DECLASSIFIED
By: DOD
18 Jun 80
Date: 3/17/74

18 MAR 1945

*File
MAR*

MEMORANDUM FOR LIEUTENANT GENERAL GILES:

Subject: Aircraft Bombs

1. During the past several weeks, pressure has been brought to bear on the Army by Congressional parties because of alleged over-production of aircraft bombs. At the same time, messages have been received from the ETO and the MTO that supplies of aircraft bombs are insufficient to conduct an air offensive on a scale equal to the potential capacity of the Air Forces in those theaters.

2. The Congressional criticism has been based upon the fact that several times as many tons of bombs have been produced as have been dropped, and that stocks on hand in theaters represent approximately many months' expenditures in tons. At first glance, such figures are apparently indicative of over-production, improper planning, and poor distribution. The underlying causes for such requirements are, of course, to be found in the necessity for supply and stockage of selective items, in the necessity for maintaining pipelines and ready storage stocks along supply routes, and in the necessity for stocking theater depots and air fields to assure that bombs of the several types which may be required are available at the airrome when required. Analyses of supply problems concerning aircraft bombs, which have been compiled by the Under Secretary of War for submission to the interested Congressional agencies, have shown quite clearly why it is impossible to carry on any operation if production is scaled to a one-produced for one-utilized basis. Further, such analyses indicate why the ratio of produced to utilized must be much higher for any operation which demands a selection of items. Since the airplane is by far the most flexible weapon of war in its ammunition load, being able to carry diverse sizes and types of bombs, it is of course expected that the ratio of bombs produced to bombs dropped should be the highest of any ammunition supply. The common factors which create undue production requirements, namely, (a) Adoption of new items to replace those being produced, (b) Changing utilization of types of items presently being produced, (c) Build-up of Continental Reserves, and (d) Immobilization of stocks in theaters or parts of theaters becoming inactive, have been acted upon by the Army Air Forces to minimize this effect upon production as follows:

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Sub 471.6 (45)

~~SECRET~~

Memorandum for Lieutenant General Giles:
Subject: Aircraft Bombs

a. The adoption of new high-explosive bombs has been held almost exclusively to items in the fragmentation-bomb category, and to methods of clustering smaller bombs to allow more efficient loading of aircraft. Since some changes have arisen in utilization and types of fragmentation bombs being employed, some fluctuation has occurred in production and in some stocks on hand, with a resultant overage of a few items which are no longer in use together with a demand for more recently developed similar bombs. However, requirement forecast has been interjected into procurement supervision to the greatest degree possible to minimize over-production of items which are to be temporarily suspended from use. At present, stockage of types of fragmentation bombs not presently in use is appreciable only in four items. The total tonnage involved represents a relatively small percentage of total production of high-explosive bombs.

b. The trends of utilization of the various types of bombs are being surveyed continually to adjust bomb production between types within the flexibility limit of facilities to meet, as closely as possible, anticipated expenditure demands. The impossibility of adjusting all facilities between all types of bombs, together with sudden fluctuations in expenditure, which is governed by the target involved, have caused periodic unbalance of production by types compared with expenditure. It is believed, however, that these fluctuations are within reason when consideration is given to the available planning data.

c. No Continental reserve of bombs currently being used has been accumulated other than the small working balances which are required to accomplish regular flow to overseas theaters. A strategic reserve is considered mandatory to guarantee continual supply of each item equal to fluctuating demands. Sufficient quantities have been programmed for production to create such a reserve, in the event expenditure continued at the rate apparent when programming was accomplished. However, increased theater demands, coupled with the inability of existing facilities to produce programmed quantities of every item, have obviated the possibility of building reserves in any of the more popular types.

d. Progression of the offensive world-wide, particularly in the SWPA, has immobilized certain stocks in theaters or in parts of theaters which have become inactive. The "roll-up" of these stocks is largely a problem of transportation. Although some stocks are not now considered to be available for movement or of sufficient quantity in critical items to warrant shipping allocation, stocks are being reclaimed

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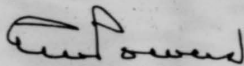
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Memorandum for Lieutenant General Giles:
Subject: Aircraft Bombs

and replaced in supply channels wherever possible. In this connection, a commission from this Headquarters has just returned from the SWPA. Action has been initiated to analyze and to move to advantageous locations the large stocks, which this commission has reported to be in the South Pacific Islands.

3. The present critical shortages of aircraft bombs, which are reported by ETO and MTO, exist in one or two specific items. This condition has been created by the fact that recently chosen targets can be most effectively reduced, in the opinion of the theater Air Forces, by the exclusive use of these items of which the most popular is the 500-lb General Purpose Bomb. This has caused an unpredictable unbalance of supply. It would be most desirable, from an operating standpoint, to have on hand in the theaters a supply of each type of bomb equal to the total potential of the theater Air Forces during the period of time against which stockage is made. This would require from 10 to 12 times as much initial production, storage space, and handling personnel as under the present system of stocking against experience usage rates. The present overall production of approximately 190,000 tons monthly of high-explosive bombs should be sufficient to meet the overall tonnage expenditures at present world-wide operating rates. However, any concentrated usage by the larger theaters of one or two types will create shortages in these items which may not be offset by theater levels, and cannot be offset immediately from production. The ETO has been requested to furnish this Headquarters a forecast of expenditures, which will allow production and supply to be geared more closely to its anticipated requirements. Such a forecast was recently received from the MTO.



E. M. POWERS
Brigadier General, U. S. A.
Deputy Asst. Chief of Air Staff,
Material and Services

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DOD Use.
8 Jan. & 20 June 1974
By: ~~MAJ/ELC~~ Date: 3/11/77

DECLASSIFIED

19 March, 1945

*File
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MEMORANDUM FOR LIEUTENANT GENERAL GILES:

Subject: Aircraft Bombs

1. Pressure has been brought to bear on the Army by Congressional parties because of alleged over-production of aircraft bombs. At the same time, messages have been received from the ETO and the MTO that supplies of aircraft bombs are insufficient to conduct an air offensive on a scale equal to potential capacity of the Air Forces in those theaters.

2. Congressional criticism has been based upon the fact that several times as many tons of bombs have been produced as have been dropped, and that stocks on hand in theaters represent approximately many months' expenditures in tons. Underlying causes for such requirements are, of course, to be found in the necessity for supply and stockage of selective items, for maintaining pipelines and ready storage stocks along supply routes, and for stocking theater depots and air fields to assure that bombs of the several types which may be required are available at the airbase when required. Analyses of supply problems concerning aircraft bombs, which have been compiled by the Under Secretary of War for submission to the interested Congressional agencies, have shown quite clearly why it is impossible to carry on any operation if production is scaled to a one-produced-for-one-utilized basis. Further, such analyses indicate why the ratio of produced to utilized must be much higher for any operation which demands a selection of items. The common factors which create undue production requirements namely, (a) Adoption of new items to replace those being produced, (b) Changing utilization of types of items presently being produced, (c) Build-up of Continental Reserves, and (d) Immobilization of stocks in theaters or parts of theaters becoming inactive, have been acted upon by the Army Air Forces to minimize this effect upon production as follows:

a. The adoption of new high-explosive bombs has been held almost exclusively to items in the fragmentation-bomb category, and to methods of clustering smaller bombs to allow more efficient loading of aircraft.

b. Trends of utilization of the various types of bombs are being surveyed continually to adjust bomb production between types within the flexibility limit of facilities to meet, as closely as possible, anticipated expenditure demands. The impossibility of adjusting all facilities between all types of bombs, together with sudden fluctuations in expenditure, which is governed by the target involved, have caused periodic unbalance of production by types compared with expenditure. It is believed, however, that these fluctuations are within reason when consideration is given to the available planning data.

c. No Continental reserve of bombs currently being used has been accumulated other than the small working balances which are required to accomplish regular flow to overseas theaters. A strategic reserve is considered mandatory to guarantee continual supply of each item equal to fluctuating demands. Sufficient quantities have been programmed for production to create such a reserve.

d. Progression of the offensive world-wide, particularly in the SWPA, has immobilized certain stocks in theaters or in parts of theaters which have become inactive. The "roll-up" of these stocks is largely a problem of transportation. Although some stocks are not now considered to be available for movement or of sufficient quantity in critical items to warrant shipping allocation, stocks are being reclaimed and replaced in supply channels wherever possible.

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Memorandum for Lieutenant General Giles:
Subject: Aircraft Bombs

3. The present critical shortages of aircraft bombs, which are reported by ETO and MTO, exist in one or two specific items. This condition has been created by the fact that recently chosen targets can be most effectively reduced, in the opinion of the theater Air Forces, by the exclusive use of these items of which the most popular is the 500-lb General Purpose Bomb. This has caused an unpredictable unbalance of supply. It would be most desirable, from an operating standpoint, to have on hand in the theaters a supply of each type of bomb equal to the total potential of the theater Air Forces during the period of time against which stockage is made. This would require from 10 to 12 times as much initial production, storage space, and handling personnel as under the present system of stocking against experience usage rates. The ETO has been requested to furnish this Headquarters a forecast of expenditures, which will allow production and supply to be geared more closely to its anticipated requirements. Such a forecast was recently received from the MTO.

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DOD Form
8 Jan. & 20 June 1974
By: *EM/PLC*; Date: *3/10/77*

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Letter from General Knerr in Regard t the Bomb Situation in ETO

TO: General Echols
FROM: Chief of the Air Staff

DATE 13 Apr 45
COMMENT NO. 2
FWT/ova/5265

SAS 471.6 (476)

It is desired that a letter be prepared to General Spaatz based on the proposed cable bringing him up to date on the Giles-Sumerville conversation, acknowledging receipt of General Knerr's letter on the same subject, and asking General Spaatz to pass on the information to Knerr. Attached proposed letter to General Knerr will not be dispatched.

3 Incls w/c
Added—ltr to Gen. Giles
frn Gen. Knerr and
draft of proposed ans.

PATRICK W. TIMBERLAKE,
Brigadier General, U.S.A.,
Deputy Chief of Air Staff.

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Disped.
13 Apr 45

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DOD IAW
8 Jan. & 20 June 1974
By: AN/ACLC; Date 3/17/77

AFDAO-2
Lt Col F W Walker Jr
naaf/72345/16 Apr
Rewritten: AFDA5
PWTimberlake/eva/5265

~~SECRET~~

20 APR 1945

General Carl Spaatz,
CG, U.S. Strategic Air Forces in Europe,
APO #633, a/o PM, New York, N.Y.

Dear Today:

On Ira's return he discussed the bomb situation with me at some length. He covered the whole story from your point of view and indicated its seriousness. This letter is to bring you up to date and to point out what we have done and what we intend to do to remedy the situation.

The recent marked increase in consumption of aircraft bombs in ETO made possible through causes of which we are both fully aware has been accompanied by sharp increases in consumption in MTO, Twentieth Air Force in the Pacific, and in demands upon U.S. production by the British. These demands aggregate more than present peak production. Since maximum possible production has not allowed an accumulation of reserve stock, we have been and are faced with the problem of rationing to meet, as closely as possible, the more important operations.

In the matter of distribution ETO and MTO are being considered together as the top priority theaters, although it would be necessary to eliminate supply to all other theaters in order to support the present full potential of the Allied Air Forces in ETO and MTO. This, of course, is impossible; however, releases to other theaters have been held to a bare minimum in order to make available a maximum quantity of the more desirable bombs to the European Theater. Further, continuous review is being made to redistribute, within and between Pacific theaters, to gain maximum utilization of stocks. Bombs to support the Twentieth Air Force are being picked up from all Pacific Theaters where they have become immobilized or where usage rates do not fully justify their retention. The small quantities and the types of bombs involved, the length of haul from the Pacific to European theaters, and the fact that the use of these bombs in the Pacific by the Twentieth Air Force allows more bombs to be shipped from the U.S. to Europe have precluded the shipment of Pacific stocks to Europe.

We have requested the Army Service Forces to more than double the presently scheduled 1945 bomb production rate during 1945. This will be needed to support planned post-V-E Day operations in the Pacific as well as worldwide two-front operations at their presently

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SAS 471.6 (474) by SAS.

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planned rates. We have brought and are continuing to bring the importance of this request to the attention of the Chief of Staff and to Army Service Forces. We have been advised by Army Service Forces that such an increase is utterly impossible at any early date, and that no appreciable increase can be gained without the establishment of considerable new facilities with delays inherent therein. A full report and estimate is forthcoming from Army Service Forces within a few days outlining the necessary program to double present production and the time required for accomplishment. We hope to get this program approved.

Our records indicate that, with your predicted expenditures during April and May, your stock on hand on 1 June should be approximately 40,000 tons higher than on 31 March with some of this increase in 500-lb and 1000-lb bombs which you consider most desirable.

We are doing everything possible here to make available to the European theaters the maximum number of usable bombs, to increase production to support the desired operations of our world-wide Air Forces, and to make available wherever possible all immobilized or maldistributed stocks. Meanwhile, estimates as stated in your cable, UA 66252 of 21 March, covering anticipated expenditures by types, revised as early as you can predict change, will be of inestimable value because it will permit us to use your forecast instead of your past experience in production planning and in making bomb releases.

I have received two letters from Hugh Enerr on the bomb situation and should appreciate your passing on the information contained herein to him if he is still there.

Sincerely,

Signed

BARNY W. GILES,
Lieutenant General, U.S.A.,
Deputy Commander, Army Air
Forces.

DISPATCHED
20 APR 1946
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DOD ltr.
8 Jan. & 20 June 1974,
By: *AA/RC*: Date *3/1/77*

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Letter from General Egan in Regard to the Bomb Situation in HPO

General Timberlake

17 APR 1945

General Echols

³
GFR/mst/EJMS

1. There is attached herewith, as inclosure No. 5 (Tab "A"), a letter to General Spartz which has been prepared in accordance with your request contained in Comment No. 2, above.
2. It is recommended that the attached letter be signed and forwarded.

(Signed) O. P. Echols

5 Incls
Incls 1 - 4, no change
Added Incl 5 (Tab "A")
Ltr to General Spartz

O. P. ECHOLS
Major General, U.S.A.
Asst Chief of Air Staff
Material and Services

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AFDAO
Lt Col Walker/72365

REWRITTEN: AFDA8
PWT/ova/5265

30 March 1945

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DOD ltr.
8 Jan. & 20 June 1974
By ~~SP-1~~ E.L.C.; Date 3/17/77

Major General John I. Cannon,
Mediterranean Allied Air Forces,
APO #650, c/o Postmaster,
New York, New York.

Dear Joe:

Barney received a letter dated 19 March 45 from Ira stating your critical situation in supply of 500-lb General Purpose Bombs. Since he has arrived in this headquarters, I am forwarding the reply to you.

The bomb supply problem has been brought to the personal attention of General Arnold and General Marshall, and we are doing our utmost to speed to the theater all the bombs which can possibly be manufactured. The shortage of 500-lb General Purpose Bombs is caused by the fact that the targets which have presented themselves during the past few months throughout the European theater apparently can be reduced most effectively by bombs of this size; and, of course, good weather has increased all expenditures.

Eighty per cent of all the 500-lb bombs which have been released during the past two months have been released to ETO and MTO. In order to do this, the other theaters have been held to a bare minimum of expenditures of this type bomb.

Every effort is being made to increase production; however, since facilities are now at top capacity, it is doubted very much if any appreciable increase can be obtained at any-early date.

In our message, WARI 51911, of 12 March 45, we advised that we hoped to be able to release 120,000 of the 500-lb bombs for May delivery in your theater. Actually, we have been able to release 150,000.

I assure you that the Mediterranean will be given all possible consideration in allocation of 500-lb bombs and all other aircraft ammunition, and that we will continue to expend every effort to furnish you with aircraft ammunition which will make it possible for you to accomplish the most satisfactory results.

Sincerely yours,

Signed

PATRICK W. TIMBERLAKE,
Brigadier General, U.S.A.,
Deputy Chief of Air Staff.

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31 MAR 1945
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19 March 1945

Lieutenant General Barney H. Giles
Chief of the Air Staff
Headquarters Army Air Forces
The Pentagon
Washington, D. C.

Dear Barney -

A careful study of our bomb supply position shows that we have been receiving only a small portion of the quantities of 500 pound general purpose bombs in this theatre that we have requested. Although we have managed to carry on through the winter months with these short shipments, such will not be the case with the coming of spring and fine flying weather. Between the first of March and the first of May we have available to us a total of 314,000 of these bombs (including on hand and due in), and our estimated expenditures during the same period is 241,000 which will leave us a balance of 73,000 on 1 May. Considering that our authorized level, two and one-half months supply, is 250,000, this is not a good situation.

Your message, WARI 51911 of 12 March, has been received and we realize this situation is world-wide. However, I would like to request that we be given all possible consideration.

We have on hand quite good stockages of other types of bombs such as 1000 pound general purpose, 250 pound general purpose, and 100 pound general purpose, and of course we will substitute these for 500 pounders where practicable. However, the 500 pounders are considered the most desirable for the majority of targets on which we work, such as oil refineries, marshalling yards, and industrial plants.

It is possible that a revision of allocations might alleviate this situation here and in the ETO where the critical and decisive phase of the European war is now being fought.

I would greatly appreciate anything that you might be able to do to help us to obtain a greater supply of these bombs in this theatre.

Sincerely

IRA C. EAKER
Lieutenant General, U.S.A.
Commanding

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DOD ltr

3 Jun 1980 June 1974

By: 10000; Date: 3/11/77

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HRM/mh/73292
#187-6
13 March 1945

MEMORANDUM FOR THE CHIEF OF AIR STAFF:
ATTENTION: General Head

SUBJECT: Expenditure of Bombs For Demonstrations and Joint-Training Exercises.

DISCUSSION

1. War Department letter, file AG 471 (3-3-45), GH-7-6, dated 11 March 1945, subject: "Ammunition for Demonstrations" was sent to the Commanding General, Army Air Force, Army Ground Force, Army Service Force, and Third Air Force. This letter authorized the expenditure of twelve (12) 250 pound demolition bombs, or prescribed substitutions, and thirty (30) fragmentation parachute bombs, 25 pounds per demonstration for Divisions and like organizations. War Department memorandum, dated 26 August 1943, subject: "Combined Air-Ground Training" authorized the same expenditures for demonstrations at service schools.
2. Dated June 1944, a TMI was sent to each Continental Air Force from Headquarters Army Air Force (Air Ordnance Officer), to discontinue use of bombs for demonstrations and training purposes until further notice, due to critical nature of supply of such items.
3. Headquarters Army Ground Force (Major Overbeck, G-3 Division) has made inquiry by telephone as to reasons why no bombs were obtainable by III Tactical Air Command for demonstrations at service schools and have stated that employment of live ammunition was desirable for such exercises.
4. The War Department authorization to use bombs has not been rescinded or suspended. The suspending or rescinding of said War Department directive would furnish the best reply to the Ground Force request for information reference employing bombs in future joint exercises.

SMS 471.6 (1172)

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DOD ltr.
& 20 June 1974
By: [unclear] LC: Date 2/17

SMS 471.6 (1172)

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RECOMMENDATIONS

1. That attached memorandum to the Chief of Staff requesting suspension or rescission of War Department authorizations be signed and forwarded.

2. That, if action recommended above is favorably considered, the Assistant Chief of Air Staff, USA, (Air Ordnance Officer) be directed to notify the Assistant Chief of Air Staff, Training, when the supply of tanks is such that expenditures for demonstrations and joint training exercises is considered justifiable.

3. That, if action recommended above is ^{NOT} favorably considered, the Assistant Chief of Air Staff, USA, be directed to inform the Third Air Force and the Assistant Chief of Air Staff, Training, that the expenditure of tanks is authorized in accordance with War Department letter and memorandum referred to in paragraph 1 of discussion.

COORDINATES

AFOCR _____
Requirements _____
Asst. for Air Forces _____
AFASD _____
Air Ordnance Officer _____

1 Enclosure:
Memo to Chief of
Staff, subj: Same
as above.

PAUL G. ANDERSON
Colonel, Air Corps
Adding
Assistant Chief of Air Staff,
Training

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MEMORANDUM FOR THE CHIEF OF STAFF:

SUBJECT: Expenditure of Bombs For Demonstrations and Joint Training Exercises.

DISCUSSION

Present requirements in the combat theaters make it inadvisable to expend bombs for demonstrations and joint training exercises in the United States.

RECOMMENDATIONS

That the authorization to expend ammunition, other than Caliber .50, Grade AG, linked (4-1), as listed in (a) War Department letter, file AG 471 (3-3-43), OB-P-C, dated 11 March 1943, subject: "Ammunition for Demonstrations," and (b) War Department memorandum, file WDCT 353 (17 July 1943), dated 26 August 1943, subject: "Combined Air-Ground Training," be rescinded or suspended until such time as the supply of bombs is such as to justify their use for demonstrations and joint exercises.

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8 Jan. # 20 June 1974

ALL/LC: Date 3/4/77

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Brief for General Reed on Standard Expenditures for Demonstrations²

1. Purpose:

To obtain agreement of War Department authorizations with Army Air Force instructions.

2. Expenditure under War Department authorizations

- 324 - 500 pound bombs per year for demonstrations at service schools,
- or
- 304 - 300 pound bombs per year for demonstrations at service schools,
- or
- 648 - 100 pound bombs per year for demonstrations at service schools,
- and
- 810 - 25 pound frags
- and
- 270,000 - Cal. 50 AE

3. Opinion: The small expenditure seems justified, even though the bombs are a critical item. Air Ordnance Officer does not agree with my opinion, but GSG does agree.

ROK H. DONALDSON
Colonel, Air Corps
Chief, Tactical Air Force
and Joint Training Branch

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DD Form 138
1 Jun 60
By: LC Date: 3/17

AFDAS
FWT/eva/5269

DECLASSIFIED

21 March, 1945

Lieutenant General Carl Spaats,
A.P.O. #633, c/o Postmaster,
New York, New York.

Dear Toody:

I am concerned over the tone of your cablegram UA-65885, dated 15 March, which pertained to the long-standing controversy over your supply of bombs. No useful purpose can be accomplished by such a message as it tends to break down rather than build up an effective workable relationship between your staff and this Headquarters.

That I should be concerned was confirmed by General Marshall who specifically mentioned the tone and tenor of the last paragraph of your message and asked me to tell you that he assumed it was prepared by an over-zealous ordnance officer and had been dispatched from your headquarters without too careful screening by you or your staff.

The receipt of your message and the conversation with General Marshall occurred before General Arnold's return and, under the circumstances, I see no need for bringing it to his attention. I do feel, however, that you should personally go into this bomb situation and give me a realistic appraisal. You know that we are trying our damndest to give you the types and quantities of bombs that you need. On the other hand, other production programs and other theaters must be considered, and it is most improbable that your ultimate desired requirements can ever be met.

I will expect to hear from you in the near future. In the meantime, if I can help in any way, such as making available key ordnance and distribution supervisory personnel, please let me know.

Sincerely yours,

Signed

BARNEY W. GILES,
Lieutenant General, U.S.A.,
Deputy Commander, Army Air Forces.

DISPATCHED
22 MAR 1945
AFSA

DECLASSIFIED

DOD ltr

8 Jan. & 20 June 1976

By: [unclear] LC; Date: [unclear]

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(470)

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AFDAO-2

25

22 FEB 1945

MEMORANDUM FOR THE CHIEF OF AIR STAFF:

Subject: Bomb Requirements

I. Discussion

1. The ETO has requested considerable increase in theater stock levels of certain aircraft bombs, based upon anticipated increased operations within present capabilities and upon desirability of having a choice of bombs available. Such increase in ETO stock levels requires appreciable increased production.

2. Under present policy, the War Department General Staff is the agency which must approve all theater stock levels.

3. The attached Memorandum for the Asst Chief of Staff, GFD, WDGS, requests approval of the new ETO levels and of increased bomb production. It outlines in detail the change in levels requested, and states the resultant increase in production which must be effected.

4. This proposal has been coordinated with AC/AS, GCR, and AC/AS, Plans. It is considered that no further coordination in this Headquarters is required.

II. Action recommended

It is recommended that the attached Memorandum for the Asst Chief of Staff, GFD, WDGS, be signed and forwarded.

(Signed) O. P. Echols

1 Incl
Memorandum for the
Asst Chief of Staff
GFD, WDGS, sub: "Bomb
Requirements," w/4 incls

O. P. ECHOLS
Major General, U.S.A.,
Asst. Chief of Air Staff,
Materiel and Services

SAS 471.6 (468)

File
471.6 (468)

DECLASSIFIED
DOD ltr.
8 Jan. & 20 June 1974
By: [signature] / LC: Date 5/1/87

DECLASSIFIED

APR Lt Col. Fix/ejj/2656
APBCR Col Roberts/dr/6765
Wrtm 19 Feb 1945

DECLASSIFIED

DOD Hqs.

8 Jul 50 June 1974
M4/MP Date: 3/4/77

28 FEB 1945

MEMORANDUM FOR THE ASSISTANT SECRETARY OF WAR FOR AIR:

Subject: Development and Use of Fire Bombs (Napalm).

1. The name fire bomb is used to describe incendiary munitions, which have been made by field filling of fighter belly tanks or 55 gallon oil drums with a mixture of napalm and gasoline. Fire bombs constitute the use of fire as a weapon by bringing a volume of fire to the target, in distinction to the standard small incendiary bombs, which are used to bring a source of fire that can ignite inflammable objects. Operational use of fire bombs by all Air Forces has proven exceptionally effective against a wide variety of targets, and this weapon can be considered an item of major importance.

2. The development of fire bombs has been almost completely an Army Air Forces project throughout, with most of the work accomplished by the Proving Ground Command at Eglin Field, Florida. The first consideration of using droppable gasoline tanks as fire bombs was in March 1943, at which time the use of standard tanks with plain gasoline filling was tested. A report was prepared and distributed to the theaters, but only very limited use was made of this weapon because of the poor functioning characteristics of straight gasoline. Also some testing was done by Army Air Forces personnel in the theaters using 55 gallon oil drums and crude oil mixtures. In the spring of 1944 additional work was done at Eglin Field on the 55 gallon oil drum project, and during this time the idea of using napalm mixed with gasoline was suggested. A practical means of accomplishing this mixing in the field was developed in conjunction with these tests, and napalm was immediately used as a filling for the fighter belly tank. This was completed in June and constitutes what is now known as the fire bomb. The Navy, which had been following the tests at Eglin, were interested in the project, and requested that tests be conducted for them using Navy planes and tanks. Therefore, the final phase of the tests was conducted as a joint Army-Navy project at Eglin.

3. A special mission of Army Air Forces officers was sent to the ETO to introduce the fire bomb to that theater, and the first actual use of napalm bombs was on the 17 July 1944 by P-38's of the Ninth Air Force against a target in France. The Navy sent a project officer to the Pacific who, operating through channels, initiated the use there by P-47's of the Seventh Air Force on 28 July 1944 against targets on Tinian. Other project officers have been sent to the Southwest Pacific to assist in the initiation of their use of fire bombs. A completely detailed training film was prepared and

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distributed to all Air Forces.

4. Over 2750 fire bombs, representing approximately 1500 fighter sorties were employed by the Air Fir Forces during December 1944. Usage in some theaters is still curtailed by limited supplies. However, shipments in transit will eventually permit the employment of over 10,000 fire bombs a month. This can be increased further if the theaters establish requirements.

5. The fire bomb has been principally a fighter weapon, but tests have been carried out to produce a munition that can be used from high altitudes in heavy bombardment airplanes. This has included the use of proximity fuses to give air burst functioning to prevent excessive cratering. These tests have emphasized the economy of effort in using fighters, as a fighter airplane can carry almost the same payload of napalm gel as can be carried internally in B-17's, or B-24's. While the high altitude development has been only moderately successful, a specially trained project officer has been sent to the STO to assist in tests there and in the initiation of any operational use that they may desire to make. The T-51 proximity fuse which is just becoming available from production is required for this application. Tests are being conducted at Eglin Field also on 410 gallon B-17 bomb bay tanks and British made fighter tanks to adapt them for fire bomb use.

BARNEY M. GILES,
Lieutenant General, U. S. Army
Deputy Commander, Army Air Forces and
Chief of Staff

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23 FEB 1945
AGC

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AFM Lt Col Fix/ejj/2656
AFSCM Col Roberts/dr/6765
Wrtm 19 Feb 1945

DECLASSIFIED
DOD Ver.
8 Jan. 20 June 1974
By: *AF/ST/CS Data 34477*

28 FEB 1945

MEMORANDUM FOR THE ASSISTANT SECRETARY OF WAR FOR AIR:

Subject: Development and Use of Fire Bombs (Napalm).

1. The name fire bomb is used to describe incendiary munitions, which have been made by field filling of fighter belly tanks or 55 gallon oil drums with a mixture of napalm and gasoline. Fire bombs accentuate the use of fire as a weapon by bringing a volume of fire to the target, in distinction to the standard small incendiary bombs, which are used to bring a source of fire that can ignite inflammable objects. Operational use of fire bombs by all Air Forces has proven exceptionally effective against a wide variety of targets, and this weapon can be considered an item of major importance.

2. The development of fire bombs has been almost completely an Army Air Forces project throughout, with most of the work accomplished by the Proving Ground Command at Eglin Field, Florida. The first consideration of using droppable gasoline tanks as fire bombs was in March 1943, at which time the use of standard tanks with plain gasoline filling was tested. A report was prepared and distributed to the theaters, but only very limited use was made of this weapon because of the poor functioning characteristics of straight gasoline. Also some testing was done by Army Air Forces personnel in the theaters using 55 gallon oil drums and crude oil mixtures. In the spring of 1944 additional work was done at Eglin Field on the 55 gallon oil drum project, and during this time the idea of using napalm mixed with gasoline was suggested. A practical means of accomplishing this mixing in the field was developed in conjunction with these tests, and napalm was immediately used as a filling for the fighter belly tank. This was completed in June and constitutes what is now known as the fire bomb. The Navy, which had been following the tests at Eglin, were interested in the project, and requested that tests be conducted for them using Navy planes and tanks. Therefore, the final phase of the tests was conducted as a joint Army-Navy project at Eglin.

3. A special mission of Army Air Forces officers was sent to the STO to introduce the fire bomb to that theater, and the first actual use of napalm bombs was on the 17 July 1944 by P-38's of the Ninth Air Force against a target in France. The Navy sent a project officer to the Pacific who, operating through channels, initiated the use there by P-47's of the Seventh Air Force on 26 July 1944 against targets on Tinian. Other project officers have been sent to the Southwest Pacific to assist in the initiation of their use of fire bombs. A completely detailed training film was prepared and

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distributed to all Air Forces.

4. Over 2750 fire bombs, representing approximately 1500 fighter sorties were employed by the Air Fir Forces during December 1944. Usage in some theaters is still curtailed by limited supplies. However, shipments in transit will eventually permit the employment of over 10,000 fire bombs a month. This can be increased further if the theaters establish requirements.

5. The fire bomb has been principally a fighter weapon, but tests have been carried out to produce a munition that can be used from high altitudes in heavy bombardment airplanes. This has included the use of proximity fuses to give air burst functioning to prevent excessive cratering. These tests have emphasized the economy of effort in using fighters, as a fighter airplane can carry almost the same payload of napalm gel as can be carried internally in B-17's, or B-24's. While the high altitude development has been only moderately successful, a specially trained project officer has been sent to the BTU to assist in tests there and in the initiation of any operational use that they may desire to make. The T-51 proximity fuse which is just becoming available from production is required for this application. Tests are being conducted at Eglin Field also on 410 gallon B-17 bomb bay tanks and British made fighter tanks to adapt them for fire bomb use.

BARNEY M. GILES,
Lieutenant General, U. S. Army,
Deputy Commander, Army Air Forces and
Chief of Air Staff

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23 FEB 1945
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DDI Form
8 Jan. & 20 June 1974
By: *AM/PLC*; Date: *3/17/77*

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By Authority of
Lt Col *FLX/MS/MS56*
on 20 Feb 85
Date _____ Initial _____

24 FEB 1945

Air Commodore W. R. Buckle
British Air Commission
1785 Massachusetts Avenue, N. W.
Washington 6, D. C.

Re: *22-3-4*
8248/1838

Dear Air Commodore Buckle:

Your cooperation in arranging for officers of this Headquarters to visit Royal Air Force stations to make a detailed study of your large bomb use is greatly appreciated.

It is expected that these officers will leave this country about 1 March 1945 by air and will arrive in London shortly thereafter. The following officers are leaving at that time:

Colonel V. C. Huffsmith representing Army Air Forces Board
Lt. Colonel D. G. Hawes representing AAF Proving Ground Command

One other officer, Colonel J. A. Gibbs representing Assistant Chief of Air Staff, Material and Services, will be in the theater and will contact this mission and will participate in the activities of this group.

I trust the proposed date will be satisfactory with your people, and again thank you for your cooperation.

Sincerely yours,
Signed

BARNEY M. GILES,
Lieutenant General, U. S. Army,
Deputy Commander, Army Air Forces and
Chief of Air Staff

24 FEB 1945

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8 Jan. & 20 June 1994
By: *MA/MLC*; Date: *3/11/77*

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10 FEB 1945
Date

slm
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18 FEB 1945

MEMORANDUM TO THE CHIEF OF AIR STAFF:

Subject: JB-2 Program for Launching 1000 Bombs per Month

1. Reference is made to the plan recently approved for the launching of 1000 JB-2 bombs per month.
2. Various staff agencies in Headquarters, Army Air Forces will have duties and responsibilities in connection with implementing this program. A directive stating the responsibilities of each is now believed proper.
3. It is recommended that the attached *PAR* be signed and dispatched.

1 Incl
#1 - *PAR*, same subject as above,
for signature.

Signed

WILLIAM F. MOORE
Colonel, G.S.C.
Acting, Asst. Chief of Air Staff
Operations, Commitments & Requirements

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8 JAN 20 20 2004
By: ~~SP-1~~ C: Date: 3/1/07

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8 FEB 1945

Sir Richard Sairey
Director General
British Air Commission
1785 Massachusetts Avenue, NW
Washington, D.C.
Dear Sir Richard:

The successful British use of the 12,000 pound tall boy bomb, and the contemplated use of the 22,000 pound tall boy bomb have been followed with interest. The Army Air Forces are initiating a program on very large bombs of the same size and type.

It is believed that a thorough study of your development, experience and test procedures on these bombs as well as an analysis of your operational usage would be invaluable to the Army Air Forces in their program. It is requested that permission be granted to send a commission of three or four officers on temporary duty to England to study in detail all phases of your large bomb program. It is expected that this commission would be interested in studying the operational planning, usage and results, your testing procedures, and discussing the problems pertaining to aircraft armament and modification. Approximately one month should be required for this project.

The commission could be sent at any time convenient to your people, but it would be desirable if the visit could be arranged for the near future.

Sincerely yours,

Signed

BARNEY M. GILES,
Lieutenant General, U. S. Army,
Deputy Commander, Army Air Forces and
Chief of Air Staff

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8 FEB 1945

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DOD Ltr.
8 Jan. & 29 June 1974
By: *SP1/CL1*, Date: *3/4/77*

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Heavy Bomb Test Program

Chief of Air Staff

8 FEB 1945

Asst C/AS, Operations, Commitments and Requirements

Lt Col Fix/slj/2656

1. The Army Air Forces Board has submitted tentative requirements for a service testing program on the large bombs of which operational use is being projected. This includes the 4250 pound rocket assisted concrete piercing bomb and the 12,000 and 22,000 pound tall boy bombs. The test requirements in airplanes, man power to conduct the tests, and funds for construction of appropriate targets are very extensive.

2. It is considered that these tests are highly desirable and actually essential to some extent prior to the initiation of combat usage of very large bombs. However, it is believed that a detailed study of British experience in development, testing, and operational use can produce such data that would materially reduce the requirements for tests in this country. It is believed that a thorough study by a commission of qualified officers sent to U.K. could eliminate much of the testing necessary in this country and could serve as an excellent basis for establishing of the future test program here. It is understood, also, that a comprehensive series of tests are being planned on actual captured targets in France such as sub pens and fortresses, and such valuable data could be obtained from these tests.

3. It is recommended that a commission of three or four officers composed of representatives from the Army Air Forces Board, Orlando, the Proving Ground Command, Eglin Field, and ATSC be sent to the ETD to conduct this study. One of the officers should be thoroughly qualified in the tactical and operational usage problems, one qualified in testing procedures, and one qualified in the technical aircraft and armament details.

4. It is recommended that the attached letter to the British Air Commission initiating action to carry out the above suggestion be signed.

1 Incl
Ltr to British
Air Commission

Signed
WILLIAM F. MCKEE
Colonel, U.S.A.
Acting Asst. Chief of Air Staff,
Operations, Commitments & Requirements

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E.O. 11652
11 Jan. 60 20 June 1974
By: ~~AW/PLC~~; Date: 3/11/77

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AFRDB
Lt Col Fix/alj/7656
Room 4E 120
Wttn 3 Feb 45

The British Air Commission
1705 Massachusetts Avenue, NE
Washington, D. C.

Re: Study of British Development and Usage of Very Large Bombs

Gentlemen:

The successful British use of the 12,000 pound tall boy bomb, and the contemplated use of the 22,000 pound tall boy bomb have been followed with interest. The Army Air Forces are initiating a program on very large bombs of the same size and type.

—It is believed that a thorough study of your development, experience and test procedures on these bombs as well as an analysis of your operational usage would be invaluable to the Army Air Forces in their program. It is requested that permission be granted to send a commission of three or four officers on temporary duty to England to study in detail all phases of your large bomb program. It is expected that this commission would be interested in studying the operational planning, usage and results, your testing procedures, and discussing the problems pertaining to aircraft armament and modification. Approximately one month should be required for this project.

The commission could be sent at any time convenient to your people, but it would be desirable if the visit could be arranged for the near future.

Sincerely yours,

Rewritten in 978AS
6 Feb. 45
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C/AS

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DOD ITR
8 Jan, & 20 June 1974
By: *[signature]* Date: 3/11/77

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Central Forces

MEMORANDUM TO CHIEF OF AIR STAFF:

Subject: Development and Use of Fire Bombs

28 JAN 1945

1. The rapidly increasing use of fire bombs in every combat theater confirms that this is a weapon of major importance. Over 2750 fire bombs, representing approximately 1500 fighter sorties carrying fire bombs alone were employed by the AAF during December 1944. Extremely large requisitions for additional supplies that have been placed by the theaters indicate greatly expanded use in the future. As the fire bomb has proven not only an effective combat weapon, but a tremendously profitable one in terms of logistics, training requirements, etc. that were required to mount this large scale use, there are several phases that are particularly significant and worthy of emphasis.

a. Development - The development was almost completely an AAF project throughout, and was accomplished by the Proving Ground Command at Eglin Field, Florida. The first consideration of using droppable gas tanks as fire bombs was in March 1943, at which time the use of standard tanks with plain gasoline filling was tested. This is covered by Eglin Field reports 1-42-53 dated 29 March 1943 and 1-42-53 Supplement, dated 27 September 1943. These reports were distributed to the theaters, and the igniters developed in these tests were shipped to the theaters. In spring of 1944 interest was aroused in the use of 55 gallon oil drums as fire bombs. During the experimental work that was conducted at Eglin Field on this project, the idea of using napalm mixed with gasoline was suggested. As this filling immediately proved superior to anything tried, the idea was immediately advanced that it be used in droppable gasoline tanks also. Eglin Field personnel developed a practical means of mixing napalm and gasoline in the field. At this time the Navy, which had been following the 55 gallon oil drum project through their liaison officer at Eglin, requested that tests be conducted for them using Navy planes and tanks. Therefore, to meet the Navy request the official tests on the fighter tank phase were conducted as a joint Army-Navy project, at Eglin Field, in which both Army and Navy airplanes were used.

b. Combat Use - The first actual combat use of napalm bombs was on 17 July 1944 by P-38s of the Ninth Air Force against a target in France. The Navy sent a project officer to the Pacific, who operating through channels, initiated the use there by P-47s of the Seventh Air Force on 28 July 1944 against targets on Tinian.

c. Training Requirements - The use of fire bombs in all theaters has been accomplished without special training for operational units, and with no interference to operations. A minimum of training has been given to Chemical Officers on the mixing technique.

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d. Logistics - The fire bomb uses items mainly available in the theater such as fighter belly tanks, which are actually in excess in most places, and bulk oil gasoline. Only the igniters and the nozzles, which represent a small part in tonnage, had to be shipped.

e. Troop Basis - The Air Chemical companies in the theater have assimilated the service functions without any burden on existing troop basis requirements.

2. The fire bomb is almost entirely a fighter weapon. Developments and tests are proceeding on high priority to attempt to attain fire bombs suitable for high altitude use from bombardment airplanes.

WILLIAM F. MCKEE
Colonel, G.S.C.
Acting, Asst. Chief of Staff
Operations, Comments & Requirements

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Itm.
8 Jan, & 20 June 1974
By: *SP7/LOJ* Date: *5/11/77*

Copy to Gen Hood
gjh

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11/29/45

Noted
gjh

Lt Col Fix/Am/2656
Wrtm 27 JAN 1945
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MEMORANDUM TO CHIEF OF AIR STAFF:

Subject: Development and Use of Fire Bombs

28 JAN 1945

file 2/12/45
gjh

1. The rapidly increasing use of fire bombs in every combat theater confirms that this is a weapon of major importance. Over 2750 fire bombs, representing approximately 1900 fighter sorties carrying fire bombs alone were employed by the AAF during December 1944. Extremely large requisitions for additional supplies that have been placed by the theaters indicate greatly expanded use in the future. As the fire bomb has proven not only an effective combat weapon, but a tremendously profitable one in terms of logistics, training requirements, etc. that were required to mount this large scale use, there are several phases that are particularly significant and worthy of emphasis.

a. Development - The development was almost completely an AAF project throughout, and was accomplished by the Proving Ground Command at Eglin Field, Florida. The first consideration of using droppable gas tanks as fire bombs was in March 1943, at which time the use of standard tanks with plain gasoline filling was tested. This is covered by Eglin Field reports 1-42-53 dated 29 March 1943 and 1-42-53 Supplement, dated 27 September 1943. These reports were distributed to the theaters, and the igniters developed in these tests were shipped to the theaters. In spring of 1944 interest was aroused in the use of 55 gallon oil drums as fire bombs. During the experimental work that was conducted at Eglin Field on this project, the idea of using napalm mixed with gasoline was suggested. As this filling immediately proved superior to anything tried, the idea was immediately advanced that it be used in droppable gasoline tanks also. Eglin Field personnel developed a practical means of mixing napalm and gasoline in the field. At this time the Navy, which had been following the 55 gallon oil drum project through their liaison officer at Eglin, requested that tests be conducted for them using Navy planes and tanks. Therefore, to meet the Navy request the official tests on the fighter tank phase were conducted as a joint Army-Navy project, at Eglin Field, in which both Army and Navy airplanes were used.

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gjh

b. Combat Use - The first actual combat use of napalm bombs was on 17 July 1944 by P-38s of the Ninth Air Force against a target in France. The Navy sent a project officer to the Pacific, who operating through channels, initiated the use there by P-47s of the Seventh Air Force on 28 July 1944 against targets on Timor.

c. Training Requirements - The use of fire bombs in all theaters has been accomplished without special training for operational units, and with no interference to operations. A minimum of training has been given to Chemical Officers on the mixing technique.

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d. Logistics - The fire bomb uses items mainly available in the theater such as fighter belly tanks, which are actually in excess in most places, and bulk (4) gasoline. Only the igniters and the napalm, which represent a small part in tonnage, had to be shipped.

e. Troop Basis - The Air Chemical companies in the theater have assimilated the service functions without any burden on existing troop basis requirements.

2. The fire bomb is almost entirely a fighter weapon. Developments and tests are proceeding on high priority to attempt to attain fire bombs suitable for high altitude use from bombardment airplanes.

WILLIAM F. McKEE
Colonel, G.S.C.
Acting, Asst. Chief of Air Staff
Operations, Commitments & Requirements

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DOD ltr.
8 Feb. & 20 June 1974
By: [unclear] LC; Date: 3/14/77
Bomb Stocks

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CONFIDENTIAL

Secretary of Air Staff
AS/AS HAS Air Ordnance Officer

5 FEB 1945

1
CWO Smith/mef/74985

1. In accordance with verbal instructions of Brig. General Timberlake to Brig. General Coupland on 5 February, no further action is necessary on this paper at this time.

1 Incl.
Memo to Gen. Timberlake dtd 1-21-45
from SAC w/incls. re: Bomb Stocks.

R. G. COUPLAND
Brig. Gen., U.S.A.

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DOD Hqs.
3 Feb 20 June 1974
By *447/101* Date *3/1/77*

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By Authority ~~DECLASSIFIED~~
The Commanding General
Army Air Forces
19 Jan 45 *RD*
Date Initials

2-2 JAN 1945

MEMORANDUM FOR: COMMANDING GENERAL, ARMY AIR FORCES

Subject: Effectiveness of Proximity-Fused Ground Artillery Shells and Probable German Countermeasures

1. Tremendously increased effectiveness of U.S. ground artillery fire caused by use of proximity fusing is confirmed by German prisoners. The improvement in ground artillery fire resulting from ability to deliver accurate air bursts at all hours of day and night, regardless of ability to observe the fire, is expected to produce violent German reaction and high-priority efforts to jam U.S. proximity fuses.

2. It has been established that the Germans have effective equipment for jamming the fuses now being used against them. (These jammers were produced for another purpose but operate in the correct frequency ranges). No conclusive evidence of German jamming of U.S. proximity fuses has yet been reported.

3. This German experience with electronic fuses for ground artillery is likely to result in an accelerated German effort to develop search receivers and jamming equipment for use against U.S. proximity-fused antiaircraft shells as well as ground artillery shells, also in accelerated development of German proximity fuses for their own antiaircraft artillery.

4. A letter, subject "Proximity Fuses", supplementing our letter of 19 December 1944 on the same subject, is being sent to the A-2s of the higher Air Force echelons in all theaters to provide them with the latest estimates of enemy capabilities for producing electronic proximity fuses, including the time until quantity production of these fuses will reach a point where they may be effectively employed against our airplanes. In this connection it should be noted that proximity fuses will not show the extremely sharp increase in the effectiveness of antiaircraft fire with Japanese and German antiaircraft fire control which has resulted from the use of such fusing with U.S. fire control. An extremely accurate fire control system is necessary to realize the full advantage of this type of fusing. Japanese antiaircraft fire control is not yet comparable in accuracy to German fire control, and German fire control is definitely inferior to the best U.S. fire control systems. The present program for development of U.S. search receivers and jamming equipment is also outlined in this letter.

W. M. BURGESS
Colonel, GSC
Deputy, Assistant Chief of
Air Staff, Intelligence

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SAS 4-7-46 (459)

ADDRESS REPLY TO
COMMANDING GENERAL, ARMY AIR FORCES
WASHINGTON 25, D. C.

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ATTENTION:

HEADQUARTERS, ARMY AIR FORCES
WASHINGTON

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A. DOD Mrs.
9 Feb. & 20 June 1974
By: [signature] Date: 3/11/77

11 JAN 1945

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By Authority of
DECLASSIFIED
[signature] General
Army Air Forces
9 Jan 45 RAD
Date Initials

MEMORANDUM FOR: COMMANDING GENERAL, ARMY AIR FORCES

Subject: Compromise of U.S. Proximity Fuzes

1. On 5 January 1945 a conference was called by General Borden, New Developments Division, WDGS, regarding possible German compromise of U.S. proximity fuzes.
2. Colonel Cox, Joint New Weapons and Equipment Committee, and Dr. McAllister, NDRC, recently returned from the European Theater, reported that it seems likely but is unconfirmed that 500 to 1500 T-74 antiaircraft proximity fuzes were captured by the Germans near Malmody.
3. This report will be confirmed or disproved within approximately one week as a result of an investigation now being conducted by the theater G-2.
4. It was the consensus of the meeting that twelve to eighteen months would be required for the Germans to get into quantity production on antiaircraft proximity fuzes but that fuzes for air-to-air rockets might be produced in quantity by the Fall of 1945.
5. A production model of an air-borne jammer for protection of our aircraft should be available in April. Quantity production of this equipment will be possible in September 1945.

[Signature]
JAMES F. HODGES
Major General, U. S. Army
Assistant Chief of Air Staff,
Intelligence

*Noted by Gen A
[Signature]*

* NDRC: New Developments Research Council

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8 Jan. & 20 June 1974
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By Authority of
The Commanding General
Army Air Forces
9 Jan 45 RAD
Date Initials

11 JAN 1945

MEMORANDUM FOR: COMMANDING GENERAL, ARMY AIR FORCES

Subject: Compromise of U.S. Proximity Fuses

1. On 5 January 1945 a conference was called by General Berden, New Developments Division, WDCS, regarding possible German compromise of U.S. proximity fuses.
2. Colonel Cox, Joint New Weapons and Equipment Committee, and Dr. McAllister, SERC, recently returned from the European Theater, reported that it seems likely but is unconfirmed that 500 to 1500 T-74 antiaircraft proximity fuses were captured by the Germans near Malmedy.
3. This report will be confirmed or disproved within approximately one week as a result of an investigation now being conducted by the theater G-2.
4. It was the consensus of the meeting that twelve to eighteen months would be required for the Germans to get into quantity production on antiaircraft proximity fuses but that fuses for air-to-air rockets might be produced in quantity by the Fall of 1945.
5. A production model of an air-borne jammer for protection of our aircraft should be available in April. Quantity production of this equipment will be possible in September 1945.

JAMES P. HODGES
Major General, U. S. Army
Assistant Chief of Air Staff,
Intelligence

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 8 Jan. & 20 June 1974
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 By Authority of
 The Commanding General
 Army Air Forces
9 Jan 45 RAD
 Date Initials

MEMORANDUM FOR: COMMANDING GENERAL, ARMY AIR FORCES

Subject: Compromise of U.S. Proximity Fuses

1. On 5 January 1945 a conference was called by General Borden, New Developments Division, WDCB, regarding possible German compromise of U.S. proximity fuses.
2. Colonel Cox, Joint New Weapons and Equipment Committee, and Dr. Wallister, WDCB, recently returned from the European Theater, reported that it seems likely but is unconfirmed that 500 to 1500 T-74 antiaircraft proximity fuses were captured by the Germans near Namény.
3. This report will be confirmed or disproved within approximately one week as a result of an investigation now being conducted by the theater G-3.
4. It was the consensus of the meeting that twelve to eighteen months would be required for the Germans to get into quantity production on antiaircraft proximity fuses but that fuses for air-to-air rockets might be produced in quantity by the Fall of 1945.
5. A production model of an air-borne jammer for protection of our aircraft should be available in April. Quantity production of this equipment will be possible in September 1945.

JAMES P. HODGES
 Major General, U. S. Army
 Assistant Chief of Air Staff,
 Intelligence

OFFICE SYMBOL	ASIAN	AFABI. ©					
SIGNATURES OF RESPONSIBLE OFFICERS	<i>Cox</i>	<i>Wallister</i>	<i>...</i>	<i>...</i>	<i>...</i>	<i>...</i>	<i>...</i>
INTERNAL OFFICE COORDINATION	<i>RAD WWS</i>	<i>...</i>	<i>...</i>	<i>...</i>	<i>...</i>	<i>...</i>	<i>...</i>

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AIR STAFF

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JUN 11 1942
AIR STAFF

HEADQUARTERS AAF

ROUTING SLIP

TO →	OFFICE & INDIVIDUAL IN TURN	DATE FORWARDED
1.	<i>Gen Smith</i>	<i>16 Dec</i>
2.	<i>Col Dean</i>	
3.		
4.		
5.		

FOR → FOLLOWING ACTION(S) AS CHECKED		
<input type="checkbox"/> COORDINATION	<input type="checkbox"/> NOTE AND RETURN	<input type="checkbox"/> INFORMATION
<input type="checkbox"/> NECESSARY ACTION	<input type="checkbox"/> RECOMMENDATION	<input type="checkbox"/> FILE
<input type="checkbox"/> SEE OR PHONE ME	<input type="checkbox"/> APPROVAL	<input type="checkbox"/> SIGNATURE

COMMENT

Note my caution. Obviously we would not desire such a long running travel for 4-5 sec. delay fixes for next night bombing. There is no misunderstanding in office Chief of Ordnance

JH

FROM → OFFICE & INDIVIDUAL <i>J. C. LAYNE</i> Lt. Col. Air Corps Assistant Secretary, AAF	PHONE 578 5790
--	-------------------

3-175, AF Rev. 1 Aug 1941

ADDRESS REPLY TO
HEADQUARTERS OF THE ARMY AIR FORCES
WAR DEPARTMENT
WASHINGTON, D. C.

DECLASSIFIED

SECRET
DECLASSIFIED
The following General
of the Army Air Forces
DEC 5 1944 **AFGE**
DATE INITIALS

WAR DEPARTMENT
HEADQUARTERS OF THE ARMY AIR FORCES
WASHINGTON

DECLASSIFIED
DOD ltr.
8 Jan. & 20 June 1974
By **SP-10**; Date **3/1/77**

AFRDE

MEMORANDUM FOR COLONEL F. M. DEAN

Subject: Armed Salvo Release in B-29's

1. A cable was sent to both the XXth and XXIst Bomber Commands on 27 November 1944, recommending against armed salvo release of demolition bombs from B-29 airplanes.
2. Action has been taken previously to establish requirements for fuzes for 100 lb demolition bombs with longer air travel, so they can be released safely in multiple suspension and in armed salvo from B-29 airplanes.
3. The Chief of Ordnance was advised today ^{that requirements will} be forthcoming to change the arming travel on fuzes for all size bombs to give a vertical safe fall before arming of about 500 to 750 ft. A small percentage of fuzes will be procured with the short arming distance for use in fighter airplanes for dive bombing.
4. Tests have been initiated on a high-priority to investigate possible modifications to the arming vanes of standard fuzes to lengthen the air travel required before arming. It is considered that some modification may be accomplished in the field by cutting off part of the arming vanes, or twisting them to a greater angle which will serve as a temporary solution until production can be modified.
5. Both B-29 Bomber Commands will be advised by cable as soon as results are obtained.

1 Incl - Memo to AFRDE
dtd 3 Dec 1944

Returned to **RDB**
4 Jan 45

for **JFG** **Cor GSC**
MERVIN E. GROSS
Brigadier General, U.S.A.
Chief, Requirement Division
Office, Asst Chief of Air Staff
Operations, Commitments and
Requirements



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SAS 4716 (45)

ADDRESS REPLY TO
COMMANDING GENERAL, ARMY AIR FORCES
WASHINGTON 25, D. C.

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HEADQUARTERS, ARMY AIR FORCES
WASHINGTON

ATTENTION:

30 November 1944

DECLASSIFIED
DOD - ITR

8 Jan. & 20 June 1974
By: *[Signature]* / JELC; Date: *[Signature]*

MEMORANDUM FOR GENERAL GILES:

Subject: Bomb Requirements of the Royal Air Force.

1. Reference is made to cable from General Eaker dated 28 November asking for authority to supply the Royal Air Force with American type bombs, particularly the 1,000 pound bomb and your remark thereon "General Echols, General Wilson check this and see me." General Echols has informed me that he discussed this matter with you.

2. As a matter for your information and as a matter of record the following information is pertinent:

British requirements stated first of year

240,000	500 lb.
120,000	1,000 lb.

Actually released to December 1st

175,000	500 lb.	
+	97,000	promised for December
Total	272,000	500 lb.
	118	1,000 lb.

Transferred in UK by Eighth Air Force in addition to above

36,000	250 lb.
26,000	500 lb. SAP
5,000	1,000 lb. GP
105,000	1,000 lb. SAP

Bomb supply still extremely critical, particularly 1000 lb.. Plan has been to give RAF anything they need to keep their planes flying, after substantiation of the need. Cable answered to MAAF OK'ing release by theater to British if absolutely necessary. This will further complicate our present short supply bomb situation, but is considered necessary.

[Handwritten signature]

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WILLIAM F. MORSE
Colonel, G.S.C.
Acting, Asst. Chief of Air Staff
Operations, Commitments & Requirements

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471.6 (456)

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DOD ltra.
8 Jan., 20 June 1974
By: [unclear] Date: 3/4/77

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CG AAF
Date: 7/1/44
Initials: [unclear]

29 NOV 1944

MEMORANDUM FOR COLONEL DEAN:

Subject: Stoppage of Flying Bomb Production

1. On 26 November you forwarded to this Office by R&R four (4) questions asked by General Arnold on the above subject after he had read the following item in the M&S Activity Report for 25 November:

"Information received from Wright Field that there will be a complete stoppage of JB-2 (Chinese copy) flying bomb production, on completion of present order for 1,000 (probably in April 1945), unless further orders are placed now.

"No procurement can be directed until requirements are established and both AAF and Army Ground Forces requirements are being held up pending further results of AAF Board tests now being conducted."

2. General Arnold's questions, with the answers, follow:

a. Have we a T/O for operating? Yes, suggested T/O has been prepared by the Board and will arrive at this Headquarters this week. The T/O is based on theory and may prove worthless, in view of the fact that no standard launching device or method has yet been developed.

b. Have we any provisional units being trained? No, except for personnel engaged in test launching of flying bombs at Eglin Field.

c. Have we told Spaatz about when he could expect units and enough bombs to send into Germany 500 a day? No, although General Spaatz has been fully advised of the present program and informed that any operational project for the JB-2 would depend wholly upon the outcome of AAF Board tests.

d. Does he want them? No, General Spaatz has twice reiterated his lack of immediate interest and has recommended that all equipment be held in the U. S. for experiment and evaluation. General Spaatz has further indicated that ETO requirements for the JB-2 need not be stated prior to January 1945. General Kubank, now in ETO, will discuss this entire subject with General Spaatz.

3. Present state of JB-2 development definitely rules out firm planning, formation of units, allocation of shipping space etc. Board tests are being expedited, however.

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4. The AGF verbally expressed a possible requirement for 25,000 JB-2's. This is an odd twist, the more so since AGF indicated no specific use in mind and is awaiting outcome of AAF Board tests. Our policy in this respect is one of watchful waiting. AGF has made no formal move to acquire the JB-2. We already possess it, and will take action to block AGF moves when they eventuate.

5. Our opinion is that the JB-2, when perfected, can be used effectively only against a large urban area and must be used in quantity. The Ruhr is the first target which might justify a large JB-2 program. Suggest the attached R&R be sent to General Echels.

1 Incl
Prop R&R to
Gen Echels

WILLIAM F. McKEE
Colonel, G.S.C.
Acting, Asst. Chief of Air Staff
Operations, Commitments & Requirements

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SAS 4716 (705)

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DOD Use
8 Jan. & 20 June 1974
By *DA/MLC* Date *3/1/77*

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By Authority **DECLASSIFIED**
The Committee
A. H. A. 10000

28 NOV 1944 *AMROB*
McKee
Don

MEMORANDUM FOR THE CHIEF OF AIR STAFF:

Subject: Fire Bomb Igniters for UK.

1. With reference to cable UK70487 from USSTAF, expressing an urgent requirement for 10,000 fire bomb igniters to arrive in UK by 15 December 1944, an answer was sent stating the quantity will be available this week. The theater is establishing air priority so the igniters should reach destination in time.

2. The supply of igniters had been stopped temporarily while some changes were incorporated in production to take care of difficulties that were encountered. This special requirement from the UK, therefore, will delay other theaters about ten (10) days in getting their previously stated requirements. In view of the temporary cessation of production the supply of igniters to all theaters is pretty tight at the moment.

3. The theater has previously been queried on the type of containers they plan to use, in addition to their proposed use of bomb bay fuel tanks. Some details were requested, also, on the general nature of the targets, against which they propose to use heavy bombardment airplanes on fire bomb missions, to guide the development that is going on here.

1716
DCM

WILLIAM F. MCKEE
Lieut. Colonel, U. S. A.
Deputy, Assoc. Chief of Air Staff
Operations, Commitments & Requirements

cc to Gen Timberlake

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DOD Itr.
8 Jan. & 20 June 1974
By: MAF/ALC; Date: 3/11/77

SAS 471.6 (452)

TO: AC/AS, Material & Services
Attn: Air Ordnance Officer
FROM: Chief of the Air Staff

DATE 5 Feb 65

COMMENT NO. 2
FWZ/ova/5265

A report on the status of this project is desired on 15 February and each two weeks thereafter until completion.

Signed
PATRICK W. TIMBERLAKE,
Brigadier General, U.S.A.,
Deputy Chief of Air Staff.

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J.P. GARDNER
8 FEB 1965
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8 Jan. & 20 June 1974
By: *[Signature]* LC: Data: *2/4/77*

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Bomb Functioning and Acceptance Test Methods

AG/AS, Material & Services
Attn: AIR ORDNANCE OFFICER
Chief of the Air Staff

23 Nov 44

PST/eva/5265 ¹

1. The attached memorandum and accompanying data have been reviewed. This office is of the opinion that testing of bombs and fuses in the past has been inadequate, and immediate action should be taken to ameliorate this condition. Whether or not this situation was brought about by conditions beyond the control of the Ordnance Department, is past history and is of no importance at this time.

2. It is directed that necessary action be initiated to change pertinent War Department, Air Force or Ordnance specifications, regulations or circulars to insure that ammunition, bombs and fuses used by the Air Force are proof-tested in sufficient quantities to insure proper functioning under all operational conditions now being encountered or anticipated in the near future.

3. It is realized that this probably will involve additional Air Force equipment and personnel. If, upon consultation with the appropriate staff agencies, such equipment and personnel are not forthcoming, the matter is to be brought immediately to the attention of the Chief of Air Staff.

Signed

PATRICK W. TIMBERLAKE,
Brigadier General, U.S.A.,
Deputy Chief of Air Staff.

1 Incl
Memo to Gen. Timberlake
from Gen. Coupland dtd
16 Nov this subj w/5
incls--Tabs A to E.

24 NOV 1944
[Stamp]

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471.6 (432)

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DOD ltr.
Jan. 20 June 1974
By: [unclear] Date 3/4/77

Lt Col E. G. Brown/gva/5443
Written: 13 Nov 1944

AFRC

22 Nov 44

MEMORANDUM FOR THE SECRETARY OF THE JOINT CHIEFS OF STAFF:

Subject: Joint Publication of Army Air Forces Board Report
No. 3574471.0, "Selection of Bombs and Fuses for
seaboard Targets"

1. The inclosed report has been approved by the Commanding General, Army Air Forces.
2. In accordance with the recommendations contained therein, it is requested that this report be approved as a Joint Army-Navy Publication (JANF).
3. A distribution of eight (8) copies of this report has been made to the Chief of Naval Operations, Navy Department, Washington, D. C., per letter inclosed (Incl 2).

For the Commanding General, Army Air Forces

- 2 incs
Incl 1. AAF Bd Rpt,
above subj
Incl 2. Copy ltr to Chief
of Naval Ops

SAS 471.6 (51)

BMG

AFRC AFRC

Copy to: AFRC

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(51)

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4 Jan. 8 20 June 2004
By: ~~SP1~~ SEC: Date: 3/14/77

DECLASSIFIED

Lt Col E. G. Brown/gva/5443
Written: 13 Nov 1944

AFRC

Army Air Forces Board Report No. 3554471.6, "Selection of Bombs and Fusion for Bombardment Targets"

Chief of Naval Operations
Navy Department
Washington 25, D. C.

22 Nov 44

1. Eight (8) copies of subject report are herewith forwarded for your information.
2. This report has been submitted to the Secretary of the Joint Chiefs of Staff per memorandum inclosed (Incl 2).
3. It is requested that the recommendations of the Navy Department pertaining to subject report be submitted to the Secretary of the Joint Chiefs of Staff at the earliest practicable date.

For the Commanding General, Army Air Forces:

- 2 Incls
Incl 1. 8 eye sub;
AAF Bd Rpt
Incl 2. Cy memo to
Secy of JCS

FREDERIC H. SMITH, JR.
Brigadier General, U. S. Army
Deputy Chief of Air Staff

AFRC

AFRC

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Copy to: AFRC

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Jan. & 20 June 1994
WY:MM/ELC: Data 300/07

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Reason Doubt

AC/AS, Operations, Commitments & Requirements

11 Nov 44

Chief of the Air Staff

RR/oa/72141 1

1. Recommendations contained in Section III a and b approved.
2. For necessary action,

Encl: 1

Signed

BARNEY M. GILES,
Lieutenant General, U. S. Army,
Deputy Commander, Army Air Forces and
Chief of Air Staff

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13 NOV 1944
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ADDRESS REPLY TO
COMMANDING GENERAL, ARMY AIR FORCES
WASHINGTON 25, D. C.

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ATTENTION:

HEADQUARTERS, ARMY AIR FORCES
WASHINGTON (AFIMA-20)

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DOD Itrs.
8 Jan & 20 June 1974
By *SP4 JLC: Data 2/12/77*

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8 NOV 1944

MEMORANDUM FOR THE CHIEF OF AIR STAFF.

SUBJECT: Progress Report to 31 October 1944 on JB-2 and JB-1 Robot Bombs.

1. The following is a brief of progress to 31 October 1944:

a. JB-2 (Chinese Copy): Four launchings have been made on the Egin Field 500 ft. (6° slope) ramp. The first took off at approximately 250 m.p.h., never climbed, and flew for several miles in a "power-landing" position. The second (with 6 take-off rockets instead of 5) took off at approximately 285 m.p.h., started to climb, and then dived abruptly. The third and fourth, launched with 5 rockets on 28 October, turned over on one side, and completely over, shortly after clearing the ramp and dived in. Wreckage recovered from the third and fourth indicates that the tandem rocket arrangement on the take-off cart resulted in deflecting the blast from the forward two rockets against the control surfaces, resulting in damage or destruction of the controls. Design of a new launching cart is nearing completion. The German type ramp has not been received as yet. (This ramp is more cumbersome and slower than the proposed assisted take-off method). Radar type control for the "Willie Orphan" (ground controlled war-weary robot) is proceeding rapidly and has given good results to 100 miles. It is anticipated that this can also be used with JB-2 and JB-1. 1000 JB-2s are on order with a maximum production of 200 per month. An increase in the assisted take-off rocket facilities (the most difficult to expand) has been authorized to a 1000 per month launching rate by approximately April 1945.

*471.6
SAS*

b. JB-1 (Northrop Tail-less Flying Bomb): The first launching of the JB-1 is scheduled for late November on 6° ramp at Egin. The 4000 lb. bomb load will be left off the first JB-1 because the two engines are developing only 200 lb. thrust each instead of 400 lb. General Electric expects to improve the engines to 400 lb. thrust each by January 1945. SCR-584 radar has been installed at Egin to track all flying bomb flights. Methods of remote control are being studied. Northrop believes that the longitudinal instability apparent in the glider model will be eliminated in the first missile model.

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O. P. ECHOLS
Major General, U.S.A.,
Asst. Chief of Air Staff,
Material and Services

SAS 471.6 (449)

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HQ. AAF
CLASSIFIED MAIL SECTION

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8 Jan. 8 26 June 1974
By ~~SP4~~ LCI: Date 3/11/77

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Test re feasibility of Dropping Napalm Bombs from High Altitudes

Assistant Chief of Air Staff, OADR

25 October 1944

Chief of the Air Staff

1
BAG/hd/3373

1. General Arnold directed that a test be made at an early date to determine the feasibility of dropping napalm bombs from high altitudes. It is directed that this test be conducted at Eglin Field or at some other suitable place as soon as practicable.

2. It is also directed that you investigate the desirability of manufacturing bombs with light cases that can be aimed and fairly accurate ballistic data worked up for the various altitudes.

Signed

BARNEY M. GILES
Lieutenant General, U. S. Army
Chief of Air Staff

471.6 (448)

26 OCT 1944
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DOD Nos.
3 Jun 26 June 1974
By: [unclear] 3/8/77

Bomb Load for B-32 and B-29

~~SECRET~~

25 October 1944

General Echols

General Giles

1
BMD/hd/3373

1. General Arnold stated this date that he was dissatisfied with our bombers in not being able to carry anything larger than a 4000 pound bomb while the British Bombers can carry up to a 12000 pound bomb. Have your engineers check the feasibility of reworking the B-32 and B-29, permitting the carrying of heavy bombs up to 12000 or 14000 pounds.

2. Give me a report within the next 10 days.

Signed

BARNETT M. GILES
Lieutenant General, U. S. Army
Chief of the Air Staff

26 OCT 1944
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Proximity Fuse Requirements

INFO:ms 3979

AG/AS *M+S*
Air Ordnance Officer

24 Oct 44

General Giles.

1

General Arnold stated this date that the proximity fuse would be fully released for combat in all theaters, at the next meeting of the Combined Chiefs of Staff. It is, therefore, directed that you take action, at once, and submit requirements for the proximity fuse.

Signed

BARRY H. GILES
Lieutenant General, U. S. A.
Chief of the Air Staff

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16 OCT 1944
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1 Jan. & 10 June 1974
By: *AM/MLC: Dab. 2/11/77*

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Production of JB-2 Buzz Bomb

AG/AS, Operations, Commitments and Requirements
Chief of the Air Staff

7 October 66

1

Recommendation contained in the attached memorandum is concurred in.

Signed

1 Encl.
Name same subj 10-6-66

F. H. SMITH, JR.,
Brigadier General, U. S. Army
Deputy Chief of the Air Staff.

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8 Jan. & 20 June 1974
By: MELC: DAW 3/11/7

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By Authority of
The Under Secretary
Army Air Corps
Date 30 Sep 44

"One Million Tons of Bombs"

Deputy Chief of Air Staff (Brig Gen F. E. Timberlake)
Management Control, Statistical Control Division

30 Sep 44
1
OCT 1944

Maj Theobald/cwp/71040

Attached for your information is a copy of an announcement of the dropping of the millionth ton of bombs by the Army Air Forces along with other statistics regarding the AAF which might be of interest in connection with this milestone event.

1 Incl
One Million Tons of Bombs

CHARLES S. THORNTON
Colonel, Air Corps
Chief, Statistical Control Division

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HENRY HARLEY ARNOLD

Box 134 Folder 7

MILITARY

DECIMAL

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471:6 Single Screens &
Bombs

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BY: WJL
DATE: 11/17/77

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SAS 471.6 Aerial Mines

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8 Jan & 20 June 1974
Dr. ANIC

Q

MEMORANDUM TO THE CHIEF OF AIR STAFF:

Subject: Aerial Mining

27 JAN 1945

1. You asked this morning for a brief on aerial mining to include types of mines used, employment, altitudes from which dropped, etc., both for B-24s and B-29s.

2. Large scale mining operations to-date have been accomplished as follows:

a. South East Asia - Between 26 March 1943 and 23 November 1944, B-24s of the Tenth Air Force and RAF under the Strategic Air Force flew 340 sorties, laying 1377 mines in the rivers, harbors and sea channels of Burma, Siam, Malay Peninsula and the Andaman Islands. The mines employed were 1000 lb Mark 13 (magnetic) and 1000 lb Mark 13 Mod 5 (acoustic), interspersed with British A Mark V (magnetic) to confuse sweeping effort. In these operations six (6) aircraft were lost. These operations were flown at medium and low altitudes using both L&B, H&Z and visual methods. On 10 August 1944, eight B-29s laid sixteen 1000 lb mines in the channel approach to Palembang operating from bases in India to Ceylon and thence to target, a distance of 1900 miles. No aircraft were lost or damaged. These mines were laid from altitudes of 500 to 1000 ft. Reports of operational results, as well as strongly expressed opinion of commanders concerned, indicate that effect of this mining has been extremely effective.

b. Central Pacific - B-24s of the Seventh Air Force between 16 November 1944 and 8 December 1944 flew 80 sorties, laying 227 mines in the waters adjacent to harbors in the Volcanos and Bonins. These were both 1000 lb and 2000 lb magnetic and acoustic. Mines were laid at altitudes between 500 and 2500 ft both with L&B, H&Z and visual methods. Jap shipping was affected to the extent that, whereas before the initial strike three or more vessels of 1000 tons or more per day were observed, thereafter only one such vessel was observed each three weeks. No aircraft were lost.

c. Southeast Asia - On 25-26 January 1945, 71 B-29s of the IX Bomber Command operating against targets at Singapore, Saigon, Cap St Jacques and Cam Ranh Bay laid 231 short tons of Mark 26 Mod 1, 1000 lb (magnetic) and Mark 25, 2000 lb (magnetic) mines. Sixty-five (65) aircraft laid mines visually and seven (7) by radar from 2000 to 6000 ft. Results shown to be good to excellent. No aircraft were lost.

3. All aerial mines are dropped by parachute to prevent damaging the firing mechanism.

SAS 471.6 Coastal Mines (24)

Copy for Gen Hood (orig given to Gen Sible)

WILLIAM F. MOKKE
Colonel, G.S.C.
Acting Asst. Chief of Air Staff
Operations, Commitments & Requirements

SAS 471.6 Aerial Mines (24)

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DOO IWS
By AN/CE on 20 June 1988
LCC Date 3/11/79

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Mine Mark 13-5 - Policy Regarding Use of.

JUN 30 1944

Commanding General, Army Air Forces.

General Kuter.

1
GOC:hmf/72279

1. The Army Air Forces requested the Navy for a policy on the aerial mining of China waters with the Mark 13-5 mine which is the new acoustic type.
2. The attached memorandum from Admiral King points out the necessity for extreme care in the use of this new type mine in order to prevent it falling in the hands of the enemy and requests your concurrence in the attached cable, which sets forth the conditions under which the Mark 13-5 mine may be used.
3. Attached hereto is a memorandum for your signature to the Chief of Staff, covering a memorandum from General Marshall to Admiral King concurring in the proposed cable.
4. It is recommended that the attached memorandum to the Chief of Staff be forwarded over your signature.

L. S. KUTER
Major General, U. S. A.
Asst Chief of Air Staff, Plans

2 Incls:

- 1 - Memo from Admiral King
dtd 27 June 1944.
- 2 - Memo to Chief of Staff.

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SAS 471.6 Casualty Reports (23) B

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AFRIB
Lt Col G J Fix/jh 2656
Written 7 June 1944

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OSR

Mark 13-5 Aircraft Mine

20 JUN 1944

Commander-in-Chief
United States Fleet
Navy Department
Washington, D. C.

1. A cable has been received from the Fourteenth Air Force, Kunming, China, stating that the Commander-in-Chief, U. S. Navy, has refused to grant permission for the planting of the Mark 13-5 mine in the China area because danger of compromise would prevent full exploitation of initial surprise. It is understood that the Mark 13-5 mine has been employed by Navy forces in the Pacific.

2. The Fourteenth Air Force plans to use these mines, mixed with magnetic mines, to prevent sweeping. They would be employed principally to prevent Japanese use of small ships and wooden vessels in rivers and harbors. Considerable effort has been made to get the first fifty (50) mechanisms to China by special air transportation. Additional requirements of 450 units are contemplated for the CBI area.

3. It is requested that the policy on the employment of Mark 13-5 mine be stated, with thorough definition of the restrictions on use. It is desired particularly to know, as soon as possible, when and where it can be used in the CBI area. It is believed that a full explanation of the restrictions, with a detailed list of restricted areas, would assist the Army Air Forces in maximum effect in employment of this weapon within the present limitations.

For the Commanding General, Army Air Forces:

PARLEY N. GILES,
Lieutenant General, U. S. Army
Chief of the Air Staff.

20 JUN 1944

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Aircraft mine
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8 Jan. 8 20 June 1974
by *AWJ/cc* *3/1/94*

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JUN 7 1944 *GNDK*

MEMORANDUM FOR THE CHIEF OF AIR STAFF

8 JUN 1944

Subject: Mark 13-5 Aircraft Mine

1. The Fourteenth Air Force has stated a positive need for using the Mark 13-5 acoustic mine in conjunction with Mark 13 magnetic mine. After some discussion initially with the Navy regarding their ability to store this special mechanism under very restrictive temperature conditions, the Navy agreed to make these items available to the Fourteenth Air Force. Special arrangements were completed to ship fifty (50) acoustic mechanisms via the Fireball with a Navy officer to accompany the shipment all the way to destination to insure proper handling and safe arrival. Additional requirements for the CBI area for 450 more mechanisms beyond this original 50 units have been stated.

2. A cable has just been received from the Fourteenth Air Force stating that the Commander-in Chief of the United States Navy has refused to grant permission for the use of Mark 13-5 mine in that area because danger of compromise would prevent full exploitation of initial surprise. It is known that the Navy has employed this mine to a limited extent in the Pacific. No information on the restrictions of use of this mine has been given to this headquarters.

3. In order that the Fourteenth Air Force can proceed with their mining program, for which they have made elaborate arrangements, it is necessary that a clarification of policy on the use of this mine be obtained from the Navy. It is requested, therefore, that the attached letter be signed and forwarded, as the mines are now in the theater ready for combat use.

1 Incl
Ltr to Commander-in-Chief,
U. S. Navy

H. A. Craig
Major General, U. S. Army
Asst. Chief of Air Staff
Operations, Commitments & Requirements

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(23)

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DDI No.

8 Apr 68 New York
Dr. Miller
44/17

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AFPM

Aircraft Mining Operations

25 APR 1944

Commanding General
Fourteenth Air Force
APO 637, c/o Postmaster
New York, N.Y.

China

1. The mining operations that are being conducted by the Fourteenth Air Force, and the results that are accruing from this work, are highly gratifying to me. They exemplify in the finest manner the versatility of the Army Air Forces, and their ability to utilize every available weapon to strike the enemy by day and by night.

2. I desire that each individual who has contributed to this effort, and particularly the crew members who are flying the missions, be extended my congratulations on a job well done. I am confident that your future aerial mine operations will be proceed here with the same vigor and determination, and will result in even greater success.

H. Arnold

H. H. ARNOLD
General, U. S. Army
Commanding General, Army Air Forces

Dispatched
25 APR 1944
AAG

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CONFIDENTIAL

Air ab 471.6 let memo (2)

DECLASSIFIED
CCO 105
8 Jan & 20 June 1984
Wesley C. ...

DECLASSIFIED

Mining Operations by the Tenth and Fourteenth Air Forces

Secretary of the Air Staff

18 April 19

AC/AS Operations, Commitments & Requirements

2

Lt Col Hill/br 6

1. Attention is invited to Comment number 1 which explains why the attached letters are forwarded for signature by the Commanding General, Army Air Forces.

4 Incls n/c

WILLIAM F. McKEE
Colonel, Air Corps
Deputy Asst. Chief of Air Staff
Operations, Commitments & Requirements

Wesley C. Hill
4771.6
Gen. Minors
(33)

*File
4/25/44*

DECLASSIFIED

Wesley C. Hill
4771.6
Gen. Minors
(33)

DECLASSIFIED
EOD 105
8 Jan. 6 20 June 1974
By *MAJ/CC* *MG/Don* *3/14/95*

DECLASSIFIED

AFRIB
Lt. Col. Younger/aa
71674/AR 132
1 Nov. 1943

NOV 5- 1943

SUBJECT: Mark 19 Mine

TO: The Chief of Naval Operations
Navy Department
Washington, D. C.

1. Reference is made to letter dated 25 October 1943, subject as above, (OP-9083-RT, (AG) 8-76-1, Serial 077A830), and inclosures thereto.

2. The War Department has no objection to the use of the Mark 19 contact mine in U. S. Naval operations, provided such operations are limited to use in the open sea, rivers, or harbors, and do not include its use against inland targets.

3. This mine was developed for Army use against specific enemy targets and elaborate plans for such employment are being made. It is therefore deemed most desirable to maintain closest security regarding the techniques for which this munition was designed, until such time as its full use as originally intended can be accomplished.

(SG) JOSEPH T. MONAGHAN

Deputy Chief of Staff



Copy of 911 to War, Pacific
File
MOL
11/9/43

AFRIB

AFRIG

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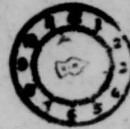
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NOV 6-1949

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Air Adjutant

ORIGINAL FILED FROM
OFFICE CHIEF OF STAFF

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NOV 6-1949

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CONFIDENTIAL
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ODD IIS

9 Jan. & 20 June 1974
By: M/ICE LG, Doc. 3/14/07

20 OCT 1943

MEMORANDUM FOR THE CHIEF OF STAFF: (Attention: G-2 Division)

Subject: Report of Mine Laying Operations

I. Discussion

1. The Geneva Convention requires all signatories to keep an accurate and up-to-date list of all mines and mine fields in order to maintain complete and up-to-date information on the location and characteristics of mine fields for sweeping operations both during and after the war.

2. This requires that certain data and charts be submitted to some Headquarters Army Air Forces Staff for mines laid by Army Air Forces components.

II. Action recommended

The Secretary of War directs that a War Department Memorandum, essentially as outlined on the attached draft, be issued to the Commanding Generals of all Air Forces both in overseas theaters and in the Continental United States.

For the Commanding General, Army Air Forces:

Signed

William E. Hall
Brig. Gen. USA
Deputy Chief of Air Staff

2 Incls
Incl 1 - Tab A - Proposed ADD Memo
Incl 2 - Tab B - Ltr dtd 7/26/43

COPIES FOR: Chief of Air Staff

Handwritten: 471.6 Div. Memo (20)

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20 OCT 1943
AMG

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DDO 102

By *Amf/ess* *1-10-83* *2/14/83*

DRAFT

(PROPOSED AGO MEMORANDUM)

MINE LAYING OPERATIONS

1. In accordance with the Geneva Convention, all governments are required to keep an accurate and up-to-date list of all mines and mine fields in order to maintain complete and up-to-date information on the location and characteristics of mine fields for sweeping operations both during and after the war.

2. It is, therefore, directed that a "Report of Mine Laying Operations" be submitted by Army Air Force units concerned whenever such units lay aerial mines. This report will be submitted by the officer in charge of the mine laying operation as soon as practicable after the completion of the operation by letter directly to the Assistant Chief of Air Staff, Intelligence, Headquarters Army Air Forces, Washington, D. C. with copies to local authorities responsible for the safe routing of friendly shipping in the area where the mines are laid, and such other copies as may be determined necessary by the originator in accordance with special instructions and local practice. The following information will be given in each report:

a. An overlay of appropriate chart showing: position of mines, with indication of degree of accuracy; principal navigational aids; principal enemy ground defenses encountered.

b. Number and type of planes employed.

c. Mark and modification of mines with mark and modification of firing mechanisms, sensitivity settings, period delay mechanism setting (if used), type of sterilizer (if used) with date field becomes safe, arming delay period (if used), and other special devices. If any of the above vary throughout the field, the appropriate information should be indicated for individual mines on the overlay.

d. Source of mines.

e. Number of premature mine explosions with probable causes and time after laying (if known); other mine defects.

f. Brief description of tactics employed with comment and analysis. A full discussion is especially desired if new methods or tactics are employed.

g. Casualties sustained.

h. Comments and recommendation, and any additional information which may be useful in planning future operations.

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CONFIDENTIAL

COPY

DECLASSIFIED
DDC 102

8 Jan. & 20 June 1974
By: AW/CC JG, Date: 3/16/77

DECLASSIFIED
& CONFIDENTIAL

WAR DEPARTMENT
OFFICE OF THE CHIEF OF ORDNANCE
WASHINGTON, D. C.

26 July 1943

Subject: Aerial Minalaying Operational Reports

To: Assistant Chief of Air Staff, Intelligence

Attention: Colonel W. C. Bentley, AAF

1. The Ordnance Department has procured approximately 3650 aerial mines of the U. S. Navy and has shipped these mines to Army Air Forces in overseas theatres. Additional aerial mines are on requisition and will be shipped when requested by overseas theatres. In each case where aerial mines have been shipped to a particular theatre the Navy Department has attached two Naval officers to the Air Force staff to act in a technical capacity on the use of these mines.
2. The Army Air Forces School of Applied Tactics has been directed by the Assistant Chief of Air Staff, Training, to prepare a Technical Manual on the Tactics and Technique of Aerial Minalaying. However, the tactics of aerial mining is at present based upon British practice since detailed information on Army Air Force minalaying operations is very meagre.
3. The Navy Department has established a repository for mine warfare information in the Office of the Chief of Naval Operations. This repository was established in order that:
 - (a) "Complete and up-to-date information on the location and characteristics of minefields will be readily available to authorities responsible for sweeping operations, both during and after the war."
 - (b) "Mine warfare operational information is readily available to agencies responsible for the development and improvement of mines and mine countermeasures, the improvement of strategic and tactical employment of mines, and the improvement of mine-sweeping methods and techniques."
4. Considering the evident requirements of paragraphs 2 and 3 above, it is recommended that a Report of Minalaying Operation be submitted by Army Air Force units concerned whenever such units lay aerial mines; this report to cover minalaying operations when subject mines are U. S. or British. The type of report considered essential is outlined below:

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& CONFIDENTIAL

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DDO WFO

6 20 Jan 1984

3/11/77

CONFIDENTIAL

DECLASSIFIED

REPORT OF MINELAYING OPERATION (By Letter)

- (1) Originator: Officer in Charge of minelaying operation
- (2) Submitted to: Assistant Chief of Air Staff, Intelligence, Washington, D. C. (Direct)
- (3) Copies to:
 - (a) Local authority responsible for the safe routing of friendly shipping in the area where mines are laid.
 - (b) Others as may be determined by the originator in accordance with special instructions and local practices.
- (4) When submitted: As soon as practicable after the completion of operation.
- (5) How submitted: By letter.
- (6) Information desired:
 - (a) An overlay of appropriate chart showing: position of mines, with indication of degree of accuracy; principal navigational aids; principal enemy ground defenses encountered.
 - (b) Number and type of planes employed.
 - (c) Mark and modification of mines with Mark and modification of firing mechanisms, sensitivity settings, period delay mechanism setting (if used), type of steriliser (if used) with date field becomes safe, arming delay period (if used), and other special devices. If any of the above vary throughout the field, the appropriate information should be indicated for individual mines on the overlay.
 - (d) Source of mines.
 - (e) Number of premature mine explosions with probable causes and time after laying (if known); other mine defects.
 - (f) Brief description of tactics employed with comment and analysis. A full discussion is especially desired if new methods or tactics are employed.
 - (g) Casualties sustained.
 - (h) Comments and recommendation, and any additional information which may be useful in planning future operations.

DECLASSIFIED

CONFIDENTIAL

(a) Dean Luce
DEAN LUCE
Colonel, G. D.
Mine Warfare Liaison

~~CONFIDENTIAL~~

DMC file

DECLASSIFIED
DDO 107

8 Jan. & 20 June 1974
By: *MLC* Date: *2/6/77*

Planting of British Mines from U. S. Aircraft, Policy Governing.

Management Control, Organizational Planning

26 July 1943

Air Adjutant General

EAB/11/71128

2

1. Attention is invited to comment No. 1.

2. It is the opinion of this office that the proposed letter in paragraph 2, comment No. 1 should properly be published in a War Department Training Circular.

E. A. BRADUNAS
Captain, A. G. D.
Assistant Air Adjutant General.

1 Inal.
n/c

TO: Air Adjutant General

DATE 31 July 1943

FROM: Management Control, Organizational Planning

COMMENT NO. 3
LWF 24/2324

1. Because of the highly confidential nature of the subject matter contained in Comment 1, this office agrees with Assistant Chief, Air Staff, OGR, Requirements Division that the matter should be published as a CONFIDENTIAL AAF Letter.

2. The matter was discussed with Lt Colonel Younger, who concurs.

Incls
n/c

JOSEPH S. CLARK, JR
Lt Col, Air Corps
Chief, Organ. Planning

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~~CONFIDENTIAL~~

*File
ci 3 Aug 43*

air 43 4716 Aerial Mine 13/8

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DECLASSIFIED

Planting of British Mines from U. S. Aircraft, Policy Governing.

Management Control, Organizational Planning

26 July 1943

Air Adjutant General

WAB/11/71120

2

1. Attention is invited to comment No. 1.

2. It is the opinion of this office that the proposed letter in paragraph 2, comment No. 1 should properly be published in a War Department Training Circular.

E. A. BRADWAS
Captain, A. G. D.
Assistant Air Adjutant General.

1 Incl.
m/s

dispatched
20 JUL 1943
AAG

File in 4716 Division 3rd Floor (19) B

DECLASSIFIED

File in 26 July 43

OFFICE SYMBOL	WAB/11/71120						
SIGNATURE OF RESPONSIBLE OFFICER							
INTERNAL OFFICE COORDINATION							

CONFIDENTIAL

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000 101
1 Jan. 6-20 June 1979
MUTG JG. Date 2/16/79

DECLASSIFIED

Training in Aerial Mine Warfare for Army Air Force Officers in the
Navy School of Mine Warfare.

MEMOR 5265

9 49000 49000 1942
8-17

1. For action indicated in paragraph 5, basic letter.
2. Officer will be selected from those now destined for Malaya.

Incls
n/c

WILLIAM E. HALL
Colonel, A.C.

Dispatched
AUG 19 1942
AAG

AAG File Copy

*File
ei 8/19/42*

DECLASSIFIED

in 02 471.6 Aerial Mines (16)

DECLASSIFIED
GPO 115
By AAJ/CE JC Date 3/16/87

~~SECRET~~

7 AFAS AFAS 1942
5-14

MEMO

1. Attention is invited to attached copy of letter from the Deputy Chief of Staff to the Vice Chief of Naval Operations.

2. Could the officer requirement mentioned in basic letter be filled from this class?

2 Incls.
1 added

W. E. R.
2/28

Dispatched
AUG 15 1942
AAQ

File 471.6

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As CD 471.6 Admiral's office (16)

DECLASSIFIED
000 100
A.M. & 20 June 1982
AM/CC - JCS Date 1/14/77

DECLASSIFIED

Magnetic Mines for European Theatre.

2. AFWER General 1942
(General Arnold 7/30
Fairchild)

1. Captain Fullinwider, U. S. N., Naval Operations, (Mines and Underwater Armament) was personally contacted by a representative of this Directorate regarding the release of subject mines by the Bureau of Ordnance (Navy) to the Chief of Ordnance (Army).

2. Captain Fullinwider, U. S. N., has advised that he has taken up the matter with the Chief of Naval Operations and that 500 mines can be shipped immediately. Approval has been given to supply 1,000 in August, 500 in September, and the delivery of the additional 500 will be dependent upon the rate of production. There is the possibility of their being supplied in late September or October.

EQ. ARMY AIR FORCE
JUL 30
AAG RECEIVED

MUR S. FAIRCHILD,
Brig. General, U. S. Army,
Director of Military Requirements.

*File
ca 8/3/42*

3. AFCAF General S-2
Fairchild

General Arnold has noted Comment No.

G.E.S.
AFCAF

Dispatched
AUG 3 1942
AAG

DECLASSIFIED

Mr Gray

SECRET

A-1/AS
A-2/AS
Asst. S.
A-3/AS
A-4/AS
Plans AS
Inspection AS
ML. R.
A. D.
Exec. Sec.
Gr. S.
Rec. Mgmt.
Com. Sec.
Pub. Aff.
Dir. Sec.
ML. Sec.
Gen. Sec.
Budget
Fiscal
Signal. Con.
Adj. Gen.
Off. Fl.
Stat. Pl.
Leg. Fl.
Mat. C.
A. S. C.
F. C.

716
David Fairchild
(15)

DECLASSIFIED
1000 hrs.

by ML/SC on 10/1/88

DECLASSIFIED

Magnetic Mines for European Theatre

1. General General 7/26
Arnold Fairchild 1942

Message #630, July 25, 1942, from General Eisenhower reads
in part as follows:

"This message is for Chief Army Air Forces. Request that
magnetic mines MK 13 be shipped to this theater".

Query: Can we get the mines in the quantity required and
ship them at the rate of:

500 in July
1000 in August
1000 in September

H.H.A.

SEARCHED
DECLASSIFIED

ADDRESS REPLY TO
CHIEF OF THE AIR CORPS
WAR DEPARTMENT
WASHINGTON, D. C.

DECLASSIFIED

DECLASSIFIED
DOD HIS
8 Jan. & 20 June 1974
By: MAJ/CC J.C. Date: 2/11/77

WAR DEPARTMENT
Headquarters Army Air Forces
~~OFFICE OF THE CHIEF OF STAFF~~
WASHINGTON

MEMORANDUM FOR THE ASSISTANT CHIEF OF STAFF, OPD

Subject: Attachment of Navy Technician to
Headquarters of the 8th Air Force.

1. It is desired that the necessary action be taken to have a Technician from the Navy Research Staff who is qualified on Aerial Mines MK XIII (Navy) sent to Bolero and attached to Headquarters, 8th Air Force.

2. Action has been taken to have the serial Mines MK XIII (Navy) delivered to Bolero commencing in July. It is therefore desired that the Technician above referred to, arrive at Bolero prior to the arrival of the first mines.

3. A report of the action taken is desired.

471.6 Aerial Mines (D)

file - action has been taken. 2 panel officers are assigned + here left on this mission.
WST

Incl:
Cpy. memo fm.
Gen. Spaatz to
Gen. Arnold
5/20/42

FOR DEFENSE



DECLASSIFIED

471.6 Aerial Mines (D)

DECLASSIFIED
EOD 115.
1 Jan. & 20 June 1974
Pr. M/S/CC J.C. Don. 2/14/77

DECLASSIFIED

MEMORANDUM FOR THE ASSISTANT CHIEF OF STAFF, OPD

Subject: Attachment of Navy Technician to Headquarters of the 8th Air Force.

1. It is desired that the necessary action be taken to have a Technician from the Navy Research Staff who is qualified on Aerial Mines MK XIII (Navy) sent to Bolero and attached to Headquarters, 8th Air Force.
2. Action has been taken to have the serial Mines MK XIII (Navy) delivered to Bolero commencing in July. It is therefore desired that the Technician above referred to, arrive at Bolero prior to the arrival of the first mines.
3. A report of the action taken is desired.

Incls:
Cpy. memo fm.
Gen. Spaatz to
Gen. Arnold
5/20/42

DECLASSIFIED

SECRET

See 125471-6 Aerial Mine 1316

DECLASSIFIED
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9/15/83
3/4/77

DECLASSIFIED
~~SECRET~~

HEADQUARTERS EIGHTH AIR FORCE
Office of the Commanding General

May 20, 1942

MEMORANDUM TO: General Arnold

SUBJECT : Aerial Mines MK XIII (Navy)

1. The Navy magnetic mine of the MK XIII type is designed to be carried on 1000^{lb} bomb station in bombardment airplanes. Information received from the Navy Department indicates that a quantity of these mines sufficient to permit initiating mining operations in the Bolero Theater, can be made available during the next three months.

2. Based upon an investigation of the characteristics of the Aerial Mine MK XIII, it is desired to start mining operations at the earliest practicable date. It is requested that necessary action be taken to supply Aerial Mines MK XIII to Bolero in accordance with the following schedule:

During July	500
During August	1000
During September	1000

3. Based on a suggestion from the Navy Department, it is recommended that a qualified Technician from the Navy Research Staff be sent to Bolero prior to the arrival of the first mines and that he be attached to the Headquarters of the 8th Air Force.

CARL SPAATZ,
Major General
U. S. Army

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DOD, 4/14/83
20/1/83
SECRET
A.L.C. 5/14/77

air 471-6 Aerial Mine (3) 5

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AP/EP/CMT/Jw

DECLASSIFIED
DATE
By: M. J. C. CC 10/1/77

Wtn 6/2/42

MEMORANDUM FOR THE ASSISTANT CHIEF OF STAFF, OPD

Subject: Attachment of Navy Technician to Headquarters of the 8th Air Force.

1. It is desired that the necessary action be taken to have a Technician from the Navy Research Staff who is qualified on Aerial Mines MK XIII (Navy) sent to Balore and attached to Headquarters, 8th Air Force.
2. Action has been taken to have the Aerial Mines MK XIII (Navy) delivered to Balore commencing in July. It is therefore desired that the Technician above referred to, arrive at Balore prior to the arrival of the first mines.
3. A report of the action taken is desired.

~~See the Commanding General, 8th Air Force,~~

Incl.
Cy. memo fm.
Gen. Spinks to
Gen. Arnold
5/20/42

~~M. J. C. C.
Colonel ~~U.S.A.~~ C.
Assistant Chief of the Air Staff, Plans~~

Hq. Army Air Forces
JUN 3 1942
RRB Received

HEADQUARTERS--ARMY AIR FORCES--CORPORATION										
Chief of Staff	No. of Air Staff	A. A. G.	A-1	A-2	A-3	A-4	A-5	A-6	A-7	A-8

DECLASSIFIED

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Ac 26271-6 Aerial Mines (13)B

AAP-20

DECLASSIFIED
EOB No.
1 Jan. & 20 June 1974
By: AAW/c JG: D... 3/1/77

~~SECRET~~

HEADQUARTERS EIGHTH AIR FORCE
Office of the Commanding General

May 20, 1942

MEMORANDUM TO: General Arnold

Subject : Aerial Mines MK XIII (Navy)

1. The Navy magnetic mine of the MK XIII type is designed to be carried on 1000# bomb station in bombardment airplanes. Information received from the Navy Department indicates that a quantity of these mines sufficient to permit initiating mining operations in the Bolero Theater, can be made available during the next three months.

2. Based upon an investigation of the characteristics of the Aerial Mine MK XIII, it is desired to start mining operations at the earliest practicable date. It is requested that necessary action be taken to supply Aerial Mines MK XIII to Bolero in accordance with the following schedule:

During July	500
During August	1000
During September	1000

3. Based on a suggestion from the Navy Department, it is recommended that a qualified Technician from the Navy Research Staff be sent to Bolero prior to the arrival of the first mines and that he be attached to the Headquarters of the 8th Air Force.

CARL SPAATZ,
Major General
U. S. Army

DECLASSIFIED

~~SECRET~~

103/74

DECLASSIFIED
DATE 5/4/77

SECRET
DECLASSIFIED

Aerial Mines MK XIII (Navy).

AFADS
WMB/elm

1. AFADS AFAEP 1942
5/26

1. A copy of a letter, May 20, 1942, from the Headquarters, 8th Air Force is attached. Will you take the necessary action in regard to paragraph three of this letter.

2. Attached for your information is a copy of an R&R sent to the Director of Base Services from this division.

Incl.
Cy. R&R fm AFADS to
AFRBS, 5/26/42, abv
subj/ w/memo frm Gen.
Spatz to Gen. Arnold
5/20/42

TJH, Jr.,
C/A-4.

MAY 27 42
R&R Received

Noted file
TJH

in AB 471.6 Civil Mines (13)

DECLASSIFIED
SECRET

Copy for Col. E. P. Curtis.

in AB 471.6 Civil Mines (13)

DECLASSIFIED
DDO 113

8 Jan. & 20 June 1977
by AP/CC LC Date 2/11/77

DECLASSIFIED

SUBJECT: Aerial Mines MK XIII (Navy)

1 General A-4 1942
Arnold 5/21

For necessary action.

a/HNA

Incl:

Memo. for Gen. Arnold, 5/20/42,
frm. Gen. Spaatz re above subj.

2. AFADS AFMS 1943
5/25

AFADS
WHD/abhh

1. It is requested that the Chief of Ordnance be advised to make arrangements with the Navy Department for the procurement of the aerial mines as per the attached schedule.

2. It is requested that the Ordnance Department advise this division and the Assistant Chief of Air Staff, Plans Division as to whether or not it can meet the schedule of delivery requested by the Eighth Air Force.

3. Paragraph three of the attached basic communication is under consideration and action will be taken by the Assistant Chief of Air Staff, Plans Division.

Incl.

Memo to Gen. Arnold
frm. Sq. 8th Air Force
5/20/42.

T.H., JR.,
C/A-4

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Air 46471.6 Aerial Mines (13)

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SECRET

DECLASSIFIED
DDO HFS
8 Jan. & 20 June 1974
Sp. ~~SECRET~~ CAC, Date: 3/4/77

HEADQUARTERS EIGHTH AIR FORCE
Office of the Commanding General

May 20, 1942

MEMORANDUM TO: General Arnold

SUBJECT : Aerial Mines MK XIII (Navy)

1. The Navy magnetic mine of the MK XIII type is designed to be carried on 1000^{lb} bomb station in bombardment airplanes. Information received from the Navy Department indicates that a quantity of these mines sufficient to permit initiating mining operations in the Bolero Theater, can be made available during the next three months.

2. Based upon an investigation of the characteristics of the Aerial Mine MK XIII, it is desired to start mining operations at the earliest practicable date. It is requested that necessary action be taken to supply Aerial Mines MK XIII to Bolero in accordance with the following schedule:

During July	500
During August	1000
During September	1000

3. Based on a suggestion from the Navy Department, it is recommended that a qualified Technician from the Navy Research Staff be sent to Bolero prior to the arrival of the first mines and that he be attached to the Headquarters of the 8th Air Force.

s/ Carl Spats,
Major General,
U.S. Army.

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air 05 471.6 Aerial Mines (13)

025/13

DECLASSIFIED
UPO, 175
EX. 100, 20 June 1974
By: *WJL* NO. Date: *3/4/77*

APR 28 1942

MAY 8 1942

MEMORANDUM FOR THE CHIEF OF NAVAL OPERATIONS:

Subject: **Aircraft Mines For The Middle East Theatre.**

1. It is requested that five hundred mines, Mark XIII, be made available to the Air Forces as soon as possible.
2. It is further requested that these mines be transported as rapidly as possible to the nearest practicable port on the Red Sea for delivery to the North African Military Mission (General S. L. Merrill) in Cairo.
3. It is requested that a fast vessel, a destroyer, if possible, be assigned for this purpose.
4. At least one, and preferably two officers familiar with this equipment should accompany the movement and be prepared to remain for eight weeks after arrival at the destination. These officers will instruct Air Force personnel in the use of the equipment and also observe the results obtained.

For the Commanding General, Army Air Forces:

M. F. HARMON,
Major General, U. S. A.
Chief of the Air Staff.

MAY 27 1942
MAY 28 1942
AAG

*File
A/S/2/5/2*

H.M. 6 General Merrill (12)

DECLASSIFIED

See also 471-6 General Merrill (12)

~~SECRET~~
CLASSIFIED

203/73

REQUIREMENTS FOR AIRCRAFT: These five hundred ninety and five hundred more that will be ordered delivered at a later date by the Chief of Ordnance are required for aerial mine laying operations in the Middle East Theater by units of the Army Air Forces of the United States.

Hq. Army Air Corps
MAY 27 1942
480 Receipt

DECLASSIFIED

~~SECRET~~

DECLASSIFIED
E.O. 11652

~~CONFIDENTIAL~~
DECLASSIFIED

3190

WAR DEPARTMENT
HEADQUARTERS OF THE ARMY AIR FORCES
WASHINGTON

(Air AG)

A C 27

January 6, 1942

SUBJECT: Modification of B-26 for Torpedoes.

TO : Chief of the Air Corps

1. Reference is made to R&R, subject: "Equipment to Carry Torpedoes on B-26 Airplanes", from Materiel Division to A-4, dated December 27, 1941.
2. It is desired that this equipment be installed on all B-26 type airplanes, giving first priority to those which are being set apart for early movement to "I".

By Command of Lieutenant General ARNOLD:

John B. Cooley

JOHN B. COOLEY
Lt. Col., A.G.D.
Assistant Air Adjutant General.



Air AG 4716 General Minto

1st Ind.

War Department, Office, Chief of the Air Corps, Washington, D.C., JAN 12 1942
TO: The Air Adjutant General.

1. Necessary action has been initiated to provide torpedo carrying and releasing gears for all B-26 type airplanes. Approximately sixty (60) sets of gears have been promised for delivery on or about February 1st.

For the Chief of the Air Corps

F. J. Ordway Jr.

F. J. ORDWAY, JR.,
Major, Air Corps,
Asst. Exec., Mat. Div.

10413

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and 4716 General Minto

DECLASSIFIED
GPO 1975
4 May 80 10:00 AM 1975
By AD/TC 100, Date 1/16/77

DECLASSIFIED

(Air AG)

A G 27

January 6, 1942

SUBJECT: Modification of B-26 for Torpedoes.

TO : Chief of the Air Corps

1. Reference is made to RMR, subject: "Equipment to Carry Torpedoes on B-26 Airplanes", from Materiel Division to A-4, dated December 27, 1941.
2. It is desired that this equipment be installed on all B-26 type airplanes, giving first priority to those which are being set apart for early movement to "I".

By Command of Lieutenant General ARNOLD:

JOHN B. COOLEY
Lt. Col., A.G.D.
Assistant Air Adjutant General.

4716
Chief of Staff
(11)

Discovered
JAN 6 1942
AAG

HEADQUARTERS		ARMY AIR FORCES				COORDINATION				
Chief of Staff	Sec'y of Staff	AAG	A 1	A 2	A 3	A 4	A WPD	A Insp	Budget	Statistics
		<i>PK</i>								

DECLASSIFIED

AAF 39

~~CONFIDENTIAL~~

DECLASSIFIED

EXC 105

8 Jan. 4 10 1984
By AW/GR JC. Date 3/11/87

DECLASSIFIED

January 2, 1942.

MEMORANDUM FOR THE AIR ADJUTANT GENERAL:

Subject: Modifications of B-26 for Torpedoes.

In compliance with Directive No. 4-4, dated December 31, 1941, copy attached, it is desired that the following instructions be transmitted to the Chief of the Air Corps:

"Reference HQC, subject: 'Equipment to Carry Torpedoes on B-26 Airplanes.', from Material Division to A-4, dated December 27, 1941. It is directed that this equipment be installed on all B-26 type airplanes, giving first priority to those which are being set apart for early movement to 'X'."

EDGAR P. SORENSEN,
Colonel, Air Corps,
Chief, A-4 Division.

Incl.:
Cpy. Directive 4-4,
12/31/41.

DECLASSIFIED

~~CONFIDENTIAL~~

an 28471-6 Serial 11111 (11)

DECLASSIFIED
GPO 1975
Date: 6 20 June 1975
By: *ML/te* L.C. Date: *3/17/77*

DECLASSIFIED

Directive No. 4-4

WAR DEPARTMENT
HEADQUARTERS OF THE ARMY AIR FORCES
WASHINGTON

December 31, 1941.

DIRECTIVE MEMO FOR: A-4

SUBJECT: Modifications of B-25 for
Torpedoes.

Take such action as is necessary to have
attachments or necessary modifications installed on,
or available for installation on, all B-25 airplanes
for carrying the British, Dutch and American type
torpedoes.

By direction of the Chief of the Air Staff:

C. E. Duncan,
Lt. Colonel, Air Corps,
Secretary of the Air Staff.

DECLASSIFIED

CHD/ar1.

an 25471.6 Class 2 Min 11

AP/AS
TJZ/ps

DECLASSIFIED
G-30 NIS

8 Jan. 20 1974
by 176 SAC, Date 2/12/77

Written January 2, 1942

DECLASSIFIED

JAN 5 1942

MEMORANDUM TO: Colonel Streett
Office of the Assistant Secretary for Air

1. The information requested in your memo of December 29, 1941 to the Chief of the Air Staff is as follows:

Para. 1. The 54 Group Program did not include dive bomber groups but 13 Groups are included in A-WPD/1 (Victory Program). The latest Production and Allocation Report (12-30-41) shows that 54 dive bombers will become available from July through October 1942, which will allow the activation of approximately 9 Groups during that period. The A-3 Division has a study under way to adapt the P-40 for dive bombing. This, if effected, would enable the activation of dive bomber units at an earlier period.

Para. 2 The attached Memo, prepared by the Armament Branch Material Division dated December 31st, 1941 gives the latest available information on torpedoes and torpedoes.

Para. 3 B. Bomb Charges. Two types are being produced by the Ordnance Department through the Navy:

- 18,750-325# (standardized) with expected delivery of 2,000 about June 1942 on which the Newfoundland forces have first priority.
- 6,000-tons-1,000# (non-standardized) with no anticipated delivery schedule due to present TNT shortage.

b. Aerial Mines. In Memo for the Chief of the Air Staff, subject "The Establishment of an Army Requirement for Aerial Mines" dated 10-31-41 A-WPD recommended that a War Reserve of 3,000 tons of 1,000 lb Navy type magnetic mine, to be set up. The Navy has some mines and is just going into production on a 2,000 lb parachute magnetic and contact fuse mine although the standardization is still in doubt and no production figures are available. The Air Corps will shortly request the Ordnance Department to procure this type mine.

Chief, Air Staff

HEADQUARTERS ARMY AIR FORCES - CORPS HEADQUARTERS AIR STAFF										
Chief of Staff	Asst. Chief of Staff	A. G. O.	A-1	A-2	A-3	A-4	A. W. P. D.	A. Insp.	Budget	Statistics
	<i>JTC</i>						<i>JTC</i>			
1 Incl. - Gy. Memo dated 12-31-41										

DECLASSIFIED

AM 20471.6 annual memo

HEADQUARTERS ARMY AIR FORCES

1833

ROUTING AND RECORD SHEET

CONFIDENTIAL

Note: --A line will be drawn across sheet after each comment.

File No.

DECLASSIFIED
DDO WTS

Tally No. AAP

8 Jan. & 20 June 1984
By *SP-13 JG. Date 1/17/7*

SUBJECT: Establishment of an Army Requirement for Aerial Mines.

NO.	FROM	TO	DATE	COMMENTS
1	AAP A-4	<i>AAF A-3 thru AWPD</i>	1941 11/10	<p>1. In part III of AWPD study on the above subject (Serial 429) a War Reserve of 3,000 tons of Navy type magnetic mine is recommended. In the temporary absence of Lt. Col. Anderson information is desired whether this is present Navy standard parachute type with magnetic discharger and contact nose fuse or the development type mentioned in paragraph 11. If the latter, it would appear that no War Reserve is possible at this time.</p> <p>Incls: Memo C/AAP fr. AWPD w/2 Incls: #1 R&R, 1 fr. A-4 to A-WP-10/2/41 #2 Cy. R&R, C/AS to A-4/9/30/41.</p> <p><i>abf</i> <i>EH</i> EPS C/A-4 A</p> <p>AAF/A-4 JPM/omd</p>
2.	AAP A-WPD	AAP A-4 thru A-3	12/4	<p>1. The type recommended for War reserve is the 7500 lb Navy standard parachute type with magnetic discharges and nose contact fuse.</p> <p>Incls: n/c</p> <p><i>MLC</i> <i>ca 90/A-WPD</i></p> <p>AAF/A-WPD QAM/alm</p>
3	AAP A-3	AAP A-4	12/10	<p>This Division concurs in A-WPD recommendation, R&R 2, above.</p> <p>Incls: n/c</p> <p><i>ELN</i> C/A-3</p> <p>AAF/A-3 GHC-cds</p>

(Do not use reverse side)

W-0071, AC. Rev. 8/14/41

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awpd-11/27

Page 1-
DECLASSIFIED
CONFIDENTIAL

air 13 491.6 Serial Mine?

HEADQUARTERS ARMY AIR FORCES
ROUTING AND RECORD SHEET

2634

CONFIDENTIAL

CLASSIFIED

File No.

Note: A line will be drawn across sheet after each comment.

Tally No. AAF

SUBJECT: Establishment of an Army Requirement for Aerial Mines.

NO	FROM	TO	DATE	COMMENTS
4	AAF C/AS	OCAC Armament Section	1941 12/17	1. For your information. Incls: n/o
5	OCAC Mat. Div. (4-1)	C/AS AAF	1941 12/26 29	1. Noted. TPO O.P.E. Chief, Materiel Division

RECEIVED
DEC 28 1941
MAIL ROOM

FILE
NO FURTHER ACTION
NEEDED

9/13/73

AAF/A-4
JJO/emd

 Dec 28 1941
 Chief, Materiel Division

6737
A12-23(45-B)

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W-4071, AC, Rev. 8/14/41

Page No. 4
AAF/A-4 Chief, Materiel Division 9

DECLASSIFIED
DDO 813
8 Jan & 30 June 1974
By ML/TC LQ, Date 4/12/77

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WAR DEPARTMENT
HEADQUARTERS OF THE ARMY AIR FORCES
WASHINGTON

OFFICE OF
THE CHIEF OF THE AIR STAFF

429

MEMORANDUM FOR THE CHIEF OF THE AIR STAFF:

Subject: The Establishment of an Army Requirement
for Aerial Mines.

I. Discussion.

1. The British do not desire standardization of aerial mines for British and U. S. employment.

2. The Navy have developed and are producing two sizes of magnetic type mines, non-floating, for use in shallow restricted waters weighing approximately 1000 lbs. and 2000 lbs. These mines are appropriate weapons for shallow restricted waterways.

3. The 1000 lb. size can be carried in the bomb bay of Army bombers, having the approximate dimensions of the standard 1000 lb. bomb.

4. Standardization of this mine by the Army and Navy is, therefore, practicable.

5. The Navy have 300 mines, floatation type, but have no current plans for providing a strategic reserve because of its limited tactical value.

6. A combination static-dynamic control mine that will remain in free suspension at a pre-set depth below surface for a period not to exceed 30 hours is now being developed by the Navy. As this type of mine will not disclose its presence through a visible floatation gear, it should possess advantages far in excess of the present floatation type. If, and when, this mine proves practical in tests its application to air missions should be made the subject of a special study.

7. The delivery of direct fire on targets, whenever that procedure is possible, should be preferable to any form of indirect fire such as is represented by the laying of aerial mines. Indirect fire by mine laying should be restricted primarily, therefore, to the blocking of restricted areas through which future targets must pass.

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8. In estimating war reserve requirements precision is not possible where precise operations cannot be foreseen for purposes of computation. Estimates must, therefore, be based on reserves necessary to meet demands exceeding productive capacity based on a reasonable mission percentage basis.

II. Conclusions.

9. A military requirement exists for a water mine which can be released from aircraft and which will remain freely in suspension for a minimum of 30 hours at a depth to be controlled by a presetting mechanism and which will explode either on contact by a surface vessel or by the passage of such vessel above it.

10. A military requirement exists for a non-floating type mine which can be released from aircraft and which will explode when a surface vessel passes above it.

III. Action recommended.

11. It is recommended that when the tests now being conducted by the Navy result in the development of a mine which will remain in free suspension below the surface of water by a combination of static-dynamic control, a study be conducted by the Air Staff to determine Air Corps requirements for this weapon.

12. It is recommended that there be set up a War Reserve of 3,000 tons of the 1000 lb. Navy type magnetic mine.

2-Incls.:

- #1 - R&R, 1. fr. A-4
to A-WP-10/2/41
- #2 - Cy. R&R, C/AS to
A-4, 9/30/41

*1 Incls.
for H.L. George.
AWP*

Cl-737

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AWP 471.6 Aerial Mine (P)

~~CONFIDENTIAL~~
 HEADQUARTERS ARMY AIR FORCES
 ROUTING AND RECORD SHEET

DECLASSIFIED
 DOD TRS.
 8 MAR 83 20 June 1974
 By *SP1/EC* JG, Date *2/1/77*

(To be filed with correspondence)

Note.—A line will be drawn across sheet after action by each office concerned.

SUBJECT: The Establishment of an Army Requirement for Aerial Mines.

NO.	FROM	TO	DATE	DATA
1.	AAF A-4	AAF A-WP	1941 10/2	<div style="text-align: right;">AAF/A-4 MPS/mwb</div> <p>1. Attached hereto is copy of R&R forwarded this Division by Chief of the Air Staff.</p> <p>2. It is requested that this Division be advised of the tonnage of the subject bombs required for War Reserves.</p> <p>3. Request that this study be coordinated with A-3 who is taking into consideration the plans of the Navy.</p> <p>4. The basic R&R has been forwarded to the Chief of the Air Corps for action in connection with paragraphs 1 and 3.</p> <p>5. An R&R similar to this has also been forwarded to the Asst. Chief of the Air Staff, A-3.</p> <p>Incl: Copy R&R, above subj., from C/AS to A-4.</p> <div style="text-align: right;"><i>SP1</i> E.P.S. C/A-4</div>

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ROUTING AND RECORD

DECLASSIFIED

DDI 112

100-4-20 June 1968

100-4-20 June 1968

9/11/77

SUBJECT: The Establishment of an Army Requirement for Aerial Mines.

1. C/AAF C/AS 1941
9/30

1. Immediate steps will be taken by the Air Staff to secure the establishment of an Army requirement for aerial mines. (Floating type—exploding on contact by surface vessel).
2. This requirement should cover an adequate tonnage for War Reserve.
3. The mines procured must be of such shape and size as to be capable of being carried in both Army and Navy airplanes.
4. This project will be assigned a high priority.

HNA

2. AAF AAF
C/AS A-4 9/30

Necessary action.

CKD

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DOO 100
By MAN/CA & 23 June 1985 /107?
10, Date

SUBJECT: Establishment of an Army Requirement for Aerial Mines.

AAF/A-4
JFW/omd

1. AAF AAF 1941
A-4 A-3 11/10
THRU
AWPD

1. In part III of AWPD study on the above subject (Serial 429) a War Reserve of 3,000 tons of Navy type magnetic mine is recommended. In the temporary absence of Lt. Col. Anderson information is desired whether this is present Navy standard parachute type with magnetic discharger and contact nose fuse or the development type mentioned in paragraph 11. If the latter, it would appear that no War Reserve is possible at this time.

Incls:
Memo C/AAF frn AWPD w/2
Incls: #1 BAR, 1 fr A-4
to A-WP-10/2/41
#2 Cy, R&R, C/AS to
A-4/9/30/41.

EPS
C/A-4

2. AAF AAF 12/4
A-WPD A-4
thru
A-3

AAF/A-WPD
CAA/alm

1. The type recommended for War Reserve is the 1000 lb Navy standard parachute type with magnetic discharges and nose contact fuse.

Incls:
n/c

HLG
C/A-WPD

3. AAF AAF 12/10
A-3 A-4

AAF/A-3
GMC-ds

This Division concurs in A-WPD recommendation, BAR 2, above.

Incls: n/c

RLN
C/A-3

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WAR DEPARTMENT
HEADQUARTERS OF THE ARMY AIR FORCES
WASHINGTON

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DECLASSIFIED
DOD 603
on 6/20/2000 1216
by SP/TC J.C. Doss 24/07

MEMORANDUM FOR THE CHIEF OF THE AIR STAFF:

Subject: The Establishment of an Army Requirement
for Aerial Mines.

1. Discussion.

1. The British do not desire standardization of aerial mines for British and U. S. employment.
2. The Navy have developed and are producing two sizes of magnetic type mines, non-floating, for use in shallow restricted waters weighing approximately 1000 lbs. and 2000 lbs. These mines are appropriate weapons for shallow restricted waterways.
3. The 1000 lb. size can be carried in the bomb bay of Army bombers, having the approximate dimensions of the standard 1000 lb. bomb.
4. Standardization of this mine by the Army and Navy is, therefore, practicable.
5. The Navy have 300 mines, floatation type, but have no current plans for providing a strategic reserve because of its limited tactical value.
6. A combination static-dynamic control mine that will remain in free suspension at a pre-set depth below surface for a period not to exceed 30 hours is now being developed by the Navy. As this type of mine will not disclose its presence through a visible floatation gear, it should possess advantages far in excess of the present floatation type. If, and when, this mine proves practical in tests its application to air missions should be made the subject of a special study.
7. The delivery of direct fire on targets, whenever that procedure is possible, should be preferable to any form of indirect fire such as is represented by the laying of aerial mines. Indirect fire by mine laying should be restricted primarily, therefore, to the blocking of restricted areas through which future targets must pass.

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~~CONFIDENTIAL~~

8. In estimating war reserve requirements precision is not possible where precise operations cannot be foreseen for purposes of computation. Estimates must, therefore, be based on reserves necessary to meet demands exceeding productive capacity based on a reasonable mission percentage basis.

II. Conclusions.

9. A military requirement exists for a water mine which can be released from aircraft and which will remain freely in suspension for a minimum of 30 hours at a depth to be controlled by a presetting mechanism and which will explode either on contact by a surface vessel or by the passage of such vessel above it.

10. A military requirement exists for a non-floating type mine which can be released from aircraft and which will explode when a surface vessel passes above it.

III. Action recommended.

11. It is recommended that when the tests now being conducted by the Navy result in the development of a mine which will remain in free suspension below the surface of water by a combination of static-dynamic control, a study be conducted by the Air Staff to determine Air Corps requirements for this weapon.

12. It is recommended that there be set up a War Reserve of 3,000 tons of the 1000 lb. Navy type magnetic mine.

2-Incls.:

- #1 - R&R, 1. fr. A-4
to A-WP-10/2/41
- #2 - Cy. R&R, C/AS to
A-4, 9/30/41

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CONFIDENTIAL
DECLASSIFIED
DOD IIS
8 Jan. & 20 June 1964
By AB/12 JG, Doc 31477

SUBJECT: The Establishment of an Army Requirement for Aerial Mines.

1. AAF 1941
A-4 A-WP 10/2

AAF/A-4
MFS/mwb

1. Attached hereto is copy of R&R forwarded this Division by Chief of the Air Staff.
2. It is requested that this Division be advised of the tonnage of the subject bombs required for War Reserves
3. Request that this study be coordinated with A-3 who is taking into consideration the plans of the Navy.
4. The basic R&R has been forwarded to the Chief of the Air Corps for action in connection with paragraphs 1 and 3.
5. An R&R similar to this has also been forwarded to the Asst. Chief of the Air Staff, A-3

Incl:
Copy R&R above subj.,
frn C/AS to A-4

E.P.S.
C/A-4

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HEADQUARTERS ARMY AIR FORCES
ROUTING AND RECORD SHEET

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File No.

8 Jan. & 20 June 1989
By AM/SC AC, DOD 3/4/87

Tally No. AAF

SUBJECT: Aerial Torpedoes.

NO.	FROM	TO	DATE	COMMENTS
1.	AAF A-WPD	AAF C/AS	1941 12/16	<p>1. The devastating effect of torpedoes launched from low-flying aircraft against naval craft has been amply illustrated at Tirano, Pearl Harbor and Singapore. The Army Air Forces have neither torpedoes nor the attaching devices for the aircraft to carry them.</p> <p>2. The equipping of our aircraft to carry torpedoes has been under study for some time. It is believed that the matter has reached a stage of urgent importance. Development should be rushed and training of units begun without delay.</p> <p>3. Recommendation: That the attached directive be addressed to the Assistant Chief of the Air Staff, A-4.</p> <p style="text-align: right;">AAF/A-WPD RCL-hlg</p> <p style="writing-mode: vertical-rl; position: absolute; right: 0; top: 50%; transform: translateY(-50%);">471.6 Aerial Torpedoes (8)</p>
<p>1 Incl. Memo to the Asst. C/AS, A-4. <i>sent by my. Curtis dated 12/18 & delivered by Miss Kincaid 12/19</i></p> <p style="text-align: center; font-size: 2em;"><i>File</i></p> <p style="text-align: right;"><i>H.L.G.</i> R.L.G. A/WPD</p>				

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Page No.

W-4071, AC, Rev. 8/14/41

SECRET
471.6 Aerial Torpedoes (8)

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DDO HQ

8 Jan. & 20 June 1974

By: *MJG* / *AG, Date 3/10/77*

AAF/A-4
NFD/mhh

(Written Dec. 17, 1941)

December 18, 1941

MEMORANDUM FOR THE ASSISTANT CHIEF OF STAFF, G-3:

Subject: Mine Laying by Airplane.

The Chief of the Army Air Forces concurs in the action recommended in the memorandum (G-3/40828, December 9, 1941, Subject: "Mine Laying by Airplane") subject to the recommendation contained in paragraph 1 of comments of the Assistant Chief of Staff, G-4, (G-4/31577, December 12, 1941, Subject: "Mine Laying by Airplane").

For the Chief of the Air Staff:

Incls.

- memo for AG/S, G-3 from NFD Gen. Staff, 12/16/41;
- memo for AG/S, G-3 from G-4 Gen. Staff, 12/12/41; Brief from G-3/40828; memo for G/S from G-3, 12, 9/41; Tab A

EDGAR P. SORENSON,
Colonel, Air Corps,
Assistant Chief of Air Staff, A-4

Tab A forwarded with original only

4716 Chief Mms 7

Dispatched
DEC 23 1941
AAG

HEADQUARTERS		ARMY AIR FORCES				COORDINATION				
Chief of Staff	Sec'y of Air Staff	A.A.G.	A-1	A-2	A-3	A-4	A-WFD	A-Insp.	Budget	Statistics

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WAR DEPARTMENT
WAR DEPARTMENT GENERAL STAFF
WAR PLANS DIVISION
WASHINGTON

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DDO 005

8 Jan. & 20 June 1974
By *MALIC* AG, Date *3/4/77*

G-3/40235

December 16, 1941.

MEMORANDUM FOR THE ASSISTANT CHIEF OF STAFF, G-3:

Subject: Mine Laying by Airplane.

War Plans Division concurs in the action recommended in the memorandum (G-3/40235, December 9, 1941, Subject: "Mine Laying by Airplane") subject to the recommendation contained in paragraph 1 of comments of the Assistant Chief of Staff, G-4, (G-4/31577, December 12, 1941, Subject: "Mine Laying by Airplane").

S/by L. T. Gerow,
Brigadier General,
Acting Assistant Chief of Staff.

1 Incl:
G-4/31577, 12-12-41,
w/Incl. as listed.

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DECLASSIFIED
DOD 485
8 Jan. 6 20 June 1977
By Paul G. ... 3/1/77

Dec. 12, 1941

MEMORANDUM FOR THE ASSISTANT CHIEF OF STAFF, G-3:

Subject: Mine Laying by Airplane

1. G-2 (Colonel Compton) states that 200 British Hawkins Antitank Grenade Mines, which were requested for test in this country, have been shipped from London. G-4 believes that, instead of immediate development of a similar mine by the Chief of Ordnance, initial test should be made with the Hawkins mine. If satisfactory, this mine can be duplicated.

2. With this exception, G-4 concurs in attached recommendations.

BREHON SOMERVELL
Brigadier General,
Assistant Chief of Staff.

Incl:
G-3/40235,
12-9-41,
w/1 incl.

S/by Don C. Faith
Lt. Col., General Staff,
Asst. Executive

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WAR DEPARTMENT
OPERATIONS AND TRAINING DIVISION G-3
WASHINGTON

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DD FORM

1 Jul 62 & 23 June 1977
MJC 100 Date 3/4/77

G-3/40235

December 9, 1941

MEMORANDUM FOR THE CHIEF OF STAFF:

Subject: Mine Laying by Airplane.

I. Discussion.

1. One of the first items of military equipment capable of reaching a massed tank break-through is the airplane. Germany and especially Russia have found this to be the case according to recent G-2 reports. It is, therefore, logical to assume that the use of airplanes as an antitank weapon would be an effective means of stopping or canalizing a massed break-through. By a massed break-through is meant the penetration of Divisional, Corps or Army defenses by a thousand or more tanks to a point where it is necessary to concentrate the Tank Destroyer battalions for massed counter attacks.

2. In order to deal effectively with such attacks, it is necessary first to slow up, canalize and encircle the penetrating force. Although this procedure is prescribed in our antitank doctrine it is exceedingly difficult to accomplish with the present or contemplated equipment. Even the Russian Army, with its mass of tanks and antitank weapons has been unable to stop German massed tank attacks. This is due principally to the inability to mass counter measures of sufficient strength in sufficient time to overcome the advantage gained by the initial concentration of the enemy.

3. Therefore, the combination of airplane and antitank mine offers considerable promise. The British have developed a small antitank mine costing about 25 cents (less bursting charge) known as the Hawkins Antitank Grenade Mine #75 capable of breaking the track of a medium tank. This mine is so constructed that it will land in the alert or operating position when thrown or dropped. Its total weight is approximately 1-3/4 pounds. (Tab A).

4. These mines can be dropped or sown by planes in front, flank, rear and among the advancing tanks. The mines must be dropped in large numbers in several rows. It is believed that the effect of this mine field, available when and where needed, will have a great effect upon the mobility and impetus of the tank attack.

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WAR DEPARTMENT GENERAL STAFF
OPERATIONS AND TRAINING DIVISION G-3
WASHINGTON

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DECLASSIFIED
DOD IWS
9 Jul 8 20 1988
BY: MJC/CC JG Date: 3/16/87

G-3/40235

December 9, 1941

MEMORANDUM FOR THE CHIEF OF STAFF:

Subject: Mine Laying by Airplane.

I. Discussion.

1. One of the first items of military equipment capable of reaching a massed tank break-through is the airplane. Germany and especially Russia have found this to be the case according to recent G-2 reports. It is, therefore, logical to assume that the use of airplanes as an antitank weapon would be an effective means of stopping or canalizing a massed break-through. By a massed break-through is meant the penetration of Divisional, Corps or Army defenses by a thousand or more tanks to a point where it is necessary to concentrate the Tank Destroyer battalions for massed counter attacks.

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4. These mines can be dropped or sown by planes in front, flank, rear and among the advancing tanks. The mines must be dropped in large numbers in several rows. It is believed that the effect of this mine field, available when and where needed, will have a great effect upon the mobility and impetus of the tank attack.

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5. This reduction of mobility robs the tank of its greatest asset, maneuverability, and therein provides the necessary time for the defense to concentrate antitank means including antitank cannon planes, bombing planes, artillery, antitank weapons, tank destroyer units and also provides an opportunity for individual action by tank-stalking personnel.

6. Since the mass of the enemy tanks will be within our lines, the possibility of removal of the mines by the enemy is greatly reduced but the possibility of later removal by friendly troops is increased. The possibility of destruction of friendly vehicles in subsequent operation is realized but it is believed that lessons learned from the present conflict indicate that the importance of stopping or delaying a massed tank attack outweighs the possible loss of a few friendly tanks in a friendly mine field.

7. A mine of this type could possibly be used to replace all present mines since, according to British reports, it will break a track and stop a tank which is all that can be expected of any of our present mines of less than 10 pounds of explosive. When laid by hand such mines can be stacked if more power is desired. They are more simple and easy to manufacture, store and handle and can be made available in much greater numbers than the present mine. In size, 12 of the subject type require only 1.7 cubic feet of space.

8. A chemical fuze that will become inert in approximately eight (8) hours after dropping would be of considerable value as a safety precaution against possible destruction of friendly vehicles in subsequent operations.

9. Coordination of this development with the Air Corps is mandatory in order to determine the plane or planes most suitable for this purpose and to develop a chute or other means of controlling the distribution of the mines.

II. Action Recommended.

The Secretary of War directs:

1. That the Chief of Ordnance take immediate steps to develop an antitank mine similar to the British Hawkins Antitank Grenade Mine #75 of sufficient power to break the track of a medium

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By: AD/cc Date: 4/12/77

tank and capable of being dropped or seen in large numbers by airplanes.

2. That the Chief of the Army Air Force develop, in collaboration with the Chief of Ordnance, a satisfactory means of distribution of antitank mines from such type of airplanes that may be considered suitable for the purpose.

3. That the feasibility of this system be determined by a suitable test on a scale of sufficient magnitude to enable a conclusive decision to be reached.

4. That if approved this paper be forwarded to G-4 for action.

III. Concurrences.

- A. C. of S., G-4 ()
- Ch/Army Air Forces ()
- A. C. of S., WPD ()

S/by Harry L. Twaddle,
Brigadier General,
Assistant Chief of Staff.

1 Incl.
Tab A. (M. A. Report #44627.)

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 DOD 103

3 Jan. & 20 June 1974
 AC, Date 3/11/77

1st Ind. (Air AG)

WD HQ ARMY AIR FORCES, Washington, D.C. January 17, 1942
 TO : The Chief of the Air Corps.

Requesting compliance with the above directive.

By command of Lieutenant General ARNOLD:

Disseminated
 JAN 17 1942
 AAG

JOHN B. COOLEY
 Lt. Col., A.G.D.

HEADQUARTERS		ARMY AIR FORCES				Assistant Chief of Staff				
Chief of Staff	Secy of Staff	AAG	A 1	A 2	A 3	A 4	A WD	A Insp	Budget	Sta tistics
		99C				✓				

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AAP 39

air ab 471.6 serial 2 in 2B


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 HEADQUARTERS ARMY AIR FORCES
 ROUTING AND RECORD SHEET

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 GPO ltr.
 8 Jan. & 20 June 1974
 By: *AW/C* LC: Date: *3/1/77*

Note: A line will be drawn across sheet after each comment.

File No.
 Tally No. AAF

SUBJECT: Mine Laying by Airplane.

NO.	FROM	TO	DATE	COMMENTS	AAF/A-4 RCC/cmy
1.	AAF A-4	OCAC	1942 1/12	<p>1. Reference the inclosed directives on above subject.</p> <p>2. For necessary action.</p> <p>For Assistant Chief of Staff, 1st</p> <p>Incl.: • ltr. to C/AAF fr TAG 1/4/42 w/1 Incl.</p>	 RCC AAF/A-4

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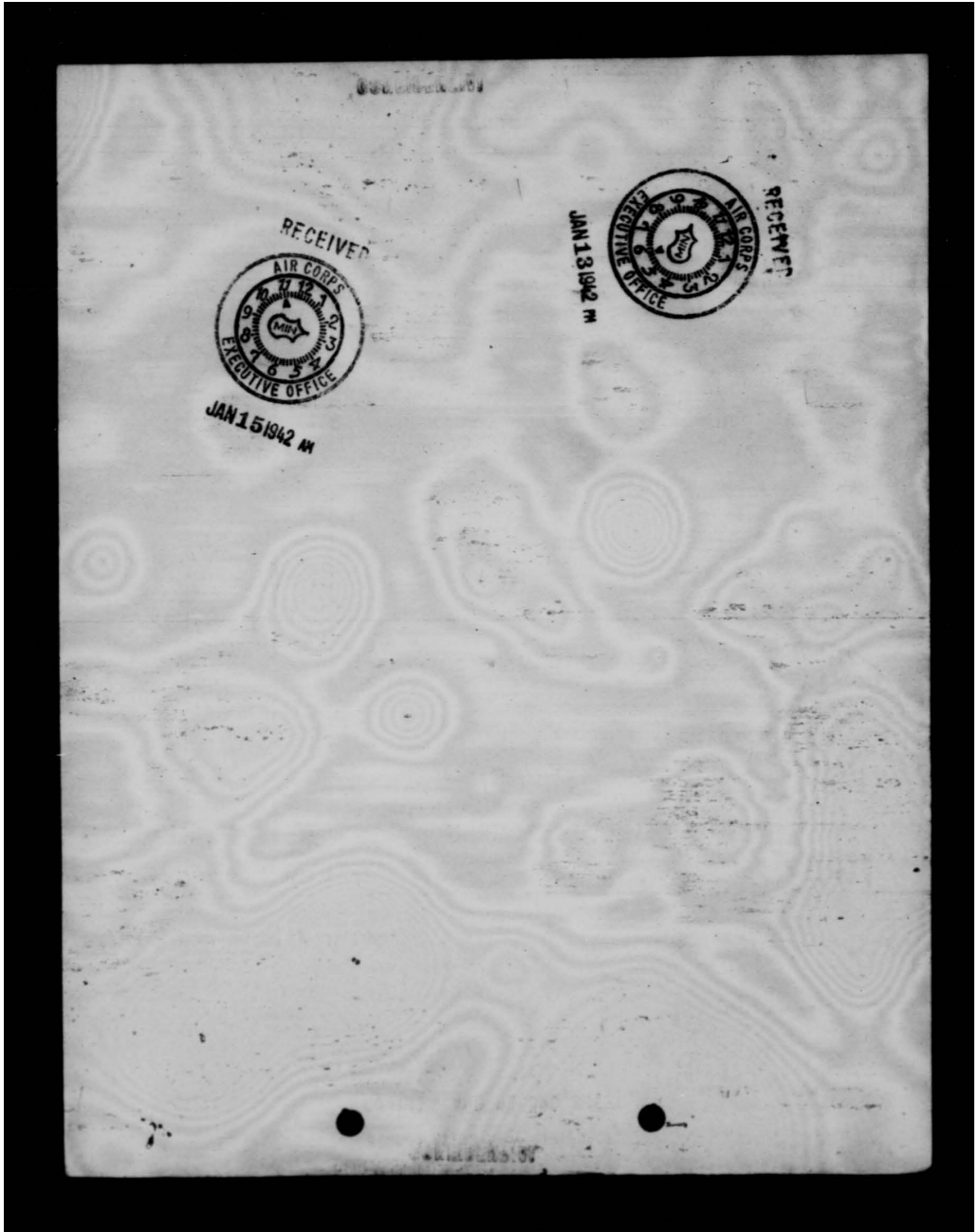
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8-4071, 40, Rev. 8/14/41

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Page No. _____ *Air 476* *476 to Marshall* *OB*

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DOC 1176

8 Jan & 20 June 1981
by *16* AG, Date *3/1/77*

Mine Laying by Airplane.

AAF/A-4
RCC/cmy

1. AAF OCAC 1942
A-4 1/12

subject.

1. Reference the inclosed directives on above
2. For necessary action.

For Assistant Chief of Air Staff, A-4

Incl.:

1 tr. to C/AAF fr TAG
1/4/42 w/12

RCC
AAF/A-4

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 ROUTING AND RECORD SHEET

Note.--A line will be drawn across sheet after each comment.

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8/17 & 20 June 1978
 By *MAJ/TC* 10, Dec 21/11/77

File No.

Tally No. AAP

SUBJECT: Methods of Defense Against Mine Laying by Airplanes.

1/4

4716
 Serial Number 12

NO.	FROM	TO	DATE	COMMENTS	AAF/A-3 BSV-da
1	AAF A-3	AAF C/AS	1941 12/1	1. Subject report on the experimentation now being conducted by the Navy on the methods of defense against mine laying by airplanes is transmitted for your information in accordance with previous instructions to this effect. Incl. Ltr frm C/AC to CAAP, 11/15/41 sub1. as above.	
2					

for
 ELN
 C/A-3

File
COB

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W-4071, AC, Rev. 8/16/41

ADDRESS REPLY TO
CHIEF OF THE AIR CORPS
WAR DEPARTMENT
WASHINGTON, D. C.

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DDO #18
8 Jan. & 20 June 1974
By: ALM/ck LC: Date: 3/4/77

WAR DEPARTMENT
OFFICE OF THE CHIEF OF THE AIR CORPS
WASHINGTON

NOV 15 1941

SUBJECT: Methods of Defense against Mine
Laying by Airplanes.

TO: Chief of the Army Air Forces

983

1. Pursuant to instructions contained in 8th Indorsement to a letter from The Adjutant General to the Chief of Coast Artillery and Chief of the Air Corps, in turn, dated May 16, 1941, a representative of this office has contacted Lieutenant Commander Dale Harris, Planning Division, Bureau of Aeronautics, U. S. Navy, and obtained from this officer the following information relative to the present status of the Navy Department's mine sweeping by aircraft development projects:

Heavier than Aircraft Project at the Naval Aircraft
Factory.

A magnetic ring is being constructed for installation in the PB1-5 flying boat. It is expected that the installation and tests of this equipment will be completed on or about April 1, 1942.

Lighter than Aircraft Project at the Naval Air Station,
Lakehurst, N. J.

Prior to towing tests with a non-rigid airship, a floating structure supporting a magnetic loop was constructed and tested behind a high powered motor boat. This floating structure, which was in the form of a triangle, consisted of three seaplane floats secured by bridge trusses. The preliminary tests indicated that the structure between the floats was too light to withstand the force of sea waves. A stronger floating structure has been constructed and is undergoing test.

No information is available to indicate that such a floating structure will withstand the force of waves produced by a mine exploding in close proximity. Inasmuch as underwater acoustic fields of sufficient intensity to explode acoustic mines can be extended to a greater range than corresponding magnetic fields, it is felt by Navy personnel that an apparatus which will actually explode acoustic mines may be practical for

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Chief of the Army Air Forces.
Methods of Defense against Mine
Laying by Airplanes.

employment with lighter than aircraft. However, it is felt that considerable development is necessary before a means of actuating magnetic mines by this method is possible.

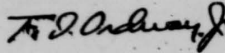
Personnel of the Navy Department have expressed doubt as to the possibility of properly maneuvering an airship in a cross wind while towing a floating structure in mine sweeping.

For the Chief of the Air Corps

Hq Army Air Forces

NOV 18 11

AAG Received



F. I. ORDWAY, JR.,
Major, Air Corps,
Asst. Exec., Mat. Div.

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on 25 471.6 aerial mines (8)

DECLASSIFIED
DD Form 1
1 Jul 63 (Rev. 1959)

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~~Sec. 1.17~~

OFFICE OF THE CHIEF OF AIR CORPS

DECLASSIFIED

FILE NUMBER:

Station

Date

SUBJECT: Receipt.

TO: The Chief of the Air Corps, Washington, D. C.

1. Received from the Chief of the Air Corps the following listed
(*Secret - ~~RESTRICTED~~) documents:

Letter to Chief of the Army Air Forces (2 pages)

Subject: Methods of Defense against Mine Laying by Airplane.

Hq. AFMEX 411 Kansas

NOV 18 41

AAG Received

*orig. recd. & returned
by Gray*

Please accomplish and
return immediately to:
Classified Mail and File Unit,
Administrative Division,
Office, Chief of the Air Corps.

Name

Rank

Branch

Office of:

*Strike out word not applicable

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W-4003, A.C.

AB-239 A11-17(7-a)A2799



HEADQUARTERS ARMY AIR FORCES
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 ROUTING AND RECORD SHEET

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Note.--A line will be drawn across sheet after each comment.

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File No.

8 Jan. & 10 June 1974
 By: AN/c 10 Dec 1977

Tally No. AAP

SUBJECT: British Hawkins Antitank Grenade Mine.

NO.	FROM	TO	DATE	COMMENTS	AAP/A-4 JJO/gwd
1.	AAF A-4	AAF A-3	1941 10/28	<p>1. Inclosed is G-2 report covering description and tests of British Hawkins Antitank Grenade Mine, together with memorandum to the Assistant Chief of Staff, G-4.</p> <p>2. Your comments and recommendations are desired to determine if there is a military requirement for a parachute antitank mine, as illustrated.</p> <p>3. In this regard a method of releasing the mine should be considered in view of the fact that vertical racks have been deleted from specifications of airplanes.</p> <p>Incls:- Cc.memo, 10/10/41, frm. AAC/S, G-2, to AC/S, G-4. Cc.Report No. 44627.</p>	<p>4716 Antitank Mine (3) B</p> <p>CS C/AS <i>[Signature]</i></p>
2	AAF C/AS	AFCC	1941 11/5	<p>For comment and recommendation reference paragraph 2 of Item 1 above.</p> <p>Incl. n/c</p>	<p>AAF/A-3 HSV-ds</p> <p><i>[Signature]</i> CS C/AS</p>
3	AFCC	CAAF	1941 11/17	<p>ACC 471.6 (10-28-41)</p> <p>Returned without action in view of action now being taken on Note 1, R & R, your office, same subject, 10/28/41, received in this headquarters, November 4, 1941. Reply on subject communication will be made in the near future.</p> <p>2 Incls. No change.</p>	<p>(G-28)</p> <p><i>[Signature]</i> C. W. R. Chief of Staff.</p>
4	AAF A-3 NOV 18 A-2 AAG Received	AAF A-2	11/26	<p>For notation of Comment 3 above.</p> <p>Incls. n/c</p>	<p>AAF/A-3 HSV-ds</p> <p><i>[Signature]</i> ELN C/A-3</p>

No further action

Correspondence referred to in letter forwarded to A-3, with AFCC for further comment.

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4716 Antitank Mine (3) B

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DDI MS.

8 Jan & 20 June 1974

By: AN/g JG Date: 2/4/77

G2/1

JSL

October 10, 1941.

MEMORANDUM FOR THE ASSISTANT CHIEF OF STAFF, G-4:

Subject: British Hawkins Antitank Grenade Mine.

1. Report No. 44627, Military Attache, London. September 24, 1941, subject, Hawkins Antitank Grenade Mine (No. 75), a copy of which is inclosed, prepared by T. J. Wells, Major, Infantry, contains the following recommendation:

That steps be taken at once to develop, standardize and adopt an antitank grenade mine of this type for general use.

2. Under the provisions of AG 350.05 (12-2-40) M-B-M, December 3, 1940, subject, Initiation of action on Recommendations from Military Attaches, this recommendation is referred to your Division for action.

HAYES A. KRONER,
Colonel, General Staff,
Acting Assistant Chief of Staff, G-2

1 Inclosure: Report No.
44627.

CC: Deputy Chief of Staff
Assistant Chief of Staff, G-3
Chief of Ordnance
Chief of Engineers
Chief of Armored Force
Chief of Infantry
Chief of Air Force

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DOD ERS.
1 Jan & 20 June 1976
By MW/CS Date 2/14/77

TJW/lrp

MILITARY INTELLIGENCE DIVISION
WAR DEPARTMENT GENERAL STAFF
Military Attache Report

Great Britain.

Country Reported On
I. G. No. 6570.28

Subject: Haykins Antitank Grenade Mine (No. 75)

Source and Degree of Reliability

Personal observation of demonstration.

Summarization of Report

Here is a simple and cheap antitank grenade mine that the U.S. should adopt for universal use. This report supplements our report No. 44336 dated September 11, 1941 on the same subject.

1. The 75 Antitank Grenade Mine has been developed by the Antitank Experimental Establishment to stop a tank. A demonstration of its capabilities was given yesterday for a group of senior officers of the War Office and the Ministry of Supply. The Commander-in-Chief Home Forces was expected but failed to appear. (See description Enclosure A).
2. There were two grenades, the dummy, filled with sand but containing the detonators, and the live grenade which was as described in Section 11 except that the "Victor Powder" was omitted and its space filled with additional ammonal (about 1 1/2 lbs. total charge). This "Victor Powder" is not required. Grenades were packed in a special sheet iron box about 8" x 8" x 24", the proper size to contain 12 grenades and a special wooden padded case for the detonators.
3. Several points about the weapon not brought out in Report No. 44336 are:
 - a. The chemical igniter, fitted to the detonator should be inserted nearest the top (filling end) so that they will be pinched by the striker; they are painted red so if the red cannot be seen through the side opening in the compartment, the operator will know he has inserted them backward.
 - b. The grenade is claimed to be waterproof as it is double sealed at the cap. The detonator-igniter is also sealed against moisture. The grenade should therefore last for long periods under water.
 - c. These grenades were spary-painted yellow for use in the desert in the Middle East; they were therefore conspicuous in the heather and should be camouflaged to suit the country.
 - d. One live grenade was accidentally stepped upon by an officer weighing about 180 pounds. Fortunately for the entire group nothing happened. They are supposed to be safe up to about 300 lbs. dead load.

From M. A. London Report No. 44627 Date September 24, 1941

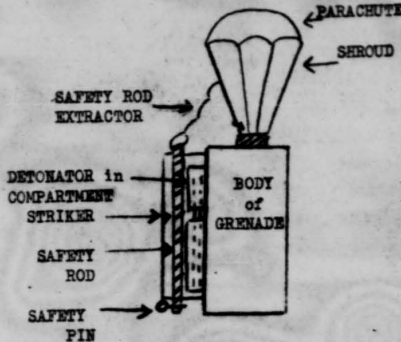
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g. These mines have been dropped from a plane at 1000 feet using a parachute about the size of a handkerchief. They landed on hard ground without detonating. For added safety in the event of a crash landing, a safety rod is inserted in parachute models, that runs the length of the grenade, under the striker. A safety pin is extracted before dropping and the opening of the 'chute draws out the rod. See sketch.



These might be dropped in considerable numbers (about 200 - 300) along or across a tank column. They should stop the column either by breaking tracks or to require the grenade removal. While incapacitated, the tanks can be strafed by other planes or artillery. This use by parachute is still very much in the experimental stage.

4. a. Comments on the Demonstration (See Section 111, Enclosure A):

- (1) The track was that of a 25 ton tank, cast steel. It was not only broken, but shattered. The grenade was laid on top of the track and covered with a sandbag and fired by a fuse.
- (2) Many of these grenades landed from a height of about 20 feet, so hard as to be dented. None went off. All landed in a flat position.
- (3) All grenades hit functioned perfectly under all four circumstances. Dummies were used for this demonstration. In some cases only one detonator was fired; this is the reason for the two detonators.
- (4) This demonstration was satisfactory except that grenades were tossed onto the road a little too soon. The tank could have stopped in time to avoid hitting one.
- (5) Twelve live grenades were thrown in front of a Valentine Mk.111 tank with forged manganese steel tracks. One track hit two grenades and was broken in two places. The first and second bogie wheels were damaged; one beyond repair. A piece of the track was picked up about 30 feet away. (See Enclosure B). The driver said that the effect inside the tank was about the same as that made by the firing of the tank's 2-pounder. The tank commander claimed he could repair the track and be under way in 30 minutes.
- (6) Eight grenades were buried with the bottom about 6 inches deep at varying distances from 4 to 8 feet from the center stack which was also buried. There was no sympathetic detonation. Ignition was made with a fuse.

M. A. London

Report No. 44527

September 24, 1941

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b. There were several other points demonstrated:

(7) A mine field was laid by two men walking parallel to each other about two paces apart. Mines were laid about two paces apart and staggered.

(8) The above was repeated by having the grenades tossed from each side of a carrier. One grenade bounced into the track and went off, indicating that they could be laid more safely from the tail of the vehicle.

(9) A carrier chased a truck along a narrow road. Grenades were dropped from the truck after negotiating a turn in the road, but the carrier was expecting this action and by nimble driving avoided the mines. It is doubtful if a less maneuverable tank could have avoided them without stopping.

5. After the demonstration Major General H. M. V. Clarke, Director of Artillery, Ministry of Supply told me that he is endeavoring to have all antitank MINES except this one abolished as it will break a track and stop a tank and that is all that can be expected of any explosive charge of less than around 25 pounds. It is cheaper, simpler and easier to manufacture, store and handle and can be made available in much greater numbers than the other mines. General Clarke's views were not shared by the entire group, insofar as the replacement of other mines is concerned. It was generally conceded by the majority, including the United States observers, to be a necessary supplement to existing antitank weapons.

6. I was accompanied on this demonstration by Major Thomas S. Timberman, Inf. in charge of Antitank Gunnery at the Infantry School; Captain R.R. Arnold, C. E., Military Observer; and Captain W. F. Powers, C.E., Military Observer, Member of Engineer Board on Explosives. We were unanimous in praising this weapon and believe it has a definite place in our armament. We therefore make the

RECOMMENDATION

That steps be taken at once to develop, standardize and adopt an antitank grenade mine of this type for general use.

2 Enclosures:

- "A" - Explanation of Demonstration
- "B" - Fragment of broken track. (forwarded by ship-pouch)

T. J. WELLS
Major, Inf.
Asst. Military Attache.

No. 44627
Office of the Military Attache, American Embassy, London, England, Sept. 24, 1941. To: A.C. of S., G-2, War Department, Washington, D. C.

Enclosures: n/c

RAYMOND E. LEE
Brigadier General, U. S. Army
Military Attache

By:

ROBERT A. McCLURE
Lieut. Col, G.S.C.
Intelligence Executive.

M.A. London

Report No. 44627

September 24, 1941.

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Enclosure "A" to Report No.
44627.S. No. 6 20 June 1929
M. G. J. C. Date 2/4/77No. 75 (HAWKINS) GRENADE -MINE.CONFIDENTIAL.

Ref. No. AT/1/10/86

I. USES.

This grenade-mine is really a small mine with several uses:-

- (1) As a hand-thrown mine, several of which can be lobbed or thrown suddenly in the path of moving tanks and motor vehicles. It is not detonated on impact with the ground, but will be detonated when passed over by a tank track or wheel of a motor vehicle.
- (2) As a static mine - and laid in minefields, in any accepted formation. Mines can be laid stacked together like bricks, and so form a composite mine of any required explosive power.
- (3) As a portable explosive charge, and used for general demolition purposes. Any commercial detonator will fire the mine, - no separate primer is required.
- (4) Trials are now in hand for dropping this mine in large quantities from the air by small parachutes. Thus scattered on a Tank column on the move, several mines, will be over-run, breaking tracks - the column must stop to clear the route, and so provide a sitting target for low level bombing or cannon attack.

A single grenade-mine will successfully cut the Manganese steel tracks of an 'I' Mark III Tank (16 tons), and the stamped or cast tracks of an 'I' Mark II Tank (25 tons). German Tanks are known to have Manganese steel tracks; this grenade-mine should prove effective against the PZ.KW. III (22 tons).

It will blow the tyre off a lorry wheel, and damage the wheel and suspension. It will operate equally well on hard roads, grassland, and the softest ground or sand over which A.F.Vs could reasonably operate.

It provides an immediate form of attack against an enemy tank movement in any theater of war. As a hand-thrown grenade it is intended as the Infantryman's chief means of taking on Tanks up to 25 tons. By throwing 8 to 10 in the path of a Tank one is certain to be over-run by a track, causing complete track breakage. All grenades thrown, but not detonated, are still potentially effective; alternatively they can be picked up perfectly safely, and used again and again.

II. DESCRIPTION.

The container is a standard "tin", to which are soldered two bridge pieces supporting the striker plate. It is armed by inserting two detonator sets in the pockets under this plate. A detonator set consists of a standard commercial detonator and a chemical igniter.

Under load, the projection in the striker plate crushes a component in the igniter, and the detonator is fired immediately by chemical action. There is no mechanism whatever in the design.

The explosive filling is $1\frac{1}{2}$ lbs. of Nobel's Ammonal 704(B) which is insensitive to rifle bullets. There is, in addition, 4 Ozs. of "Victor Powder" in the bottom of the tin to ensure detonation - this would be detonated by a rifle bullet. When thrown, the grenade-mine always comes to rest lying on its largest face, with the striker plate on top or bottom. It will invariably be detonated on being crushed. Grenades are immune from sympathetic detonation at distances of 6'.

III. DEMONSTRATION.

- (1) Firing single grenades statically against heavy steel tank track.
- (2) Throwing grenades to show that (a) None are detonated on impact with even a hard road surface, and (b) They always come to rest with the striker plate on top or bottom.
- (3) Crushing of grenades by a tank or wheeled vehicle to show that they function (a) On a hard road; (b) In grass or heather; (c) In soft ground, and (d) When buried as a mine.
- (4) Throwing a number of grenades (dummies) from cover in front of a tank moving along a road, to show that one or more will be over-run.
- (5) Repeat above using live grenades.
- (6) Firing mine composed of 3 grenades stacked ($4\frac{1}{2}$ lbs. explosive) and demonstrating range at which sympathetic detonation occurs.

(Signed) R.J. HAWKINS
Major, R.E.
Commandant A.T.E.E.

Anti-Tank Experimental Establishment
Farnborough, Hants.
10.9.41 RSR/VBB

Enclosure A to Report No. 44627
Military Attache, London

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 WAR DEPARTMENT
 HEADQUARTERS ARMY AIR FORCES
 DISPOSITION FORM

DECLASSIFIED
 DOD Hqs.
 8 Jan. & 30 June 1997
 By: MAN/2 LG, Date: 2/10/97

Date OCT 17 1941

AG
 AAF

SUBJECT: Mine Laying by Airplane, Panama Canal.

USW	ASW	ASWA	B-1P	BOWD	BPR
C/S	G-1	G-2	G-3	G-4	MPD
Sec.G/S	NQB	JAG	IG	QMG	SG
TO: OCAC	CSO	Fin.	Ord.	Ex.R.A.	ENGR
AFCC	Inf	FA	Cav	CAC	CWS
TAG					

471.6 David Mines (2)

FOR: SW directs
 Draft of reply attached
 Approved
 Disapproved
 File

Comment or concurrence
 Direct reply made
 Inviting attention to
 See notation of
 Information

Information for reply
 Ind. approved
 Army interest
 Notation and return
 Noted

*A WPD
 HAC*

1. The Chief of the Army Air Forces has no recommendations concerning this matter at this time.

2. The letter referred to in the basic disposition form, WPD 4807-2, 10/2/41, covers the use of an airplane for detonating mines. The removal or destruction of mines laid in the Panama Canal is by agreement a Navy function with which the Army Air Force is not involved.

Dispatched
 OCT 17 1941
 AAG
 Incls.

For the Chief of the Army Air Forces:

EDWARD P. CURTIS,
 Major, Air Corps,
 Secretary of The Air Staff

W-4689, A.C.

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See AS 471.6 David Mines (2)

~~CONFIDENTIAL~~
 HEADQUARTERS ARMY AIR FORCES
ROUTING AND RECORD SHEET

(To be filed with correspondence)

Note.—A line will be drawn across sheet after action by each office concerned.

SUBJECT: The Establishment of an Army Requirement for Aerial Mines. 378

NO.	FROM	TO	DATE	DATA
1.	AAF A-4	AAF A-3	1941 10/2	<p style="text-align: right;">AAF/A-4 MFS/mwb</p> <p>1. Attached hereto is copy of R&R forwarded this Division by Chief of the Air Staff.</p> <p>2. It is requested that this Division be advised of the tonnage of the subject bombs required for War Reserves.</p> <p>3. It is understood that the Navy has a suitable bomb under development. It is thought that any study of requirements should take into consideration the plans of the Navy.</p> <p>4. The basic R&R has been forwarded to the Chief of the Air Corps for action in connection with paragraphs 1 and 3.</p> <p>5. An R&R similar to this has also been forwarded to the Asst. Chief of Air Staff, A-WP.</p> <p style="text-align: right;">Incl: Copy R&R, above subj., frm C/AS to A-4.</p> <p style="text-align: right;"><i>EH</i> E.P.S. C/A-4</p> <p style="text-align: right; font-size: small;">7116 Quarters Mines ① B</p>
2.	AAF A-3	AAF A-4	10/29	<p style="text-align: right;">AAF/A-3 HSV-epb</p> <p>1. Colonel Anderson of A-WPD is handling this for War Plans. He has gathered data from the Navy and from War Plans viewpoint in relation to the War Reserve requirements. A-3 is of the opinion that this is primarily an A-WPD matter, and therefore this is returned without comment.</p> <p style="text-align: right;">Incl. m/c</p> <p style="text-align: right;"><i>ELN</i> W- ELN C/A-3</p>

(Do not use reverse side)

File - This matter being handled under serial No. 382

Page No. -1-

W-4071, AC, Rev. 8/1/41

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GDD 874

COPY

By 4/2 J.C. Date 4/77

ROUTING AND RECORD

SUBJECT: The Establishment of an Army Requirement for Aerial Mines.

1. C/AAF C/AS 1941
9/30

1. Immediate steps will be taken by the Air Staff to secure the establishment of an Army requirement for aerial mines. (Floating type---exploding on contact by surface vessel).
2. This requirement should cover an adequate tonnage for War Reserves.
3. The mines procured must be of such shape and size as to be capable of being carried in both Army and Navy airplanes.
4. This project will be assigned a high priority.

HHA

2. AAF AAF
C/AS A-4 9/30

Necessary action.

GED

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1/10/77
1/10/77

HEADQUARTERS ARMY AIR FORCES
ROUTING AND RECORD SHEET

DECLASSIFIED
CONFIDENTIAL

(To be filed with correspondence)

Note.—A line will be drawn across sheet after action by each office concerned.

SUBJECT: The Establishment of an Army Requirement for Aerial Mines

NO.	FROM	TO	DATE	DATA
1	C/AAF	C/AS	1941 9/30	<p>1. Immediate steps will be taken by the Air Staff to secure the establishment of an Army requirement for aerial mines. (Floating type---exploding on contact by surface vessel).</p> <p>2. This requirement should cover an adequate tonnage for War Reserve.</p> <p>3. The mines procured must be of such shape and size as to be capable of being carried in both Army and Navy airplanes.</p> <p>4. This project will be assigned a high priority.</p>
2	AAF C/AS	AAF A-4	9/30	<p><i>nearby action</i></p> <p><i>[Signature]</i></p>

4-554
4-664
4-441
4/10/77

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CONFIDENTIAL

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K-4884, AC
4-1-45 471-6411/11/77

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 HEADQUARTERS ARMY AIR FORCES

11/13/57

ROUTING AND RECORD SHEET

(To be filed with correspondence)

Note.—A line will be drawn across sheet after action by each office concerned.

SUBJECT: The Establishment of an Army Requirement for Aerial Mines.

382

NO.	FROM	TO	DATE	DATA
3.	AAF C/AS	OCAC	1941 10/2	<p style="text-align: right;">AAF/A-4 MFS/amb</p> <p>1. It is desired that your office take action to establish a requirement for aerial mines, to include the preparation of a statement of military characteristics and clearance to the Joint Aircraft Sub-Committee on standardization.</p> <p>2. Pending the completion of an Air Staff study on the actual number of bombs required, a figure of 1,000 tons is arbitrarily established for War Reserve.</p> <p style="text-align: right;"><i>[Signature]</i> C. S. <i>[Signature]</i> C/AS</p>
4	<i>ocac</i>	<i>Met Div</i>	<i>10/6</i>	<i>Action as requested above. [Signature]</i>
5.	Met. Div. (4-E-1)	C/AS thru C/AC	1941 10/29	<p>1. The requirement for aerial mines was presented to the Joint Aircraft Subcommittee on Standardization, but since the British are not interested in this standardization, it was decided to leave this matter for coordination by the Army directly with the Navy.</p> <p>2. A requirement for one thousand tons of aerial mines is being included in the revision of the Air Corps - Ordnance requirements now being processed by the Air Staff.</p> <p>3. The Navy now have available two types of aerial mine the size of the 1,000 pound bomb, which can be carried in Army-Navy aircraft. The first type is a ground, parachute mine with magnetic</p>



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Arr. 24/47.6 Aerial Mines *10-57*

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HEADQUARTERS ARMY AIR FORCES
~~CONFIDENTIAL~~
 ROUTING AND RECORD SHEET

Note. --A line will be drawn across sheet after each comment.

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File No.

By *MA/c* 20 June 1981
 10/20

Tally No. AAF

SUBJECT: The Establishment of an Army Requirement for Aerial Mines.

NO.	FROM	TO	DATE	COMMENTS
5. Cont.	Mat. Div. (4-E-1)	C/AS thru C/AC	1941 10/29	<p>discharger which also has a contact nose fuze, for use against land objectives. These are now under procurement. Another type, a direct contact floating mine of the 1,000 pound bomb size, has been completely developed and a small quantity are on hand in the Navy. No further production is contemplated. This bomb does not use a parachute and must be dropped from very low altitudes. It floats at a depth of thirty (30) feet.</p> <p>4. The Navy do not favor the use of the floating type mine. It can be carried off by the bow wave and in many cases will not make contact with the boat for discharge. They favor the use of the proximity type discharger and are going into production on the magnetic type mine. The magnetic type mine can be discharged by a boat at a distance of thirty (30) feet. This mine is limited in use to shallower water, while the floating mine can be used in deep water. Other types of acoustic and non-contact mines are under development, but have not yet reached a production stage.</p> <p>5. It is understood that a study is now being conducted by the Air Staff on the use of aerial mines. A decision should be rendered as to whether the thousand tons set up in the requirements for Ordnance items should be of the floating type with contact fuze or the ground type with magnetic fuze, or possibly a percentage of each type.</p> <p style="text-align: right;"><i>FDO</i> Chief, Materiel Division</p>

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F-4071, AC, Rev. 8/14/41

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HEADQUARTERS ARMY AIR FORCES
CONFIDENTIAL WORK SHEET

1182

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File No.
Tally No. AAF

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EXC No.
on 4 22 June 1982
by *AAC* on 3/11/82

SUBJECT: The Establishment of an Army Requirement for Aerial Mines. (Continued)

NO.	FROM	TO	DATE	COMMENTS
6.	C/AS (Mat. Div.)	C/AC	1941 11-4	<p>1. In reply to Item 5, paragraph 5, based upon A-WPD study, decision has been reached to establish a war reserve of 3,000 tons of the 1,000 lb. Navy type parachute mine with magnetic discharger, also contact nose fuse.</p> <p style="text-align: right;">AAF/A-4 JFW/gwd 7716 Divided thru 11-41 ① A</p> <p style="text-align: right;"><i>OS</i> C/AS W LA</p>
	Div. (4-B-1)	Air Staff (A-4)	1941 11-24	<p>For inclusion in the revision of the Air Corps Ordnance requirements now being studied by your office.</p> <p style="text-align: right;"><i>W. B. M.</i> C. P. E. Chief, Material Division.</p>

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Page No.

W-4071, AC, Rev. 8/14/41
M-12
Air OR 4271-6 (Amend) 1/22/42

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A/19(3-B)

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GDS No.
8 Jan & 22 June 1974
By SP-1/CS J.C. D... 11/27

The Establishment of an Army Requirement for Aerial Mines. (Continued)

6. C/AS C/AC 1941
 (Mat. Div.) 11-4

1. In reply to Item 5, paragraph 5, based upon A-475 study, decision has been reached to establish a war reserve of 3,000 tons of the 1,000 lb. Navy type parachute mine with magnetic discharger, also contact nose fuse.

AAF/A-4
JPD/ghd

471.6 Aerial mine Doc

CS
C/AS

Dispatched
NOV 18 1941
AAG

HEADQUARTERS ARMY AIR FORCES - COORDINATION											
Chief of Staff	Secy Air Staff	A.A.G.	A-1	A-2	A-3	A-4	A- W/D	A. Insp.	Budget	Sta-tistics	
	<i>JC</i>					<i>2/11</i>					
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471.6 Aerial mine Doc

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SAS 471.6 Aerial Torpedoes

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Glider Borne Torpedo Project

AG/AS, OCMR
Chief of the Air Staff

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DOO IIS.
By AJEC on 20 June 1984
10. Date 3/14/87

27 Sept 1944

1
FMS, Jr: JT 6971

1. Retention of the glider borne torpedo project without further augmentation in the Seventh Air Force is approved.

2. It is not believed that this project in its present stage and with its present limitations warrants any considerable further development during this war. In the event the Seventh Air Force, or General Harmon, feels that the inclusion of this project within the appropriate troop basis is detrimental to the most efficient operation of the Seventh Air Force, serious consideration will be given to its withdrawal therefrom, substituting a more flexible and effective combat unit.

1 Incl.
Memo 9-22-44 from OCMR

Signed
F. H. SMITH, JR.,
Brigadier General, U. S. Army,
Deputy Chief of the Air Staff.

471.6 aerial torpedos (33)

RECORDED
27 SEP 1944
AGB

DECLASSIFIED

471.6 aerial torpedos (33)

CONFIDENTIAL
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Mr. Goyland. - 72836
Mr. Boehm.

DECLASSIFIED
EXEMPT
DATE 10/20/01 BY 60322/UC/STP

*Subj? To - Central File
Mr. Lovett has
original y/cf.*

March 29, 1945.

MEMORANDUM TO: Chief of the Air Staff

SUBJECT: Development of Aerial Torpedoes by the Army Air Forces.

1. The following is the history and present status of the project to develop aerial torpedoes under the Materiel Command:

a. Routing and Record Sheet dated December 16, 1943, signed by General Hanley, subject: "Development of an Aerial Torpedo" stated "General Arnold directs that the Army Air Forces take immediate steps to develop an Aerial Torpedo".

b. On December 29, 1943 a routing and record sheet signed by General Hanley, subject: "Aerial Torpedo" was received, stating "Submit study to the Commanding General through this office with recommendations either to procure the British torpedo, if satisfactory, or to proceed with our own development. Regarding my previous instructions to work with the Navy on speeding up their development along these lines."

c. Under date of January 14, 1945 a memorandum to the Commanding General, Materiel Command, signed by General Hanley, subject: "Aerial Torpedoes" was received, directing "that development be started by the Army Air Forces on a missile which can be dropped at as high a speed as possible and have the following characteristics —".

d. GWT-1128, dated January 25, 1945, subject: "Development and Design of Aerial Torpedoes" was issued to the Materiel Center "To design and develop an aerial torpedo in order that such missiles may be made available for Army Air Forces use".

e. Routing and Record sheet dated January 26, 1945, signed by General Hanley, subject: "Aerial Torpedoes" was received, stating "It is not intended to develop a torpedo - in fact some other name must be used to prevent any conflict with either the Navy or the Ordnance. This is a new missile, to be designed peculiarly for the Army Air Forces".

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Page 2. Memo to Chief of the Air Staff
Subj: Development of Aerial Torpedo by the AAF

March 29, 1943.

1. Addendum No. 1 to OTL-1128, dated February 5, 1943, was sent to the Materiel Center, stating "No reference will be made to the word 'torpedo' in any and all phases in this development or in correspondence dealing thereto. A name will be coined to cover this development project".

2. Subsequent to the foregoing Addendum, the Materiel Center proposed the designation "Hydrobomb" and stated in Inter-Office Memorandum dated February 18, 1943, subject: "Development Project Covered by OTL-1128, dated January 28, 1943", "a contract is being initiated with California Institute of Technology for development work". This designation has been approved.

3. No official report has been received from the Materiel Center since approval of the designation "Hydrobomb" showing the progress made in the development. It is the opinion of the undersigned, however, that the "Hydrobomb" which eventually will be developed will be essentially another aerial torpedo and suspiciously like those now in existence.

For the Commanding General:

D. V. [Signature]
Brig. General, U. S. A.
Assistant Chief of Staff (X)

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ci*

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Serial 476

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DDO WPA
1000 & 20 June 1977
By ML/ce LC Data 1/4/77

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Development of an Aerial Torpedo.

Commanding General, Materiel Command,
ATTENTION: General Echols.

5 March 1943

Deputy Chief of the Air Staff.

1
TJH/eva/6371

471.6 Aerial Torpedo (36)

1. I have informed General Arnold of your request that the development of an air-borne missile resembling a torpedo be called to his personal attention because you feel that the action taken in this case is in direct conflict with previous agreements with the Ordnance and the Navy to concentrate all torpedo development in the Navy under the supervision of the Ordnance insofar as procurement for the Army is concerned.

2. General Arnold approved the action already taken for the Army Air Forces to develop the above-mentioned missile.

3. A new section is being organized in the War Department in the office of the Assistant Chief of Staff, G-4, to co-ordinate the development of all new weapons in the Army and to maintain direct liaison with the Navy. General Arnold directed that the Army Air Forces, when called upon to do so, report any progress made in the development of this aerial missile and request at that time that its continuing development be assigned to the Army Air Forces.

Dispatched
MAR 6 1943
AAG

T. J. HANLEY, JR.,
Brigadier General, U.S.A.,
Deputy Chief of Air Staff.

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3/7/43

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471.6 aerial torpedo (36)

ADDRESS REPLY TO
HEADQUARTERS OF THE ARMY AIR FORCES
WAR DEPARTMENT
WASHINGTON, D. C.

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WAR DEPARTMENT
HEADQUARTERS OF THE ARMY AIR FORCES
WASHINGTON

March 3, 1943.

DECLASSIFIED
EOD 135
DATE 6 20 June 1989
BY N/A JCH/Dun S/abc

MEMORANDUM FOR GENERAL ARNOLD:

Subject: Development of Aerial Torpedo.

I. Discussion.

1. About two months ago, I issued a directive to the Materiel Command to develop an air-borne missile resembling a torpedo but to be called by some other name. Development is proceeding, but General Echols has asked me to call this to your personal attention since he feels the action taken in this case is in direct conflict with previous agreements with the Ordnance and the Navy to concentrate all torpedo development in the Navy under the supervision of the Ordnance.

2. It is undoubtedly a duplication but the Navy torpedoes are not satisfactory and I believe we can get what we want faster if we develop under Air Force control.

3. The Chief of Staff has recently directed the formation of a new section under G-4, War Department, to co-ordinate the development of all new weapons of all branches of the Army, maintaining direct liaison with the Navy.

II. Action Recommended.

1. Approval of action already taken.

2. Report of progress achieved to be made to G-4 when called upon to do so, with request that development of the aerial torpedo be assigned the Army Air Forces.



3/5/43

Handwritten signature: Hanley
OK
KWA

Handwritten signature: T. J. Hanley Jr.
T. J. HANLEY, JR.,
Brigadier General, U.S.A.,
Deputy Chief of Air Staff.

DECLASSIFIED
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air 20 476 aerial torpedo 36

MAR 3 43 PM



RECEIVED
Air Adjutant Gen.

Aerial Torpedoes.

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AFANG-5B
JTH:arb
2/5/43

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ODD IFS
1 Jan. & 20 June 1984
By: PLM/CR AG: Don 2/4/77

TO: Deputy Chief of Air Staff.
FROM: Materiel Command - SB

February 5, 1943
Comment No. 3
JTH:arb 2885

1. The contents of Comment 3 have been transmitted to the Armament Laboratory, Materiel Center, Wright Field, Dayton, Ohio, with instructions to coin a name which will properly describe this new missile. As soon as a suitable name has been decided upon we will notify you.

Incl. n/s

G. F. BOWLES
Major General, U.S.A.

air 25 471.6 aerial torpedo (35) 8

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air 25 471.6 aerial torpedo

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DDO TRS
6 20 June 1989
by *MLK* J.C. Doe *MLK*

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Aerial Torpedoes.

Commanding General, Materiel Command.

Date 1-28-43

Deputy Chief of the Air Staff.

Comment No. 2.

TJH/cmc/6371

Memorandum of January 16th, 1942, from A-4 Division, dealt with the procurement of standard Navy Mark XIII Aircraft Torpedoes. The present project is not intended to conflict with those instructions and it is not intended to develop a torpedo - in fact some other name must be used to prevent any conflict with either the Navy or the Ordnance. This is a new missile, to be designed peculiarly for the Army Air Forces.

This matter will be called to the personal attention of General Arnold, at the earliest practicable moment.

Incl: n/c.

T. J. HANLEY, JR.,
Brigadier General, U.S.A.,
Deputy Chief of Air Staff.

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Diary

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Aerial Torpedoes.

DECLASSIFIED
DOD RUS

8 Jan. & 20 June 1974
By: *AM/CS* LAC, Date: *2/1/77*

Deputy Chief of Air Staff

1-22-43

Material Command - SB

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IGS:mal - 2865

1. In accordance with directive from your office as contained in memorandum under date of January 14, 1943, subject as above, action has been taken to initiate the development and design of suitable aerial torpedoes in accordance with characteristics as established by you.

2. In this connection it is ^{requested} desired that initiation of this development program be brought to the personal attention of General Arnold inasmuch as the Ordnance Department has heretofore been specifically charged with the development of guns, bombs and other munitions containing explosive charges. It is further desired to call your attention to memorandum from Assistant Chief of Staff, A-4, to the Chief of Ordnance Underdate of January 16, 1942, subject, "Aircraft Torpedoes" in which the Ordnance Department was designated as the responsible agent for the procurement, maintenance and supply of aircraft torpedoes to the Army Air Forces. A copy of this directive is attached.

O. P. BOHLS
Major General, U. S. A.

1 Incl.
Memo. dtd.
1-16-43.

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Dec 20

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DATE 02-11-2000
BY 60322 JAC/DAW/14127

January 16, 1943.

MEMORANDUM FOR THE CHIEF OF ORDNANCE:

Subject: Aircraft Torpedoes.

1. Reference letter to your office, dated December 29, on the subject of procuring 5000 standard Navy Mark XIII Aircraft Torpedoes. It is desired that the Ordnance Department be the responsible agency for the procurement, maintenance and supply of this item to the Army Air Forces.
2. The U. S. Navy has been requested to supply at least 114 torpedoes at the earliest practicable date for use of the Army Air Forces; pending the availability of Ordnance personnel to maintain and deliver torpedoes and mobile maintenance equipment to Air Forces in the Field, the Navy is being requested to furnish the necessary equipment and personnel for this purpose.
3. The Navy Mark XIII Aircraft Torpedo should be standardized for Army use and immediate steps be taken in cooperation with the Navy to train the necessary maintenance and supply personnel for handling 5000 torpedoes and to organize Ordnance Aviation Sections within the Ordnance Aviation Companies Bombardment (Light and Medium) for approximately twenty Aviation Groups, to be completely activated by the end of the Calendar Year, 1942.

For the Chief of the Air Staff:

T. J. HANLEY, JR.,
Colonel, Air Corps,
Assistant Chief of Air Staff, A-4.

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Aerial Torpedoes.

Deputy Chief of Air Staff

Material Command - SB

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GDD U.S.
By: AW/EC & 20 June 1984
AC Date: 2/11/87

1-22-43

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IGB:bml - 2865

1. In accordance with directive from your office as contained in memorandum under date of January 14, 1943, subject as above, action has been taken to initiate the development and design of suitable serial torpedoes in accordance with characteristics as established by you.

2. In this connection it is suggested that initiation of this development program be brought to the personal attention of General Arnold inasmuch as the Ordnance Department has heretofore been specifically charged with the development of guns, bombs and other munitions containing explosive charges. It is further desired to call your attention to memorandum from Assistant Chief of Staff, A-4, to the Chief of Ordnance under date of January 16, 1942, subject, "Aircraft Torpedoes" in which the Ordnance Department was designated as the responsible agent for the procurement, maintenance and supply of aircraft torpedoes to the Army Air Forces. A copy of this directive is attached.

O. P. ECHOLS
Major General, U.S.A.

1 Incl.
Memo dtd
1-16-43.

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EOD 100
8 Jan. & 20 Nov 1984
By AW/c JC, LWS 7/1/87

January 14, 1943.

MEMORANDUM FOR THE COMMANDING GENERAL, MATERIEL COMMAND:

Subject: Aerial Torpedoes.

1. The attached study has been reviewed with interest. Recent conferences with the Navy, attended by Colonel Martha and General Davidson, indicate that the development of a satisfactory aerial torpedo is in the distant future.

2. The requirement for a missile which can be dropped from an airplane moving at high speed and which can be directed toward a vessel exists at this time. This need not be a torpedo but may be a self-propelled or water-borne bomb with a simple directional device which will keep it moving straight. Recent progress in jet-propelled projectiles may have some application on this problem.

3. It is directed that development be started by the Army Air Forces on a missile which can be dropped at as high a speed as possible and have the following characteristics:

- a. Withstand impact if dropped at 350 miles per hour or higher.
- b. Arm itself shortly after entering the water.
- c. Not dive more than 40 feet.
- d. Proceed on a straight line for 1000 yards after being dropped at a speed of 50 miles per hour or better.
- e. Contain 600 pounds of explosives.
- f. Fit inside the bomb bay of our present medium aircraft, if possible.

By Command of Lieutenant General ARNOLD:

Incl: Rt^d Nos. 1, 2 & 3,
Subject as above, w/incl:
Memo for CG, AAF from Mat. Cmd.,
12-30-42, Subj: Study covering
Aerial Torpedoes. (Secret) w/incls:
Exhibits "A" & "B" & Bur. Ordnance
Circular Ltr No. T 7-42, 9-12-42.

T. J. HANLEY, JR.,
Brigadier General, U.S.A.,
Deputy Chief of Air Staff.

COPY

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Aerial Torpedoes

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GDD USG
DATE 20 June 1988 BY NTR JG, DOD 21473

TJH:eva 6371

1. AFDAS AFAMC 1942
Attn: Col. 12/20
Murtha

1. Reference our recent telephone conversation on aerial torpedoes, it is desired that you prepare a study addressed to the Commanding General, Army Air Forces, covering the following points:

- a. Present development of the Navy torpedo showing that it is unsatisfactory for aerial use.
- b. Present stage of development of aerial torpedoes by the Navy, estimated date of completion and rate of production, if satisfactory. Point out in this that the Navy will have first priority on production and that it will be problematical if the Army will ever receive any.
- c. Capabilities of the Army Air Forces to proceed with its own development and design, and procure a satisfactory aerial torpedo in a short period of time.
- d. Point out the need for torpedoes capable of being dropped at a high rate of speed, and the need now existing in the Army Air Forces for this type of weapon.
- e. Point out that the British have a satisfactory torpedo. (This was my impression from our conversation; if it is incorrect, show how far they have progressed, their rate of production, and whether or not same are available.)

2. Submit study to the Commanding General through this office with recommendations either to procure the British torpedo, if satisfactory, or to proceed with our own development.

3. Disregard my previous instructions to work with the Navy on speeding up their development along these lines.

T. J. HANLEY, JR.,
Brigadier General, U. S. A.
Deputy Chief of Air Staff

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on 6/29/2011
by *AW/ice* Date *2/11/17*

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AEADS
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REWRITTEN 8/15/42 RCWB

AUG 21 1942

Admiral E. J. King,
Commander-in-Chief,
United States Fleet.

Dear Admiral King:

Acknowledging receipt of your letter of August 7, I want to thank you for your prompt action in obtaining torpedoes for the Army Air Force for use in the Middle East. Colonel E. A. Lynn, Office of the Director of Base Services, Army Air Force, has been designated as Liaison Officer with the Navy for this particular project.

I have been informed that a small booster air compressor, suitable for the maintenance of torpedoes, is available in the Middle East, and I am having this matter investigated further.

In connection with the inability of the Navy to obtain the necessary tools for new torpedo plants, I suggest that the Navy requirements be submitted to the Army-Navy Munitions Board. The Army will cooperate with the Navy in obtaining allocation of tools for this purpose, if it can be done without interfering with other vital production projects.

Faithfully yours,

(Sgd) G. C. Marshall

Chief of Staff.

AUG 21 1942

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OFFICE CHIEF OF STAFF



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*File
a 8/23/42*

*700220 471 middle boat (8-7-42)
Div Ab 471.6 Aerial Torpedoes (34)*

Div Ab 471.6 Aerial Torpedoes (34)

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100-100-100-100

WAR DEPARTMENT
OFFICE OF THE ASSISTANT SECRETARY FOR AIR
WASHINGTON, D. C.

~~CONFIDENTIAL~~

August 4, 1942

Private and Confidential

MEMORANDUM FOR GENERAL ARNOLD

Subject: Use of Torpedoes in Australia.

What would you think of the idea of sending a cable to Australia inquiring as to the number of B-26's adapted for torpedo carrying, the number of torpedoes available, and the progress made in cooperation with the Navy in training personnel.

Knowing your reluctance to interfere in the conduct of the war out there, it occurs to me that this might be a polite way of stimulating the use of the B-26's as torpedo planes against the Jap shipping, particularly around Buna Gona where the bombing seems to have been relatively ineffective.

In the same message you might also ask for a report on the use of the stripped down P-39's for airdrome defense purposes.

From the reports received it is apparent that the squadrons at Midway and in the Aleutians have been very much more imaginative and aggressive in the use of the B-26 as a torpedo plane than have those forces in Australia.

ROBERT A. LOVETT
Assistant Secretary of War for Air

8/4/42
Kester
Prepare cable
RWA

DECLASSIFIED
CONFIDENTIAL

DECLASSIFIED

DDO (Rev. 8-20 June 1956)
 by *AM/TC* LCI Date *2/11/87*

HEADQUARTERS ARMY AIR FORCES
 ROUTING AND RECORD SHEET

Note -- A line will be drawn across sheet after each comment.

~~CONFIDENTIAL~~
 DECLASSIFIED

File No. _____

Tally No. AAF _____

SUBJECT: Use of Torpedoes in Australia

FORM 42

NO.	FROM	TO	DATE	COMMENTS
1.	DAS	A-3	8/6	<p>1. Reference is made to the attached Memorandum for General Arnold, same subject as above, dated August 4, 1942.</p> <p>2. Will you please confer with Plans Division and prepare cable as indicated.</p> <p style="text-align: right;"><i>[Signature]</i> R.C.W.B. S/AS</p> <p>Incl: Memo for General Arnold</p>
2.	A-3 Hq. Army AU RNG Received	DAS Air Force 8 1942	8/7	<p><i>Done</i> <i>or P</i></p>
3.	CAS	FILES	8/10	<p>Memo for Record:</p> <p>A copy of the cable sent by A-3 was shown to General Stratemeyer. As it seemed to be O.K., no further action was being taken.</p> <p>File.</p> <p style="text-align: right;"><i>[Signature]</i> R.H.H. Asst S/AS</p>

As of 4/11/6 Serial 1942-10-35

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(Do not use reverse side)

F-4071, AF, Rev. 8/14/41

401

Page No. _____

As of 4/11/6 serial 1942-10-35

DECLASSIFIED
 HEADQUARTERS AIR FORCE
 ROUTING AND RECORD SHEET

1304
 1449

Note -- A line will be drawn across sheet after each comment.

DECLASSIFIED
 DD Form 1304
 1 Oct. & 20 June 1958
 By: *MAJ/CC* LC Date: *7/4/77*

File No. _____
 Tally No. AAF _____

SUBJECT: Torpedoes.

NO.	FROM	TO	DATE	COMMENTS	LSK:psf
1	General Arnold	AFADS	1942 7/3	1. Ship three training torpedoes without delay to a station to be determined by the Commanding General, 4th Air Force.	
	Copy to A-3.				<i>RR</i> <i>[Signature]</i>
2.	AFADS	AFDMR Major Younger	7-7	1. Forwarded for necessary action.	RCC/hmh <i>rb</i> M. F. S. Act'g C/A-4
3.	AFRDB	AFDAS	7/8	1. Arrangements have been made thru Navy, Bureau of Ordnance whereby the CG Naval Air Station, San Diego will turn over to the CG 4th Air Force, three (3) Mark XIII Mod. 1, Torpedoes with exercise heads and these will be replaced at Naval Air Station, San Diego by shipment of three (3) of the twenty (20) torpedoes allocated for training use of the AAF which are now being held for us at Newport, R. I.	AFRDB R-3:esr <i>[Signature]</i> Act'g Dir. Bomb.
4	DAS	MAS	7/9	For file.	<i>[Signature]</i> L. S. K. DC/AS

A-100 471.6 Naval Torpedoes (31)

(Do not use reverse side)

F-4071. AF. Rev. 8/18/41

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471.6 Naval Torpedoes (31)

HEADQUARTERS ARMY AIR FORCES
ROUTING AND RECORD SHEET

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File No. _____

Tally No. AAF _____

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SUBJECT: Controlled-flight Bombs

DECLASSIFIED
DUC 104
3/10/82
2/1/87

NO.	FROM	TO	DATE	COMMENTS
1.	AFACG	AFCAS	1942 6/30	<p>1. The development of controlled-flight bombs has progressed to such a stage that, technically, their use in service is assured.</p> <p>2. In order to be prepared properly to exploit this weapon immediately upon its availability, it is desired that you take steps now to determine definitely the military requirements therefor, to train personnel in its use, and to provide for the development of methods.</p> <p style="text-align: right;"><i>H.H. Wood</i></p>
2.	AFCAS	AFACT	7/1	<p>For compliance with above directive from C.G. Army Air Forces.</p> <p style="text-align: right;"><i>G.E.S.</i> G.E.S. Actg. Chief of Air Staff.</p>
3.	AFACT	AFCAS	7-4	<p style="text-align: right;">AFACT ABO/HB</p> <p>After conferring with Colonel Moore of the Armament Section of the Materiel Command, the following facts were learned:</p> <p>1. At the present time the development of controlled-flight bombs is still very much in the experimental stage.</p> <p>2. Of all the various types of Controlled-flight bombs that were being experimented with, the two that are receiving priority tests are the glide bomb airplane borne and the power driven launched bomb. At the present time there are</p> <p>Eq. Army Air Forces JUL 4 1942 AND RECEIVED</p>

(Do not use reverse side)

F-4071 AF. Nov. 8/10/41

Page No. _____

DAG 3/31

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air 13471-6 Aerial Corp. data

HEADQUARTERS ARMY AIR FORCES
ROUTING AND RECORD SHEET

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Note.-- A line will be drawn across sheet
after each comment.

File No.

Tally No. AAF

SUBJECT: - Controlled-flight Bombs.

NO.	FROM	TO	DATE	COMMENTS
3	Continued.			<p>on order 90 1000 lb. glide bombs. These are not being purchased for tactical use but rather for final tests which were scheduled to start late in June.</p> <p>3. Development of the power driven launched bomb has reached the point to where one has been developed that will fly 200 miles an hour for 400 miles, and there are 10 on order from General Motors. These 10 will be used for further tests.</p> <p>4. Due to the fact that work on these bombs is still very experimental, it is suggested that any action taken on setting up military requirements for these bombs be withheld until the final tests have been completed.</p> <p style="text-align: right;">H.S.V. C/A-3</p>
4.	AFDAS	AFMAG	1942 7/12	<p style="text-align: right;">AFDAS LSK: pfp</p> <p>General Arnold has been informed. <i>to file.</i></p> <p style="text-align: right;">H.S.V. AFDAS</p>

As of 4/9/61
David G. Johnson
30

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(Do not use reverse side)

4-4071 AC Rev. 8/14/41

Page No. *Wash 4716 Annual Target*

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3/14/77

Aircraft Torpedoes.

1. AFREB AFMAG 1942
(Cable 5/25
Secretary)

AFREB GT/Opw

1. It is requested that a secret radiogram substantially as follows be sent to the Commanding General, Army Air Forces, so as to reach him at about the time of his arrival in England:

"IT IS UNDERSTOOD THAT RAF HAS UNDERTAKEN PROJECT TO INCREASE SPEED AND EFFECTIVENESS OF AIRCRAFT TORPEDOES PERIOD AS RESULT OF CONFERENCE WITH MR. LOYETT IT HAS BEEN SUGGESTED THAT YOU MAY CHOOSE TO ESTABLISH CLOSE LIAISON BETWEEN ARMY AIR FORCES PERSONNEL IN BOLERO AND THE RAF TORPEDO DEVELOPMENT PROJECT COMMA TO THE EXTENT OF INVITING RAF EXPERTS TO THE STATES FOR COLLABORATION IN VIEW OF OUR ELABORATE AND LONG ESTABLISHED TORPEDO DEVELOPMENT AND MANUFACTURING FACILITIES. PERIOD REQUEST INFORMATION AS TO THE ACTION COMMA IF ANY COMMA WHICH YOU WILL TAKE ON THIS SUBJECT TOGETHER WITH ANY INSTRUCTIONS YOU MAY HAVE FOR US PRIOR TO YOUR RETURN PERIOD"

Handwritten initials

MAY 26 1942

L. P. S.
Mr/Boch.

Vertical handwritten note: Di 45 471.6 Serial Torpedoes (26)

Handwritten note: That younger left this copy for you. Has been coordinated by Mr. Lovett + is being sent.

Handwritten note: noted - file WJF

Handwritten initials: JWS

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Handwritten note: Di 45 471.6 Serial Torpedoes (26)

AAF/D/Bomb.
Wrtn. 3/28/42
GY:md

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APR 20 1944
MAR 11 1944
44/27

MAR 30 1942

SUBJECT: Instructions for Preliminary and Final Adjustments and Torpedo Stabilisers, - Forwarding of.

TO: The Inspector of Ordnance in Charge, Naval Torpedo Station Newport, Rhode Island, Thru: Chief of Naval Operations.

1. Reference 875-1 (13/2249(P-2-RCS) 3-20-42, receipt is acknowledged of the following items of training literature:

a. Sixty (60) copies of instructions for preliminary and final adjustments and torpedo stabilisers for the Mark XIII-1 torpedoes, issuing numbers 151 to 210 inclusive.

b. Drawings actually received as follows: No. 226107, one hundred forty-one (141) copies, No. 226108, one hundred forty (140) copies, No. 226096, one hundred thirty-eight (138) copies, No. 226097, one hundred thirty-five (135) copies. In the event that the additional copies of these drawings were sent inadvertently, it is requested that they be properly charged to this Headquarters in order that they may be utilized in distribution to appropriate units of the Army Air Forces since the number required has changed materially since the original request was made.

For the Commanding General:

WM. W. DICK
Col., A.G. 57
Air Adjutant General

Dispatched
MAR 30 1942
AAG

Incls-3:
1-ltr (3-20-42)
2 & 3-Cards

MAR 30 1942

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W-6934, AP

47-6 Aerial Torpedos (22)

A 1/AS
A 2/AS
Intel S.
A 3/AS
A 4/AS
Plans/AS
Insp/AS
Mil. Req.
A. Def.
Bomb.
Gr. Sup.
Base S.
Adm.
Ins. Tr.
Check S.
Mail
Traffic
Photo. MAC
Tech. Insp.
Pub. Rel.
Dir. Pers.
Mil. Pers.
Civ. Pers.
Surg.
J. Assoc.
Budget
Fiscal
Mgmt. Coa.
Adj. Gen.
Org. Pl.
Stat. Pl.
Leg. Pl.
Nat. C.
A. S. C.
P. C.

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NAVAL TORPEDO STATION
NEWPORT, R.I.

DECLASSIFIED
500 Rm.

S75-1(13/2249)(F2-RCS)

9 Feb. 6 20 June 1974
By: NA/EC LC Date: 2/4/87

March 20, 1942

From: The Inspector of Ordnance in Charge
 To: The Chief of the Air Corps
 U. S. Army
 Washington, D. C.

Subject: Torpedoes - Instructions for Preliminary and
 Final Adjustments and Torpedo Stabilizers -
 Forwarding Of

Reference: (a) Bu.Ord.restr.ltr.F41/P11(351)(Mn3a) of
 February 12, 1942

Enclosure: (A) Sixty (60) copies of the subject instructions,
 Issuing Nos. 151 to 210 inclusive.
 (B) Sixty (60) Prints each of Bu.Ord. Drawing Nos.
 226107, 226108, 226096 and 226097.

1. In compliance with reference (a), enclosures (A) and (B) are being forwarded under separate cover in twenty-two (22) packages this date.
2. It is requested that upon receipt of the enclosures, acknowledgement be made on the attached cards.

/s/ R. S. Carr
R. S. Carr
By Direction

cc:
Bu.Ord.

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~~CONFIDENTIAL~~

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AAF 353-9

DECLASSIFIED
 8 Jan 4 40 1000 1000
 Dr. [unclear] 3/4/77

PMW/RIC/ri
 (Air AG)

January 24, 1942

SUBJECT: Training of Air Force Personnel on Torpedo Equipment.

TO: Chief of Naval Operations.

1. A report of recent trials of torpedo releases from B-26 airplanes conducted in cooperation with the Navy at Quonset Point, Rhode Island, is at hand. This report indicates that successful releases have been accomplished at ground speeds up to 206 miles per hour. The Martin rack and release mechanism functioned satisfactorily. Personnel of the Navy Torpedo Station expressed the opinion that an extended flight research program in the high-speed dropping of torpedoes should be undertaken. We are in complete agreement with this and are willing to participate in such a program. It will be possible to drop torpedoes up to 280 miles per hour with the B-26 airplanes.

2. All medium and light bombardment airplanes of the Army Air Forces are being adapted to permit the carrying and launching of torpedoes. It is necessary that ground personnel be trained in the handling of torpedoes, and pilots in their release, as soon as possible. Your assistance was recently obtained in the training of some of our armament mechanics in torpedo handling for units scheduled for commitment to the theatres of operation in the immediate future. This aid is appreciated. It now becomes necessary to ask for further assistance in the training of torpedo personnel, so that the men so trained may serve as a nucleus for the creation of a training activity within the Air Corps, at which adequate personnel may be trained for torpedo work.

3. It is requested that authority be granted to train in Navy Schools, the following personnel:

a. 30 armament mechanics from the Air Force Combat Command and Technical Training Command in the field handling of torpedoes, including the installation on aircraft, the adjustment of release mechanism,

HEADQUARTERS—ARMY AIR FORCES—COORDINATION										
Chief of Staff	Sec'y Air Staff	A. A. G.	A-1	A-2	A-3	A-4	A-WPTD	A-Inspr	Budget	Statistics

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and the adjustment of the mechanism of the torpedo as may be required.

b. Twenty enlisted personnel of Ordnance Companies assigned to the Air Force Combat Command in courses comparable to those which produce your aviation ordnance personnel. The Chief of Ordnance has been requested to coordinate a Torpedo Procurement Program with the Navy and to submit requests for the training of ordnance personnel required. Until a detailed program has been arranged, it is desired that the above ordnance personnel be trained.

4. No request is being submitted at this time for the training of pilots in the tactics of torpedo use. It is believed that this problem can best be solved by the detail of a few experienced naval officers with medium and light bombardment groups after ground personnel have been trained and when equipment is available for such training.

5. In order that units of the Air Force Combat Command may have available training literature covering as completely as possible the handling, installation, adjustment and release of torpedoes, in connection with aircraft, it is requested that 60 copies of all such training publications be made available for distribution to medium and light bombardment squadrons.

6. The fact is appreciated that all training activities within the Navy are taxed to capacity to produce the personnel required by your expansion and extended operations. Nevertheless, the opportunities for employment of torpedo tactics by medium and light bombardment units is believed to be such as to warrant this request.

*Copy obtained from
A.S. A.F.F. This is the
original request for subject
literature*

For the Chief of the Army Air Forces:

CARL SPATZ
Brig. General, Air Corps,
Chief of The Air Staff

HEADQUARTERS—ARMY AIR FORCES—COORDINATION					
DATE	BY	INITIALS	REMARKS	DATE	BY
		A-2	A-2		

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EPS:GY:1P
APR 28

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100-100000-1000
By: *ML/CA* Date: *10/27/77*

MEMORANDUM FOR THE CHIEF OF THE AIR STAFF:

APR 2 - 1942

Subject: Aircraft Torpedo Training.

With reference to attached memorandum dated March 3, 1942 and General Harmon's pencilled note, the following is a resume of the status of personnel now training or about to be assigned to the Naval Torpedo School for the nine (9) week course in maintenance and operation of Mark XIII Aircraft Torpedoes:

On January 29, 1942 nine (9) officers and seven (7) enlisted men (Aviation Ordnance) from Air Force Combat Command, one (1) officer and three (3) enlisted men (Aviation Ordnance) from Aberdeen Proving Ground and two (2) civilian ordnance men from Ordnance Field Service began the nine (9) week course to be completed about April 4, 1942.

On February 9, 1942 thirty (30) enlisted men (fifteen (15) each from the 15th and 45th Bombardment Groups) began the nine (9) week course to be completed about April 11, 1942.

Eighteen (18) enlisted men from the 1st, 2nd, and 3rd Air Forces, and two (2) officers and two (2) enlisted men from the Gulf Coast Air Corps Training Center and Southeast Air Corps Training Center, have been selected and ordered to report at Newport for the next course beginning April 6, 1942.

E. P. SORENSEN.
Colonel, Air Corps.
Director of Bombardment

*to Dir of Bombardment
with penc note on original:-
"Noted. Establish continuity. H."*

471.6 Naval Torpedo School (14)

Dir of Bomb.

Incls:		ARMY AIR FORCES				COORDINATION			
Chief of Staff	Secy of Air	A-1	A-2	A-3	A-4	A-WPD	A-Insp.	Budget	Statistics
	AC/AS to C/AAF Date 3/3/42 AC/AS to C/AAF.								

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471.6 Naval Torpedo School (14)

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0 Jan 4 10 10am 1974
By: AWJ/GC

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Aircraft Torpedo Training

1. AFRIT-3 AFDNR 1942
GLD:rah 4/2

1. Orders have been issued sending two officers and ten enlisted men from Lowry Field, Denver, Colorado to the Naval Torpedo School, Newport, R.I., beginning April 6.

2. In addition to this, arrangements were made whereby two officers and ten enlisted men might receive training in the handling and servicing of torpedoes at Pearl Harbor.

3. Arrangements were also made for this course to be repeated upon the completion of each course.

L.S.S.,
Col., A.C.,
D.I.T.

2. AFRDB AFGAS 4/9

1. Attention is invited to Item 1, and memorandum dated April 2, 1942

AFRDB GY:rl

Incls:
Incl #1 - Memo 4/2/42
Dir of Bomb-Subject
As above with 2 Incls.

E. P. S.
Col. A. C.
Dir. of Bomb.

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13526
8 Jan & 20 June 1994
S. W. K. J. C. D. 3/1/27

DECLASSIFIED

March 3, 1942.

MEMORANDUM FOR THE CHIEF OF THE ARMY AIR FORCES:

Subject: Procurement of Navy MkIII Aircraft Torpedoes.

1. In accordance with a directive from the Chief of the Army Air Forces, steps were taken to procure Navy MkIII aircraft torpedoes.

2. The complete story of our efforts and the present status are contained in a letter from the Office of the Chief of Ordnance, dated February 19, 1942, which is attached. The important points of this reply are summarized as follows:

a. Requisitions were submitted by the Ordnance Department for five thousand (5,000) torpedoes.

b. Requisitions were returned by the Navy as unacceptable as to delivery date and rate.

c. The Navy agrees to accept requisitions, deliveries to start one year from date, at a "practicable" rate, considering the requirements of the United States Navy, Australian and Netherlands East Indies governments, in addition to the United States Army.

d. Prior to the above delivery on requisition, torpedoes will be issued in an active theatre of operations only and then as determined by the Supreme Commander in that field.

3. This is furnished for your information in view of your present interest in this matter.

Incl.:
Ltr. 2/19/42, frm.
Off. Ch. of Ord. to
C/AAF, above subj.

T. V. HANLEY, JR.,
Colonel, Air Corps,
Assistant Chief of the Air Staff, A-4.

~~SECRET~~

Rev. 4746 dated 7/2/42

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1/12/77

WAR DEPARTMENT
OFFICE OF THE CHIEF OF ORDNANCE
WASHINGTON

Reynolds/ah/mm

February 19, 1942.

Subject: Procurement of Navy MkIII Aircraft Torpedoes

To: Chief of the Army Air Forces

1. Reference is made to memorandum from your office, dated January 16, 1942, File O.C. 471.6/2198.

2. In accordance with requirements for subject torpedoes for use by the Army Air Forces this office has submitted requisitions to the Bureau of Ordnance, Navy Department for 5,000 Navy MkIII Aircraft Torpedoes.

3. Memorandum reply from the Bureau of Ordnance dated February 11, 1942, File O.C. 400.325/8838 - Navy is considered of importance and is quoted verbatim as follows:

*875-1(85/377) (PL)

MEMORANDUM

From: The Chief of the Bureau of Ordnance
TO: The Chief of Ordnance, War Department
(Ammunition Division Industrial Service)

Subject: Aircraft Torpedoes Mark 13 - Requisitions for

Reference: (a) Army Ordnance Requisition No. ORD-42-MC1007
(b) Army Ordnance Requisition No. ORD-42-MC1007-1

Enclosure: (A) Reference (a) (Original)
(Herewith) (B) Reference (b) (Original)

"1. References (a) and (b) cannot be accepted under the conditions set forth in reference (b), and are returned herewith as enclosures (A) and (B).

"2. The Bureau is prepared to accept requisitions from Army Ordnance for the manufacture of aircraft torpedoes Mark 13, deliveries to start within approximately one year's time and deliveries to be made at a rate as found practicable, having due regard to requirements for this torpedo including, besides U. S. Naval Service, the Australian and Netherlands Governments. At the present time, the Bureau is providing additional facilities for the manufacture of torpedoes and, while it is impossible to accurately predict when the deliveries from these new facilities will start, it is anticipated that deliveries in reasonable amounts will begin within one year's time.

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"3. In separate correspondence, the Secretary of the Navy has informed the Secretary of War that the issue of aircraft torpedoes to the Army Air Corps shall be on a cooperative basis in the theater of war and that arrangements to this effect will be made by the Supreme Commander in the theater of operations. In this connection, Army Ordnance is advised that the torpedo is a complicated mechanism requiring continuous maintenance by specially trained personnel and at bases and stations equipped with supplies and ready tools. Torpedoes cannot be prepared for the firing of either a war shot or an exercise shot in one locality and transported in a charge condition to another locality for loading on aircraft. Additionally, torpedoes require periodic overhaul by personnel at bases and stations equipped with special work shop equipment and, further, aircraft must be fitted with torpedo racks suitable for the carrying of torpedoes. The above is mentioned from the material point of view alone. For operations, aviation personnel require training in the employment of torpedoes and methods of launching and technique of release and attack.

"4. As previously stated, the Bureau is prepared to accept a requisition for the manufacture of aircraft torpedoes for delivery to Army Ordnance, deliveries to start in approximately one year. However, in view of the statements made in the preceding paragraph, it is considered that prior to the actual delivery of torpedoes for use, the necessary personnel who will service and maintain these torpedoes will require indoctrination in material maintenance of torpedoes and, further, that the aviation personnel who will use these torpedoes in combat will require training. Further, work shop equipment for maintenance and preparation requires assembling and installation at stations and bases where torpedoes will be maintained and prepared for use. All these preparatory and training measures should be taken prior to the delivery of any torpedoes for actual use. The Bureau is prepared to assist as is practicable in any reasonable program to effect the above.

"5. The Bureau has reduced the classification of references (a) and (b) from "Secret" to "Restricted" in order that the matters pertaining to manufacture may go forward without restrictions required by secret classification. It is requested that any further correspondence on requisitions for material for torpedoes bear no higher classification than restricted.

/s/ W. H. P. BLANDY

JD
Copy to:
UndSecNav
AstSecNav for Air"

4. The Bureau of Ordnance, Navy Department therefore will not be able to procure subject torpedoes for the use of Army Air Forces for approximately one year. However, it is noted that the Supreme Commander in the theater of operations will effect issue of aircraft torpedoes on a cooperative basis between the two Air Services

For the Chief of Ordnance:

~~SECRET~~
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/s/ C. T. Harris, Jr.

Major General
Assistant to Chief of Ordnance
Chief of Industrial Service

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AAF/A-4
RCC
Written 2-20-42

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GPO Inv.

8 Jan. & 10 June 1974
By: *MW/CC* LC, Date: *2/16/77*

Disposition Form WFD 4630-28, 2-17-42
(Personnel and Supplies to Australia)

~~SECRET~~
WFD

471.6 Aerial Torpedoes (15)

2-17-42 Air Torpedoes
FEB 23 1942
RCC RECEIVED

Dispatched
FEB 24 1942
AAC

AAF/A-4
RCC/bmh

1. Reference your disposition form 2-17-42, WFD 4630-28 on Radio 236, 2-13-42, from C. G., U. S. Forces in Australia.

2. The United States Navy is the sole source of aircraft torpedoes for Army Air Forces at present time. Only a small quantity are now available for Army and Navy use. The Navy has been urgently requested to increase production to meet Army requirement as soon as possible. In the meantime, the Navy has promised (Capt. Sherman) to make available in the Far East aircraft torpedoes Mark XIII within the limits of availability. Sixty torpedoes are in the area concerned, twenty four additional have arrived or enroute, other quantities being collected for shipment. Operating and maintenance personnel are being sent to Naval instruction centers for torpedo work. Until such time as Army personnel can be trained, the Navy has promised to cooperate and make available some torpedoes for Army units capable of handling this weapon. The Commanding General, Australia has been advised to contact United States Naval Forces HEADQUARTERS EAST ASIAN AIR FORCES in cooperation on a COORDINATION basis for the use of

of Torpedoes in that Area	A-2	A-3	A-4	A-WPD	A-Insp.	Budget	Statistics

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Abb
T. H. HANLEY, Jr.
Colonel, Air Corps

Assistant Chief of the Air Staff, *AAF-39*

Air 03 471.6 Aerial Torpedoes (15)

DECLASSIFIED
DD Form 13
1 Oct. & 20 June 1975

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WAR DEPARTMENT GENERAL STAFF
DISPOSITION FORM

Date 2-16-42 Initials W

AG
WPD 4630-28

WAR PLANS DIVISION

SUBJECT: Personnel and Supplies for Australia.

Date February 17, 1942.

TO:	C/S	G-1	G-2	G-3	G-4	Air Staff	
	TAG	WPD	USW	ASW	ASWA	CG	Army
	AC	BLP	BOWD	ExRA	NGB	CG	Army Corps
	INF	FA	CAV	CA	ENGR	CG	CA
	ORD	QMG	CSO	SG	FIN	CG	Dept.
	GHQ	JAG	CWS	IG	B/PR	X Chief of Army Air Forces	

FOR:	S/W directs	Comment or concurrence	Necessary action
	Draft of reply	Remark and recommendation	Information for reply
	Direct reply	Inviting attention to	Ind. approved
	Approved	See notation of	Primary interest
	Disapproved	Information	Notation and return
	File	Consult	Noted

By: Spcl Msgr Radio Air Mail Immed Action Ltr Letter

1. Reference is made to radio 236, February 13, from the Commanding General, United States Army Forces in Australia, an information copy of which was furnished to the Chief of Army Air Forces by The Adjutant General.

2. War Plans Division recommends approval of the request of the Commanding General, United States Army Forces in Australia for aerial torpedo for use with B-26 aircraft, and requests the necessary action be taken by the Chief of Army Air Forces.

915PM

C. K. GALLEY, Jr.,
Lt. Col., G.S.C.,
Executive, WPD.

G. Ordway, Jr.
G. ORDWAY, Jr.,
Lt. Col., G.S.C.,
Asst. Executive, WPD

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850274 FEB 17 42

CENTRAL MAIL SECTION A.E.
Ain 025 471. General Jones

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DOO H.S.
8 Jan. & 22 June 1974
By: SA/JG/1G; Date: 1/2/87

DATE _____

SUBJECT: Disposition Form WPD 4630-28, 2-17-42
(Personnel and Supplies to Australia)

Received from Headquarters, Army Air Forces, Disposition
Form, above subject.

Officer Rank

Office

HEADQUARTERS ARMY AIR FORCES - COORDINATION										
Chief of Staff	Sec'y Air Staff	A.A.G.	A-1	A-2	A-3	A-4	A-WPD	A-Insp.	Budget	Statistics

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AAF-39

See AG 471.6 Chris [unclear]

AAF/A-4/60

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DDO 10a
8 Apr. & 20 June 1974
By: *PLH/TC* / *LC*; Date: *3/1/82*

AAF/A-4
RCC/amb
Wmt 2/3/42

MEMORANDUM FOR THE CHIEF OF THE AIR CORPS:

SUBJECT: Torpedo Installation Units for B-26
Airplanes.

1. In telephone conversation between Colonel Jordan at the Port of Embarkation, San Francisco and Colonel Coupland of this office at 3:50 P.M. February 3, 1942, the following information on the above subject was furnished by Colonel Jordan:

12 sets of torpedo installation units for B-26 airplanes destined for Copper were inadvertently shipped to I and are now at sea. 14 sets are now on the dock at the Port of Embarkation, San Francisco and will be loaded on board for Copper.

2. Twelve additional sets should be immediately shipped from Sacramento Air Depot to the Port Quartermaster, Port of Embarkation, San Francisco, marked for B-26 airplanes to Copper and twelve additional sets sent to the San Francisco Air Depot as soon as possible.

By Command of Lieutenant General Arnold

JOHN B. COOLEY
Lt. Colonel, A. G. D.,
Assistant Air Adjutant General

471.6 Aerial Torpedoes (12)

HEADQUARTERS		ARMY AIR FORCES - COORDINATION									
Chief of Staff	Sec'y Air Staff	A.A.G.	A-1	A-2	A-3	A-4	A-WPD	A-Insp.	Budget	Scen-ristics	
						<i>RH/JP</i>					
						<i>AMB</i>					

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AAF-39

Am AD 471.6 Aerial Torpedoes (12)

January 31, 1942

MEMORANDUM FOR: Col. T. J. Hanley, Jr.

Subject: Torpedo Installation Units for B-26 Airplanes

In accordance with your telephone request to Lt. Col. P. W. Timberlake that you be kept informed as to the status of the torpedo installation units for B-26 airplanes, there is attached herewith a copy of the report submitted to Col. B. E. Meyers.

L. T. Bradbury

L. T. Bradbury,
Captain, Air Corps,
Asst. Chief, Prod. Engr. Br.,
Engr. Sec., Office, Asst. for Proc.
Services, OCAC

Jordan 3⁵⁰ P.M. 2/1/42

*12 were sent to 'X' on wrong boat
14 will get on Copper:*

By telephone

rlb

Fred.Br.53

(4-E-4)

Colonel Meyers

Status of 26 Sets, Torpedo Installation
Parts for B-26 Airplanes

January 28, 1942

1. On January 26th at approximately 9:00 a.m., upon direction from higher authority, a telephone call was placed to Mr. Hartson, Vice President of the Glenn L. Martin Company, to inquire as to the status of shipment of 26 sets of torpedo installation units for B-26 airplanes, which were supposed to have been shipped on January 23rd. Mr. Hartson promised to check into this matter immediately and to call back reporting the status.
2. At approximately 11:30 a.m. the same date, a second telephone call to Mr. Hartson secured the following information from him:
 - a. The situation as of that moment was that the parts from the subcontractor were on their way by truck to the Glenn L. Martin Company for 26 complete units. Two units have previously been shipped to Fairfield Air Depot.
 - b. The subcontractor had advised Mr. Hartson that the 26 sets were complete.
 - c. Mr. Hartson stated that it would require ten hours to assemble these units after they were received and checked for completeness at the Martin plant, and that he would also check as to the shipping weight and whether or not more than one air transport would be required to ship these to the West Coast. Mr. Hartson was asked to be definite in his reply as to when these parts would be completely assembled and ready for shipment in order that the transport airplanes could be ordered for that time. It was expressly pointed out to Mr. Hartson that this job carried top priority by direction of General Arnold. LTB:epo
3. At 3:45 p.m. the same date, a third telephone call was made to Mr. Hartson and this office was advised as follows:
 - a. The twenty-six sets received from the subcontractor were complete.
 - b. It would require ten hours for the Glenn L. Martin Company to assemble these units and to box them for shipment.

(4-B-4)

c. The dimensions of the packages would be 4 ft. 9 in. long, 1 ft. 4 in. wide, 1 ft. 5 in. deep, and each would weigh 278 lbs., making a total for the twenty-six packages of 7,228 lbs.

d. Two transport airplanes would be required.

e. Mr. Hartson advised that the transports should report at the Glenn L. Martin airport as early as possible on the morning of January 27th, and that the packages would be there for loading.

f. Mr. Hartson stated that the two sets previously shipped to Fairfield were being forwarded to the west coast by air express.

4. On January 27th at approximately 10:00 a.m. a telephone call was made to Captain Perry, Air Corps Factory Representative, Glenn L. Martin Company, and the following information was obtained:

a. The two transports arrived at the Martin airport early that morning.

LTB:epc

b. The first transport would not be able to leave until approximately 4:00 p.m. due to the fact that the Martin Company had been unable to complete the assembly and crating of sufficient units to make a load.

c. Captain Perry stated that Mr. Hartson had been misinformed when he was told that this work could be accomplished in ten hours.

d. Captain Perry was informed that this had top priority and he replied that everything possible was being done to expedite this matter.

5. At 4:50 p.m. January 27th Captain Perry telephoned this office to report:

a. That the first transport plane would leave at approximately 6:00 p.m. and would have a load of either 11 or 12 of the torpedo installation units.

(4-E-4)

b. That the balance of the shipment would be unable to leave until January 28th; the reason for the delay being that the Martin Company would be unable to assemble and crate these units at any earlier date. ✓

c. The second transport airplane was returned to New York and would again report at Martin airport to pick up the load on January 28th.

6. The status of these sets as of 4:00 p.m. January 28th is:

a. The balance of 18 sets left Baltimore at 11:00 a.m. today via truck for Pittsburgh to be flown by commercial air transport from Pittsburgh direct to Port of Embarkation, San Francisco. ✓

LTB:epc

P. W. Timberlake,
Lt. Col., Air Corps,
Chief, Prod. Engr. Br.,
Engr. Sec., Office, Asst.
for Procurement Services, OCAC

January 30, 1942

1. The 18 sets which left Baltimore at 11:00 a.m., January 28 by truck for Pittsburgh and then by air to San Francisco arrived in San Francisco at 1:00 p.m. January 29th.

2. Mr. Bergduff of the Glenn L. Martin Company, telephoned January 29th to advise that they had received 32 additional sets of torpedo installation units, which are being assembled and boxed, and per instructions to be furnished by the Air Service Command, would be flown to Sacramento Air Depot. These should be ready for shipping today, January 30th, or January 31st.

January 31, 1942

3. 32 additional sets of torpedo installation units left Baltimore by air evening of January 30th for Sacramento Air Depot, Sacramento, California.

Lt. COL. P. W. Timberlake

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8 Jan. 26 20 Items 1884
BY ANTICE on 10/12/87

AAF/A-4
JFW/mwb
Wmt 2/9/42

SUBJECT: Military Characteristics of Glide Torpedo.

1st Ind.

War Department, Headquarters Army Air Forces, Washington, D. C.
FEB 10 1942 To The Chief of the Air Corps.

1. Approved.

By Command of Lieutenant General Arnold

JOHN B. COOLEY
Lt. Colonel, A. T. D.
Assistant Air Adjutant General

4716 Serial Torpedoes (11)

D. W. A. 2104
FEB 10 1942
AAG

HEADQUARTERS		ARMY AIR FORCES					COORDINATION				
Chief of Staff	Sec'y Air Staff	A.A.G.	A-1	A-2	A-3	A-4	A-WD	A-Inspr.	Budget	Statistics	
						<i>7/4/42</i>					

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Serial 4716 Serial Torpedoes (11)

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EXEMPT FROM GDS
BY AN/ice JAG/DAW 3/11/97

(4-P)

Military Characteristics of Glide Torpedo.

1 1942

The Chief of the Army Air Force.

1. The following principal characteristics for a glide torpedo are submitted for approval.

GLIDE TORPEDO

- A. CLASS - Glide Torpedo
- B. MISSION - Aerial offense against naval targets.
- C. REQUIREMENTS -

1. This torpedo shall be equipped with lift-producing air foils and control surfaces from which it will be detached before striking the water. After detachment, the torpedo will continue toward the target under water in the same manner as standard torpedoes released from airplanes.
2. This torpedo may also be equipped with stabilizing equipment, radio control (with or without television) and/or heat, light, sound or radio detecting and directing equipment. Further, this torpedo may be equipped with pre-set data devices whereby the path to be followed by it can be set in prior to its release.

For the Chief of the Air Corps:

L. S. SMITH
Lieut. Colonel, Air Corps,
The Executive Assistant.

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45-53

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62-010

Am 404716 Aerial Torpedoes (11)

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AAF/A-3
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1/27/42

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EXC 105
By: *[Signature]* 20 June 1994
Date: *1/17/77*

February 2, 1942.

MEMORANDUM FOR THE CHIEF OF NAVAL OPERATIONS:

Subject: Bombardment Airplanes Equipped for Carrying Torpedoes.

1. Present plans of the Army Air Force contemplate the delivery of one hundred fourteen (114) B-26, medium bombardment type, aircraft to Australia via Hawaii. These airplanes will be shipped to Hawaii crated, assembled there, and flown over the South Pacific route to Australia. The first shipment of twenty-eight (28) of these bombers will arrive in Hawaii about February 2, 1942. All of the above airplanes are equipped to carry torpedoes and tests conducted have proven the installation to be satisfactory.

2. The combat crews assigned these airplanes, have had very limited training with this type of equipment, and no training in the launching of aerial torpedoes. The Commanding General, Hawaiian Department, General Emmons, has been instructed to conduct the further training of these combat crews and as soon as they are considered qualified to dispatch the airplanes to Australia.

3. It is requested that the Navy in Hawaii give all assistance possible to expedite the training of these crews in reference to the launching of aerial torpedoes and their installation and maintenance. If this meets with your approval, General Emmons will be informed to coordinate his training program with the Navy to insure that it will be accomplished in the most expeditious manner.

4. It is believed that the Chief of the Asiatic fleet should be informed that one hundred fourteen (114) B-26 type medium bombardment airplanes are being assigned to Australia and that these airplanes will be available for operations requiring the use of torpedoes.

5. All possible consideration should be given to placing Australia on high priority in future shipments of torpedoes.

471.6 Naval Torpedoes (12)

For the Chief of the Army Air Forces:

HEADQUARTERS ARMY AIR FORCES					COORDINATION Bureau		
Chief of Staff	Sec. 1	AAAG	AS	A 2	A 3	A 4	Major General, Air Corps, Chief of the Air Staff.
<i>WJF</i>		Torpedoes			<i>[Signature]</i>	<i>[Signature]</i>	

SECRET

airly 471.6 Naval Torpedoes

ADDRESS REPLY TO
CHIEF OF THE AIR CORPS
WAR DEPARTMENT
WASHINGTON, D. C.

DECLASSIFIED
~~CONFIDENTIAL~~
WAR DEPARTMENT

DECLASSIFIED
DDG 100
6 MAR 20 1988
1/10/87

OFFICE OF THE CHIEF OF THE AIR CORPS
WASHINGTON

MEMORANDUM FOR: Chief of the Air Staff

SUBJECT: Torpedoes

1. In compliance with verbal instructions, Lt. Colonel Coupland, A-4 Section of the Air Staff, and Lt. Colonel Moore, Materiel Division, OCAC, conferred with Captain Sherman of the Naval War Plans. The status of the torpedoes is as follows:

- 60 are on President Polk and are now in the vicinity of "X"
- 24 are on their way in the convoy with first replacements
- 30 are scheduled to be shipped in February and plans are now under way to increase this number to 60; this will include all that are now available. Accelerated production of torpedoes does not get underway until April, 1942.

It is planned to send these torpedoes to the location of the aircraft carrier Langley in order that personnel, handling and charging equipment will be available.

2. Captain Sherman considered it desirable that a dispatch be sent to the Chief of the Asiatic Fleet giving him the full story on the B-26; that they were equipped to carry torpedoes; that the installation has been tested; when they will be available and in what quantities; and that he should cooperate with General Brett in making plans to best utilize these airplanes in dropping torpedoes. He will send a dispatch upon receipt of the information relative the B-26's. Similar information should also be sent to General Brett.

3. Captain Sherman suggested that, if possible, four (4) or six (6) officers who are going to be with this group, should proceed to Quonset Point and receive a small amount of training in dropping torpedoes in the A-20 that is now there, or that a B-26 be sent with them especially for this purpose. If possible, it is suggested that this be done in Hawaii while the crews are undergoing training there, rather than attempting to train people and then have them catch up with the airplanes and crews at a later date.

DECLASSIFIED

~~CONFIDENTIAL~~

John G. Moore
John G. Moore
Lt. Colonel, Air Corps,
Chief, Armament Branch

SECRET

Rewrite

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GPO Use
8 Apr. 4 20 June 1974
BY *SP125 JG, DWA, JLB/??*

88 35 1942

Subject: Procurement of Aircraft Torpedoes.

To: The Secretary of the Navy.

Reference is made to the letter from The Secretary of the Navy dated January 15, 1942, in which offer is made to undertake a long range program of manufacture of aircraft torpedoes for the Army Air Corps and to assist in the training of Air Corps personnel to maintain and use torpedoes.

It is the plan of the Army Air Forces to equip light and medium bombardment airplanes to carry and launch torpedoes. It is desired that the Navy develop facilities and procure for the Army on the ratio of one and one half (1½) torpedoes per airplane.

On the basis stated the requirement by the end of the calendar year 1942 will total about 3500 aircraft torpedoes. This quantity is desired at the earliest practicable date, about 150 of them now if possible. The monthly rate of production should be proportional to the production, for Army Air Force use, of the carrying airplanes. At the end of 1942 this rate will be approximately 600 airplanes per month.

It is requested that funds for the production facilities be furnished by the Bureau of Ordnance as suggested in reference to letter of January 15, 1942.

The War Department is appreciative of the cooperative attitude taken by the Navy in its offer of assistance.

471.6 Naval Torpedoes (9)

FEB 25 1942

ASST. SECRETARY

(SIC) HENRY L. SIMMONS

Secretary of War.

FEB 25 1942

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SECRETARY'S OFFICE

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OFFICE OF CHIEF OF STAFF

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S. H. & W. June 1928
AG: Date

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Procurement of Aircraft Torpedoes.

471.6 Aerial Torpedoes (9)

Hq. Army Air Forces

FEB 11 1942

AGC RECEIVED

Dispatched

FEB 20 1942

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~~FEB 20 1942~~

AAG

FEB 2 1942

AAG

1 Incl.

Draft of ltr. to S/Nav

REMARKS FOR RECORD:

The provisions of this letter are based upon action taken by Requirements Board in its meeting of February 5, 1942. Copy of minutes of that meeting are attached. *Copy of minutes are in file with Col. Lawrence.*

HEADQUARTERS-ARMY AIR FORCES--COORDINATION

DATE	BY	A. A. G.	A-1	A-2	A-3	A-4	A-5	A-6	A-7	A-8	A-9	A-10
						<i>As of Feb 11 1942</i>						

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AAF/D/Babb.
EPS

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E2 198

8 Jan. & 20 June 1988
By *SP-1/CS JAC, DOD 8/Jul/88*

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~~SECRET~~

Subject: Procurement of Aircraft Torpedoes.

To: The Secretary of the Navy.

Reference letter from the Secretary of the Navy dated January 15, 1942, in which offer is made to undertake a long range program of manufacture of aircraft torpedoes for the Army Air Corps and to assist in the training of Air Corps personnel to maintain and use torpedoes is very much appreciated.

It is the plan of the Army Air Forces to equip light and medium bombardment airplanes to carry and launch torpedoes. It is desired that the Navy develop facilities and procure for the Army on the ratio of one and one half (1½) torpedoes per airplane.

On the basis stated the requirement by the end of calendar year 1942 will total about 3500 aircraft torpedoes. This quantity is desired at the earliest practicable date, about 150 of them now if possible. The monthly rate of production should be proportional to the production, for Army Air Force use, of the carrying airplanes. At the end of 1942 this will be approximately 600 airplanes per month.

It is desired that funds for the production facilities be furnished by the Bureau of Ordnance as suggested in reference letter of January 15, 1942.

Secretary of War.

R

HEADQUARTERS - ARMY AIR FORCES - COORDINATION

NAVY	NAVY AIR FORCE	A.A.G.	A-1	A-2	A-3	A-4	A-WPD	A-Insps	Insps	...

DECLASSIFIED

Corr as 471.6 Naval Torpedoes ②

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THE SECRETARY OF THE NAVY

DECLASSIFIED
E.O. 13526
EXEMPT FROM
DECLASSIFICATION
DATE 10/12/27

DECLASSIFIED
~~SECRET~~

JANUARY 15, 1942

SIR:

I refer to your letter of January 5, 1942, requesting advice as to the number of aerial torpedoes which the Navy can furnish for use of the Army Air Forces and the approximate date of supply of such torpedoes to the Army Forces in the Far East.

It is my conviction that any munitions necessary for the successful prosecution of the war should be shared by the Armed Forces as the need arises. However, I regret to inform you that the present supply of aircraft torpedoes is critically short of the barest needs and demands of the Naval Service.

Action has been initiated to expand torpedo manufacturing facilities but quantity production may not be realized for some time and it must be emphasized that the expansion planned will be adequate only to fulfill Navy requirements.

Should the War Department so desire, the Navy Department will undertake a long range program of manufacture of aircraft torpedoes for the Army Air Corps. As this production will require additional facilities, the desired monthly production rate is requested. Funds for such facilities can be furnished by the Bureau of Ordnance and it is estimated that production can start within twelve months, possibly sooner.

The successful use of aircraft torpedoes requires a high degree of skill in maintenance and adjustment of intricate mechanisms and to this end the Navy will be pleased to lend assistance as may be practicable, in the training of Army personnel.

Until such time as trained personnel, equipment for maintenance and adjustment facilities are available to the Army, it is assumed that the care and handling of all torpedoes will continue to be performed by the Navy and that any mission involving the use of aircraft torpedoes by the Army Air Force will require close cooperation, the theater of operations, by local Commanders, upon whose judgment reliance must be placed for the best use of all available weapons.

Respectfully,

/s/ KERR KNOX

The Honorable
The Secretary of War,
Washington, D.C.

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~~SECRET~~

See also 4716 Serial Logarithm ①

February 19, 1942.

Procurement of Aircraft Torpedoes.

Sec. G/S

471.6 Aerial Torpedoes (9)

Dispatched
FEB 19 1942
AAG

For the Chief of the Air Staff:

H. P. Curtis,
Lieut. Col., Air Corps,
Secretary of the Air Staff.

- 1 Incl.
- Draft of ltr. to S/Navy
- Ltr. S/N to S/W 1/15

MEMORANDUM FOR RECORD:

The provisions of this letter are based upon action taken by Requirements Board in its meeting of February 5, 1942. Copy of minutes of that meeting are attached.

HEADQUARTERS ARMY AIR FORCES - COORDINATION

Chief	Secy	A. A. G.	A-1	A-2	A-3	A-4	A- M/D	A. Insp.	Budget	Sta- tistics
Chief of Staff	Secy Air Staff									

AAF-28

air ab 471.6 Aerial Torp. (9)

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603 904
8 Jan. & 22 June 1974
By SP-1 JCC 102, DSN 21477

WAR DEPARTMENT
WASHINGTON

AAF/D/Bomb.
EPS

Subject: Procurement of Aircraft Torpedoes.
To: The Secretary of the Navy.

Reference letter from The Secretary of the Navy dated January 15, 1942, in which offer is made to undertake a long range program of manufacture of aircraft torpedoes for the Army Air Corps and to assist in the training of Air Corps personnel to maintain and use torpedoes is very much appreciated.

It is the plan of the Army Air Forces to equip light and medium bombardment airplanes to carry and launch torpedoes. It is desired that the Navy develop facilities and procure for the Army on the ratio of one and one half (1½) torpedoes per airplane.

On the basis stated the requirement by the end of calendar year 1942 will total about 3500 aircraft torpedoes. This quantity is desired at the earliest practicable date, about 150 of them now if possible. The monthly rate of production should be proportional to the production, for Army Air Force use, of the carrying airplanes. At the end of 1942 this will be approximately 600 airplanes per month.

It is desired that funds for the production facilities be furnished by the Bureau of Ordnance as suggested in reference letter of January 15, 1942.

Secretary of War.

HEADQUARTERS - ARMY AIR FORCES - COORDINATION							
	A-1	A-2	A-3	A-WPD	A-Insps	Headqrs	Statistics

Minutes of a Meeting of the Board Appointed to Determine "Basis of Computation of Requirements for Items of Ordnance Equipment Recently Standardized" Appointed on February 2, 1942.

A Board meeting at 1:30 P. M. on February 5, 1942. Members of the committee present were Col. William E. Lynd, Col. Edgar P. Sorenson, Col. David H. Stinson, Lt. Col. Richard C. Coupland, Lt. Col. James H. Deelittle, Lt. Col. Ford L. Fair, 1st Lt. Ray E. Bayle. Members absent were Lt. Col. John C. Moore, Lt. Col. Gordon P. Saville, and Lt. Col. Oliver S. Fisher. In addition to the members present, there were two representatives from the office of the Chief of Chemical Warfare-- Lt. Col. Kellogg and Major Burns. Also present were the following officers from the A-4 Division: Col. Max F. Schneider, Lt. Burt, and Lt. Redanes.

This was the first meeting of the Board following its appointment and was considered primarily as an orientation meeting. There were several items of business, however, that were rather pressing and these were discussed and conclusions reached. Col. Coupland presented a list of items which should ultimately be reviewed and revised. Since no agenda had been prepared for the meeting and the items listed by Col. Coupland have not been prepared for discussion or for advance presentation to members of the Board, it was found impracticable to properly present any of them for action.

The two Chemical Warfare officers have been invited to be present in order to discuss requirements for chemical tanks in medium and heavy bombers. It was agreed that if the situation should demand the use of chemicals in the present war, that it was mandatory that materials and equipment in sufficient quantity must be available to permit unstinted application.

The Chemical Warfare Service is charged with the development and procurement of tanks for dispensing chemicals from aircraft. It is necessary for them to know to what extent tanks should be procured and in what airplanes they are to be carried.

It was the consensus of opinion that spray tanks should be provided for medium and heavy bombers as well as for light bombers.

The next question discussed was that of the expenditure rate of tanks as well as chemicals. The present policy of the Air Corps is to jettison tanks when the chemicals have been sprayed from them. This policy was apparently based upon the considerations of safety and a belief that tanks supposedly empty might not be entirely so and fumes from them might endanger personnel on landing. It was the consensus of opinion that the danger to personnel in the airplane had been overemphasized and

that while it was desirable to be able to drop the tanks from the airplanes at any time, it was entirely likely that a substantial proportion of the tanks would be returned with the airplanes to their operating bases and could be used again by refilling. On this basis it was decided that while tanks should be provided for the accomplishment of a number equal to one-fifth of the estimated bombing missions during the combat life of bombing airplanes, the chemicals to be procured would be sufficient for two complete fillings for that number of tanks in order that additional missions could be accomplished if circumstances demanded and if tanks were returned with the airplanes.

It was agreed that as it was unlikely that chemicals would be used in all theaters of operation and might be concentrated in any one or more, that a reasonable degree of preparedness would result from providing tanks for one-fifth of the estimated bombing missions, as stated above. Such an estimate would result in the procurement of tanks for five mission loads for each heavy bombardment airplane, ten for each medium, fifteen for each light and each dive bomber. This expenditure could be doubled provided all tanks were returned from the first mission with tanks aboard.

Present procurement of planes call for the protection of 100% chemical bombs in sufficient quantity to conduct one mission with each of the bombardment airplanes of all categories. It was agreed that the 100% bomb was a very desirable munition particularly when impaled with a time fuse and barometer which could be set for bursting at any predetermined height above the ground. It was agreed that the number of mission loads of 100% bombs should be the same as provided above for spray tanks.

It was agreed that chemicals should continue to be considered as an alternate loading and thus should not influence in itself any reduction in the quantity of high explosive bombs procured for the combat life of the airplanes.

It was the understanding of the Board that while the program being prepared was for the calendar year 1942 and would be sufficient to establish a good basis of procurement and provide reasonable preparation for use of chemicals by the end of this year, it would be necessary to review the situation in the light of later developments and procurement program in order to adjust the plans to the needs of 1943.

It was the consensus of opinion that while wing tanks have been developed for light bombers, that in the interest of speed, the future development and procurement would tend toward internal tankage.

The number of tanks to be procured for medium and heavy bombers particularly was to be based upon production estimates reduced by approved

allocations to foreign governments. It was believed most practicable to ask the Chemical Warfare people to confer, when necessary, with the A-1 Division of the Staff in order to keep their procurement quantities in proper adjustment.

It was agreed that development should continue in an effort to secure a satisfactory time fuse and air burner for chemical bombs which would permit of time adjustment by the bombardier in the air during a mission. This feature is desirable because of the fact that missions will frequently have to be conducted at altitudes which cannot be planned in advance of arrival at point of attack. A fuse of this character is understood to have been developed for use with flares.

The requirements for 30% chemical bombs were discussed. These were used in the cellular racks previously employed in A-17 and A-20 airplanes. Procurement of these racks have been discontinued but the requirements still exist for a means of carrying and launching fragmentation bombs of parachute type as well as the small chemical bombs. Some effort has been made to cluster the 30% chemical bombs with apparent success. It was decided that further discussion or any effort to prepare recommendations with respect to improved means of carrying and launching these bombs would, of necessity, be referred to a later meeting.

The next question presented was the matter of a procurement of torpedoes of the Navy type to be launched from aircraft. The Navy has offered to develop sources of manufacture for an additional supply of torpedoes and needs to know the immediate requirements for same as well as the monthly production required. The Secretary of the Navy had stated by letter that he could develop the additional facilities for manufacture and would do so with funds available to the Navy.

It was the consensus of opinion that it should be made possible to carry and launch a Naval type torpedo from medium and light bombers including dive bombers. It appears that Mr. Lovett had given an estimate of 5,000 torpedoes as the required number for war reserve and a production rate of 500 per month as desirable. The Board agreed that an expenditure rate of torpedoes to accomplish one and one-half missions per airplane of these types to be fitted to carry them would be adequate. It was, therefore, agreed that the reply to the Secretary of the Navy with respect to requirements for torpedoes should be based upon the procurement rate of pertinent airplanes to the extent of one and one-half missions for each. It was estimated that on this basis the requirements of torpedoes during 1942 would be about 3,500, and a monthly production proportional to that of the carrying airplanes, which will be about 600 airplanes per month by December, 1942.

Statement was made by Col. Schneider that bombs were now being procured on the basis of maximum loads per airplane for all of the estimated missions of its combat life. It was his recommendation that an adjustment be made in the basis of calculations since maximum bomb loads will rarely be carried. With the increasing size of bombardment

airplanes and their consequent greatly increased loads coupled with the great difference between the maximum load and the normal load, it appeared evident that a considerable surplus of bombs would be accumulated. The capacity required in bomb case construction as well as an explosive for filling are such as to demand as accurate an estimate as can be made in order to avoid pre-empting production capacity which is badly needed for other war time equipment. It was decided that a paper should be prepared for consideration of this Board at an early meeting with the view toward adjusting bomb requirements of a more realistic basis.

Col. Coupland suggested the necessity of early action on revision of our requirements for bomb fuses. Certain fuses have been standardized as between Army, Navy, and the British. Having been standardized, it is now our problem to determine to what extent we want each or all of the standardized types. It was agreed that a paper should be prepared and presented to a subsequent meeting of this Board in order to have it for a proper basis on which to take action. It was suggested that representatives of the Navy and the British be invited to attend in order to offer such considerations as may have influenced them in their determination of requirements for each of the several types. Col. Coupland stated that he would ask Col. Striking, Ordnance Department, Group Captain Crawford, and Commander Schoaffel of the Navy to be present at the next meeting for this purpose.

It was determined that it would be necessary to secure an officer to do the work of a secretary to this Board. He should have stenographic assistance and office space. It was believed that it would require the full time duty to prepare the agenda for each meeting and, following the meeting, to prepare minutes and action papers when required as a result of the conclusions reached in the meetings. It was decided that, for the present, weekly meetings would be held and that normally they would be on Thursdays at 1:30 P. M.

For the President of the Board:

Ford L. Fair
FORD L. FAIR,
Lt. Col., Air Corps,
Acting Recorder

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AAF/A-4
RCC/nja

DECLASSIFIED
DDO 110

By: *AWIC* Date: *4/6/7*

January 16, 1942

MEMORANDUM FOR THE CHIEF OF ORDNANCE:

Subject: Aircraft Torpedoes.

1. Reference letter to your Office, dated December 29th, on the subject of procuring 8000 standard Navy Mark XIII Aircraft Torpedoes. It is desired that the Ordnance Department be the responsible agency for the procurement, maintenance and supply of this item to the Army Air Forces.

2. The U.S. Navy has been requested to supply at least 114 torpedoes at the earliest practicable date for use of the Army Air Forces; pending the availability of Ordnance personnel to maintain and deliver torpedoes and mobile maintenance equipment to Air Forces in the Field, the Navy is being requested to furnish the necessary equipment and personnel for this purpose.

3. The Navy Mark XIII Aircraft Torpedo should be standardized for Army use, and immediate steps be taken in cooperation with the Navy to train the necessary maintenance and supply personnel for handling 8000 torpedoes and to organize Ordnance Aviation Sections within the Ordnance Aviation Companies Bombardment (Light and Medium) for approximately twenty Aviation Groups, to be completely activated by the end of the Calendar Year 1942.

For the Chief of the Air Staff:

T. J. HANLEY, Jr.
Colonel, Air Corps
Assistant Chief Air Staff, A-4

HEADQUARTERS			ARMY AIR FORCES				COORDINATION				
Chief of Staff	Sec'y of Staff	A.A.G.	A-1	A-2	A-3	A-4	A-WPD	A-Insp.	Budget	Statistics	
						<i>THB</i>					

AAF-39

see 2014 11-6 Serial Torpedoes 8

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DDO ITC

9 Jan. 6, 20 Jan 1974

By aw/ce AG, Date 2/1/77

RECEIPT

DATE _____

SUBJECT: Aircraft Torpedoes

. Received from the Headquarters, Army Air Forces,
one memorandum, above subject no inclosures:

OFFICER RANK

OFFICE

RECEIPT

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 GDD #2
 8 Jan. 80 Date 1978
 by AM/IC LG, Date 3/6/77

AAF/A-4
 MFS/mhh

January 13, 1942.

MEMORANDUM FOR GENERAL ARNOLD:

Subject: Equipment For Carrying Torpedoes.

1. Delivery schedule for B-26 carrying gear is as follows:
 - a. The initial delivery - January 23, 1942.
 - b. 60 sets by February 1, 1942.
 - c. 141 additional sets by February 20, 1942.
 - d. 139 additional sets by March 20, 1942.
2. The torpedo carrying gear will be built into B026's beginning March 20, 1942.
3. It is to be noted that torpedoes cannot be dropped from B-26's at over 150 miles per hour ground speed.

Air OS
 471.6 Aerial Torpedoes

T. J. HANLEY, JR.,
 Colonel, Air Corps,
 Chief, A-4 Division.

HEADQUARTERS		ARMY AIR FORCES					COORDINATION				
Chief of Staff	Sec'y of Staff	A.A.G.	A-1	A-2	A-3	A-4	A-WPD	A-Insop.	Budget	Statistics	
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Air OS 471.6 Aerial Torpedoes

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8 Jan. & 20 June 1974
AG, 1000-2107

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Directive No. 5-20

WAR DEPARTMENT
HEADQUARTERS OF THE ARMY AIR FORCES
Washington

January 4, 1941

DIRECTIVE HEAD FOR: A-3

Subject: Trained Personnel for Two Medium Bombardment Groups to L.

1. Necessary action will be taken to insure that personnel trained in the handling and technique of torpedoes accompany the two medium bombardment groups to L. It may be necessary to obtain some personnel from the Navy for this purpose or it may be possible to insure proper training of our own personnel prior to departure.

By direction of the Chief of the Air Staff.

G. E. Lumsden,
Lieut. Colonel, Air Corps,
Secretary of the Air Staff.

4716 Serial Reported

(3)

Dispersed
JAN 5 1942
AAG

HEADQUARTERS ARMY AIR FORCES - COORDINATION										
Chief of Staff	Secy Air Staff	A.A.G.	A-1	A-2	A-3	A-4	A-5/D	A. Insp.	Adret.	Sec-titious

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SAS 471.6 Buzz Bombs

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DOD Inv.
2478 20 June 1974
By *[Signature]* JLG; Date 3-11-77

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DDO IIS.

8 Jan. & 20 June 1974

By: *EST/CC* LC Date: *4/1/77*

Buss Bomb Program

- (1) AC/AS - O.C.A.B.
- (2) AC/AS - Training
- (3) AC/AS - Personnel
- (4) AC/AS - M & S
- (5) AC/AS - Intelligence
- (6) AC/AS - Plans
- (7) Air Communications Officer

12 June 1945

1

FROM: Chief of Air Staff

1. The JB-2 buss bomb program as set forth in MHR, subject: "JB-2 Program for Launching 1000 Bombs Per month" dated 16 February 1945, is rescinded.
2. The JB-2 program will be limited to a total procurement of 7000 items for the development, training and combat test.
3. The AC/AS, Material and Services will take necessary action to procure a total of 7000 JB-2's, production to reach a rate of 500 per month as soon as practicable, and also to procure necessary auxiliary equipment to equip one Special Weapons unit (JB-2) to operate four portable ground ramps simultaneously.
4. AC/AS, Training will supervise the training of the one Special Weapons unit (JB-2).
5. The AC/AS, Operations, Commitments and Requirements will arrange for necessary service testing in cooperation with AC/AS, Materiel and Services and will also provide necessary facilities for training one Special Weapons Unit (JB-2). OCAF will take the necessary steps to activate one Special Weapons Unit (JB-2).

S/S 4716 Buss Bomb 13 units (17)

15/

PATRICK W. TIMBERLAKE
Brigadier General, U. S. A.
Deputy Chief of Air Staff

Copy to each as above

DISPATCHED
13 JUN 1945
AFSAAS

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cc

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See 4716 Buss Bomb (17)

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GPO 814
By SP-2 JAC/DAW Date 4/6/87
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OR
The Commanding General
Army Air Force
9 JUN 1945
Date SM
Initials

Base Bomb Program

The Chief of Air Staff

10 JUN 1945

AS/AS, Operations, Commitments and Requirements

1. Reference is made to Memorandum from the Department General Staff - G-4
subject: "Base Bomb Program" dated 7 June 1945, which states that it is desired to
procure immediately sufficient JB-5's, and to cancel a total procurement of 7,000, for
tests of training purposes and for limited operational employment.

2. It is requested that the attached RMR be signed and dispatched implementing
this program.

1 Encl
RMR Comment No. 1,
subject as above

WILLIAM F. McKEE
Brigadier General, U.S.A.
Deputy, Asst. Chief of Air Staff,
Operations, Commitments and Requirements

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825471.6 Aug 3 Bomb (17)

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E.O. 13526
DATE 10/27/87 BY SP2E

8 June 1945

MEMORANDUM TO THE CHIEF OF AIR STAFF

SUBJECT: Reduction in Procurement of J3-2 Bom Bombs

In accordance with letter from G-4, attached, it is recommended that this office be authorized to collect the current AAF J3-2 program of 1,000 for experimental and training purposes plus 20,000 to be procured at maximum rate of 1,000 per month to a total procurement of 7,000 with maximum monthly rate of 500 a month.

(Signed) JOHN G. MOORE
Colonel, Air Corps

JOHN G. MOORE
Colonel, Air Corps
Deputy Asst. Chief of Air Staff,
Material and Services

Incl.
Cy Ltr fr G-4
dtd 7 Jun 45

SAS 471.6 Buzz Bonds (11)

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Julie
471.6 Buzz Bonds (16)

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DDO No.
8 Jan. & 20 June 1984
By: *14/16* / *10/197*

Buss Bomb, JB-2

Chief of Air Staff

Asst C/AS, Operations, Commitments and Requirements

28 MAY 1945

1

Forwarded for signature and dispatch.

1 Incl

#1 - Ltr to Gen Kenney

Signed

DONALD WILSON,
Major General, U. S. Army,
Asst. Chief of Air Staff,
Operations, Commitments & Requirements

*SMS
4/16
Buss Bomb
13-1-45
(14)*

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171-6 Pur 33 Box 110 (13)

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5 MAY 1945

SRM

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Major Short/mw/5611
Wrtm 25 May 45

6 JUN 1945
By: *ES/CE* 10 June 1974
10 June 1974

Lieutenant General George C. Kenney
U. S. Army Air Forces in Far East
A.P.O. 925, c/o Postmaster
San Francisco, California

5 JUN 1945

Dear George;

I presume that you know that the Army Air Forces have been developing an American version of the German V-1 buzz bomb, the JB-2. This development has progressed to the point that we are anxious to introduce it operationally. General Arnold is particularly interested in the use of the JB-2 in this war by the Army Air Forces to establish the AAF responsibility for such guided missiles.

Much of the work on the JB-2 has been done by the Proving Ground Command whose commander, General Grandison Gardner, has taken an active interest in the project and is very well informed in all its aspects. I would like very much to send General Gardner to your headquarters to give you all the information on the JB-2 first hand. It might also be desirable for him to talk with General MacArthur while he is in the theater.

I would appreciate your comments on this matter at your early convenience. If you concur in the above suggestion, I would also appreciate your arranging air transportation to your headquarters for General Gardner in the near future.

Sincerely yours,

Signed

IRA C. EAKER,
Lt. Gen., U. S. Army,
Deputy Commander, Army Air Forces.

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5 JUN 1945
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E.O. 13526

APPROVED
Col Giffin/ek/1627
13 Feb 15

38/CC
100 Date 1/16/27

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20 FEB 1945 Secret by authority of
CG AAF *STC*

Dr. V. Bush
Office of Scientific Research
and Development
1530 P Street, N. W.
Washington, D. C.

Date Initials

Dear Dr. Bush:

As you suggest in your letter of 7 February 1945, we will undoubtedly require OGD assistance in connection with our JB-2 bomb program. We have in fact already requested HEDC to act in an advisory capacity with respect to our proposed adaptation of Willie Orphan type control to the JB-2 and also with respect to a flywheel inertia starting system, pilot models for which we hope to obtain by early March. HEDC has further been requested to undertake developmental work in connection with a control system involving use of the AR/APW-2. I understand that HEDC is developing, with the Ordnance people, a multiple cartridge system for the German type starting ramp using about 50 lbs. of powder per launching, and that HEDC assistance may also be requested by the Chemical Warfare Service in connection with tests of various chemical propellants for use with the German ramp.

Other than as indicated above, it appears unlikely that we will be forced to request any major diversion of OGD effort to the JB-2 program.

In view of your apparent lack of interest in the JB-2, I believe a review of the Air Force's position is indicated. It is our belief that, had the Germans been in a position to initiate sustained attack against southern England at the rate of 1000 or more JB-2's per day, they might very well have knocked England out of the war. Largely as a result of Allied countermeasures, but partly as a result of the German failure to exploit fully this revolutionary new weapon, disaster was averted.

We believe the JB-2 to be representative of a new family of very long range weapons whose capabilities will profoundly affect future warfare, and especially aerial warfare. We want now to explore the possibilities of very long range missiles to the utmost extent which will not involve a serious diversion of effort from the essential business of prosecuting this war. We want specifically to obtain operational capabilities with the JB-2, both for the purpose of employing it against the enemy and of obtaining actual experience in the use of this representative new weapon.

It was our thought that the capability of launching 100 JB-2's per day, assuming a reasonably accurate control system, would present us with an effective means of attacking under any conditions of visibility one or

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SAS 471 G. B. Burgess, B. M. W. E. B.

~~SECRET~~

more of a half-dozen suitable German area targets, of which the Ruhr represents the most remunerative. Further, we would thus possess a valuable supplement to those air operations designed to "isolate the battlefield." Even without control, area targets could be harassed when our bombers were grounded. However, a careful study of the costs involved in this program (or any larger program) indicated that the diversion in personnel, shipping and production effort would be prohibitively great at this stage of the European war.

Our present plan is to attain the capability of launching operationally 1000 JB-2's per month by 1 January 1946. The cost of this program in terms of control equipment and propellant powder, while considerable, can scarcely be regarded as prohibitive. While we are assuming that the "composite" propellant will be utilized, we are sparing no efforts to attain more effective and economical means of launching the missile. We anticipate no serious difficulty in finding suitable Japanese Empire targets for these missiles in the later stages of the Pacific war, whether or not a system insuring accuracy of control becomes available. With reasonable accuracy of control, the potential targets for the JB-2 will be multiplied many times.

Developmental and production problems in connection with the JB-2 program come within the cognizance of General Echols, and I am accordingly designating him as the one man to whom OSRD can turn for resolution of OSRD problems in this connection.

Sincerely yours,

Signed

BARNET M. GILES,
Lieutenant General, U. S. Army,
Deputy Commander, Army Air Forces and
Chief of Air Staff

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20 FEB 1946

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DOO ltr.

9 Jan. & 20 June 1974
By 3318 LC; Date 2/ub7

JB-2 Project.

AC/AS, OCR (Attn: Colonel McKee)

9 Feb. 1945

Colonel Proctor

1

1. Note attached letter to General Arnold from Dr. Bush, Director, OSRD.

2. It is desired that a memorandum giving your views regarding this letter be submitted to General Giles and that a good reply be prepared for General Giles' signature.

Incl.

Ltr. to Gen. Arnold
2/7/45 from Dr. Bush.

Signed
ROBERT PROCTOR,
Colonel, A. C.,
Exec. Asst., CG/AAF.

TO: Chief of Air Staff (Colonel Proctor)

DATE 18 FEB 1945

FROM: AC/AS Operations, Commitments and Requirements

COMMENT NO. 2

A Memorandum for the Chief of Air Staff and proposed reply to Dr. Bush's letter are attached herewith in accordance with Comment No. 1 above.

Signed

2 Incls
1 - n/c
2 - added Memo for C/AS
w/ltr to Dr. Bush

WILLIAM F. MCKEE
Brigadier General, U.S.A.
Acting Asst. Chief of Air Staff
Operations, Commitments and Requirements

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S-821

8 Feb. 471.6 Buys Bomb *BR*

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8 Jan. & 20 June 1974
by *SP6 LJC, DASH*

Development and Training Facilities for Controlled Missiles Program.

Asst G/AS, Materiel and Services

16 FEB 1945

1

The Chief of Air Staff

1. The recommendation given in paragraph 1b of 1st Indorsement to letter from this Headquarters dated 26 January 1945, subject: "JB-2 (Buss Bomb) Program," is approved.

2. The Asst G/AS, MAS will take necessary action, working in conjunction with the Commanding General, Army Air Force, Proving Ground Command, to accomplish the expansion of facilities in accordance with the above approved recommendation.

1 Encl
copy of 1st Ind
as stated abv

Signed

PATRICK W. TIMBERLAKE,
Brigadier General, U. S. A.,
Deputy Chief of Air Staff.

SAS 471.6 Bug 3 Bombs

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16 FEB 1945

*Return to AFSAS
R. 3E-1049*

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SAS 471.6 Bug 3 Bombs

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AG, DOD

14 FEB 1945

MEMORANDUM TO THE CHIEF OF AIR STAFF:

Subject: Development and Training Facilities for Controlled Missiles Program.

1. Discussion.

a. Recent developments in the field of controlled missiles and pilotless aircraft indicate that this field may comprise a large portion of the future operation of the Army Air Forces. It is believed that this should be carefully considered in planning programs for development and training in connection with these weapons.

b. The current program of development of the JB-2 buzz bomb and the related training program is being pursued under a high priority. Additional facilities will be necessary for these programs in the immediate future.

c. A study has been made to determine the facilities needed for the above programs and a nation wide search made for suitable sites. Due to the large area required and a limitation to 1800 feet elevation, it has been necessary to conclude that only an over-water range is feasible. Areas near Eglin Field, Florida, with a range extending over the Gulf of Mexico appear to be most suitable.

d. The attached recommendations of the Commanding General, Army Air Forces Proving Ground Command were made at the request of this Headquarters.

2. Conclusions.

a. It is concluded that the recommendation given in paragraph 1b of the 1st Indorsement to letter from this Headquarters dated 25 January 1945, subject: "JB-2 (Buzz Bomb) Program," meets the immediate requirements for this program and also allows for future expansion to meet probable future requirements for additional facilities in connection with other controlled missile projects.

b. The proposed facilities could also be used by the Navy and the Ordnance Department for similar testing purposes.

3. Recommendations.

a. That the recommendation referred to in paragraph 2a above, be favorably considered.

b. That action be implemented by signature of attached RMR to Asst Chief of Air Staff, Material and Services.

2 Incls

- #1 - Ltr dtd 25 Jan 45/
w/1 Ind and 2 Incls
- #2 - RMR for C/AS signature

WILLIAM F. MCKEE
Brigadier General, U.S.A.
Acting Asst Chief of Air Staff
Operations, Commitments and Requirements

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Feasibility of Employing European Facilities and Manpower for the JB-2

AG/AS, Material & Services

27 Jan 45

Chief of the Air Staff

1

It is desired that an early and thorough study be made of the practicality of employing European resources and workmen in producing JB-2 buss bombs, with auxiliary equipment, for use against the Germans. Study should consider possible programs for production of 200 a day, 500 a day and 100 a day. Each program studied should include consideration of the assistance required in terms of critical materials and equipment shipped from the United States. Further, the study should indicate the maximum production which could be undertaken entirely without shipment of critical materials and equipment from the United States.

Signed

PATRICK W. TIMMERLANS,
Brigadier General, U.S.A.,
Acting Chief of Air Staff.

Copies to:
AG/AS, OCMR
AG/AS, Plans



SAS 471.6 Buss Bomb (5)

27 JAN 1945
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SAS 471.6 Buss Bomb (5)

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8 Jan. & 20 June 1974
By: JSC/AC AC Date: 4/10/77

AFREQ
Col House/ek/4627
24 Jan 45

24 Jan 45

Buss Bomb Program

AC/AC, Materiel and Services
AC/AS Training
AC/AS Operations, Commitments and Requirements
AC/AS Personnel
Air Communications Officer

XXXX

1

FROM: Chief of Air Staff

1. The buss bomb (JB-2) program, as set forth in R&R, same subject as above, dated 15 January 1945, is rescinded. Immediate action will be taken by your Office to cancel or nullify any previous actions taken to meet the above rescinded program.

SAS

2. The following program will be substituted for that in the referenced R&R:

a. Research and development of the JB-2 bomb, improved and cheaper (in terms of critical material) launching methods, and methods of control will be continued and expedited on a high priority.

b. Limited procurement of JB-2 bombs will be continued as authorized prior to the above rescinded directive (2000 JB-2 bombs).

c. Organization and training of one (1) JB-2 squadron and associated service units will continue so that research, development and operational use can be expedited.

d. JB-2 bombs not used for experimental and training purposes will be stock-piled for future operational use.

3. In order to carry out the above program:

a. The AC/AS OC&R will prepare and process a TO&E for JB-2 units.

b. The AC/AS M&S will prepare, and process through AC/AS OC&R, TO&E's for supporting service units.

c. The AC/AS M&S will procure JB-2 bombs in the amount indicated in paragraph 2 above and will store excess JB-2's, over training and experimental requirements, for future operational use.

d. The AC/AS M&S will coordinate on procurement of JB-2 bombs with the Commanding General, Army Service Forces, to insure that procurement does not materially and appreciably interfere with other war programs.

e. The Air Communications Officer will develop a means of control for the JB-2 and will initiate, through M&S, procurement of such a control

+ 711.6 Summary
Edmund
Bridges
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Bomb Bomb Program

AC/AS, Materiel and Services
AC/AS Training
AC/AS Operations, Commitments and Requirements
AC/AS Personnel
Air Communications Officer

MEMORANDUM

1

(cont'd)

FROM: Chief of Air Staff

system in an amount equal to the unused portion of the JB-2 bombs being produced at the time development is completed.

f. AC/AS OCMR will take necessary action to place one (1) JB-2 squadron and associated service units in the AAF Troop Basis.

g. The AC/AS Training is charged with supervision of training of the JB-2 squadron and associated service units and will take necessary action to complete training of the JB-2 squadron as soon as possible.

h. The AC/AS Personnel will take action to man the JB-2 squadron and associated service units in accordance with schedules and requirements submitted to him by the AC/AS Training.

i. A new program for JB-2 production and use is now under study envisaging production of 1000 JB-2's per month by January 1945. As the War Department General Staff has indicated that the JB-2 program cannot be permitted to interfere materially or appreciably with other programs, this study must be fully coordinated with the Army Service Forces before final decision can be rendered. Accordingly, the firm program for production and use of JB-2's will be the subject of separate correspondence.

Signed
PATRICK W. TIMBERLAKE
Brigadier General, U. S. A.
Deputy Chief of Air Staff.

*Copies distributed
24 Jan 45*

*Orig. Comd. to
Gen. Powers
1/24/45*

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1/24/45*

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*Squad.
Late Timberlake
says Gen Powers
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471.6 Buzz Bomb (4)*

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DOO IIR:
1 May & 20 June 1974
3576 LG, Date 2/16/77

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BY AUTHORITY OF A.C. OF S., OPL
Date:

OPD 471.61 (undated)

20 January 1945

MEMORANDUM FOR THE COMMANDING GENERAL, ARMY AIR FORCES

Subject: Buzz Bomb (JB-2)

1. Reference is made to your undated memorandum for the Assistant Chief of Staff, Operations Division, subject as above, no file number.
2. In view of the interference with the war effort of the program proposed, as indicated in paragraph 3 of the reference memorandum, the actions proposed in paragraphs 1 and 2 thereof will not be implemented.
3. It is desired that you continue to develop the buzz bomb (JB-2) and other similar missiles in accordance with existing directives and procedures, but that no action be taken which will materially and appreciably affect the present production of items of equipment whose need is immediate and critical. Full coordination with the Commanding General, Army Service Forces will be effected to this end.
4. The training and equipping of a type unit for experimental purposes with a view to eventual operational use of such guided missiles is considered desirable, and should be the subject of separate correspondence with the Assistant Chief of Staff, G-3.
5. It is further desired that you review this program in June 1945 and submit your recommendations thereon.

BY DIRECTION OF THE CHIEF OF STAFF:

J. E. HULL
Major General, GSC
Assistant Chief of Staff, OPL

SA 5471.6 Buzz Bomb 12-1-45 (3)

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SA 5471.6 Buzz Bomb
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GPO Hqs.

AFIMA-20

9 Jan. & 20 June 1974
By: *FA/CC* L.C. Date: *3/11/77*

5 FEB 1945

MEMORANDUM FOR THE ACTING CHIEF OF AIR STAFF

SUBJECT: Feasibility of Employing European Facilities and Manpower for the JB-2

1. Reference is made to the Routing and Record Sheet of 27 January 1945, subject as above.
2. The Air Technical Service Command has been requested to prepare a plan prior to 9 February 1945 to accomplish this study.
3. A mission has been recommended to the Air Technical Service Command composed of Army Air Forces, technical service (Ordnance, Engineers, etc.) and manufacturers' representatives.

(Signed) E. M. Powers

E. M. POWERS
Brigadier General, U. S. A.
Deputy Asst. Chief of Air Staff,
Materiel and Services

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GPO Hqs.

JAS 471.6 Buzz Bomb (2)

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APREQ
16 Jan 45
Lt Col Rouse/ek/h627

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Dr. J. G. ... /hid?7

Secret by authority of
CG AAF

Date: 16 Jan 45
Initials

MEMORANDUM FOR ASSISTANT CHIEF OF STAFF, OPD, WDCS:

Subject: Buss Bomb (JB-2)

1. We are taking action to produce material and trais and equip personnel and units in sufficient quantity to launch operationally in the ETO:

- a. 100 buss bombs per day by 1 Sep 45, or sooner
- b. 200 buss bombs per day by 1 Nov 45, or sooner
- c. 300 buss bombs per day by 1 Dec 45, or sooner
- d. 400 buss bombs per day by 1 Jan 46, or sooner
- e. 500 buss bombs per day by 1 Feb 46, or sooner

2. To meet the above schedule, it is necessary that the War Department General Staff direct the following:

a. Immediate assignment of full overriding priorities for obtaining machines, processes, tools, facilities, labor and critical materials involved in production of required ordnance equipment and ammunition, to include trucks, cranes, prime movers for field servicing units, warheads, explosive loads and launching powder.

b. Allocation of sufficient ship tonnage to insure the arrival of bombs, equipment and personnel in the theater in time to permit operational use of JB-2's as indicated in paragraph 1 above.

c. An increase in the AAF troop basis of 24,975 officers, warrant officers and enlisted men (23,076 for JB-2 units and 1,899 for permanent party personnel). The AAF will furnish, from its present troop basis, 5,592 officers, warrant officers and enlisted men, or the equivalent of one JB-2 squadron with associated services.

d. An intake, or source, of 29,067 bodies (by inactivation of AGF, ASF, or AAF units; cessation of transfer of AAF personnel to the AGF; immediate resumption of selective service intake), for the JB-2 units, associated service units and necessary permanent party personnel.

e. Concurrence in priority required by the War Manpower Commission for the immediate diversion of approximately 22,000 skilled air frame and instrument workers to manufacture of JB-2 bombs.

545 471.6 Buss Bomb (JB-2)

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office of Lt Col
545471.6 Buss Bomb

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3. The above program, as a preliminary estimate, will occasion the following interference with the war effort:

a. Diversion of 22½ Liberty ships or their equivalent in August and an additional 22½ ships monthly until a total of 112½ ships have been diverted solely for the transportation of JB-2 bombs and, in addition, the diversion of further tonnage at appropriate times for the movement of units and equipment to the theater.

b. An initial loss of approximately 25% in the current expanded artillery program, leveling off at about a 17½% reduction in the overall artillery (medium and heavy) program and prevention of presently planned expansion of production schedules until facilities as listed in Tab A are constructed.

c. A loss of approximately 17% of peak bomb production until facilities as listed in Tab A are constructed.

d. A slight reduction in the production of certain types of aircraft due to the transfer of skilled air frame and instrument workers to JB-2 production facilities.

e. New construction of ordnance facilities as indicated in Tab A.

f. Approximately a 3.5% monthly reduction in the aviation gasoline and synthetic rubber program after ordnance facilities, as listed in Tab A, are made available (½ based on January 1945 monthly production figures of gasoline and rubber).

g. Possible interference with heavy truck and automotive equipment programs of the AS), AGF and AAF.

h. An approximate 7 to 9 month delay in the movement dates of presently committed AAF units and AAF ground replacements after 31 March 1945, including VHB groups and associated service units, very long range fighter groups, engineer units, and other ASWAAF units.

1 Incl
Tab A

BARNEY M. GILES,
Lieutenant General, U. S. Army,
Deputy Commander, Army AAF Forces.

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EEO 13526

TAB A

~~SECRET~~
DECLASSIFIED

9 Jan. & 20 June 1981
By: [unclear] 10. [unclear] 11/12/7

REQUIRED NEW CONSTRUCTION OF ORDNANCE FACILITIES

1. a. New toluene plants will be required and will take approximately fifteen months for construction.
 - b. New ammonia facilities will be required and will take a minimum of twelve months for construction.
 - c. New TNT facilities will be required and will take a minimum of nine to twelve months for construction.
 - d. New load lines for the warhead will be required and will take nine months for construction.
 - e. New powdered aluminum facilities will be required and will take from four to six months for construction provided there is sufficient aluminum capacity in the country.
 - f. New potassium nitrate facilities will be required for quantities over and above 6,000 JB-2's per month (200 per day).
2. The above construction, after completion, will allow resumption of current artillery and bomb production.

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Bugs Bomb Program

copy M+S, aco, aep, aej + PmP
Asst C/AS, Operations, Commitments and Requirements Personnel

Chief of the Air Staff

2

1. To supplement the directive in Comment No. 1 above, the following additional decisions were made by General Arnold in a conference held 12 Jan 45:

a. That the necessary procurement of JB-2 buss bombs be initiated immediately so as to insure the operational use (in the theater) of

- 100 JB-2's per day by 1 Sep 45
- 200 JB-2's per day by 1 Nov 45
- 300 JB-2's per day by 1 Dec 45
- 400 JB-2's per day by 1 Jan 46
- 500 JB-2's per day by 1 Feb 46

and that the above dates be bettered if possible.

b. That, on the basis of one JB-2 squadron, manning four launching ramps and with the capability of launching 100 JB-2 bombs per day, immediate steps be taken to man, organize, train and equip one JB-2 squadron and a associated service units with a readiness date of 1 August 1945, or sooner and that the remaining four JB-2 squadrons and associated service units be similarly manned, organized, trained and equipped one month prior to the dates for operational use of each additional increment of 100 JB-2's per day as given in paragraph 1a above. In the event that the above dates for operational use of each additional increment of 100 daily launchings of JB-2's are bettered, the necessary units will be trained and equipped so as to remain in phase, i.e., one month prior to the new dates that are thus set.

c. That the JB-2 bombs be put into operation against the enemy (Germany) as soon as possible but not until a rate of at least 100 per day can be sustained.

d. That, while it was agreed that improved accuracy by radar control or other means was desired, the addition of these features will not be permitted to delay either the production or the initial or subsequent operations.

2. The Asst C/AS, OC&R will prepare a memorandum to OPD setting forth what the Army Air Forces is doing with respect to JB-2 bombs, what help is needed from the War Department to insure meeting the program as set forth in paragraph 1 above, and the cost to other programs both in the AAF, ACP, and ASF. Asst C/AS, M&S and the Air Communications Officer will give Asst C/AS, OC&R such aid as is needed in the preparation of this memorandum.

3. The Asst C/AS, M&S will immediately initiate action to obtain the priority of materials necessary to meet procurement requirements.

SA 5 4 71.6 Bugs Bombs

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COPY FOR ~~OPERATIONAL AIR~~ Staff

2

SA 5 4 71.6 Bugs Bombs (1)

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Buzz Bomb Program

Chief of the Air Staff

(Continued) ⁸

4. The Asst C/AS, OC&R will immediately initiate action to give this project the necessary priority to insure meeting both the personnel and material phase dates given above and will also initiate such action as is necessary to procure the personnel and troop basis authorization required.

5. The Asst C/AS, Personnel will take action to man the units in accordance with schedule and requirements submitted to him by the Asst C/AS, OC&R.

6. The Asst C/AS, Training is charged with supervision of training of the units.

PATRICK W. TIMMERMAN
Brigadier General, U.S.A.
Acting Chief of Air Staff

DISTRIBUTION TO:

- AC/AS, Personnel
- AC/AS, Training
- AC/AS, OC&R
- Air Communications Officer
- AC/AS, M&S

COPY FOR SECRETARY AIR STAFF

File
1/10/43
A

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SAS 471.6 Buzz Bomb

SUBJECT: Buzz bomb program
TO: Chief of the Air Staff
FROM: General Arnold

DATE 1/13/45

COMMENT NO. 1

Desire that AAF procure, organize and be prepared to launch 100 buzz bombs a day as soon as possible, with view to increasing to 500 a day as soon thereafter as possible.

Upon reasonable determination of all factors involved, OPD must be notified:

1. That AAF is preparing this program.
2. What OPD must do to permit completion.
3. Probable interference this program will cause in other programs such as bomb and ammunition production.

H. H. A .

COPY FOR SECRETARY AIR STAFF

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SAS 471.6 Caribbean Defense Command

DECLASSIFIED
DOD Form 4
1 Jan 80 June 1974
By *[Signature]* Date 5/12/77

THIS PAGE IS DECLASSIFIED IAW EO 13526

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DOD file

SECRET
DECLASSIFIED

January 27, 1942

8 Jan. & 30 June 1974
By: AD/CG AG, Date: 1/16/97

AAF/A-4/471-23

Release of Banks to G.H.Q. for Caribbean Defense Command.

SECRET

SECRET

SECRET

SECRET

SECRET

471.6 Code of Conduct
85-083471-6

AAF/A-4

ACTION TAKEN: Ltr. to
C/Ord. Jan. 31, 1942. w/oys to
S/AAF, A.C. of S.
MNR/CS - 1/35.

I. 1. Confirming telephone instructions issued to your office (Capt. Stone)
January 26, 1942 (Serial 1177) from Lt. Col. Burgess, A-4, Air Staff, it is desired
that the following banks be released to G.H.Q. for shipment to Caribbean Defense
Command:

Banks

- 300 ea. 100# Frangible HMA2
- 20 ea. 500# Ignition
- 100 ea. 100# Ignition

JAN 30 1942

UNITED-OFFICE CHIEF OF STAFF

JAN 29 1942

17874-70

II. To be advised of above action.
JAN 30 1942

For the Chief of the Air Staff



OUT SVC
RECEIVED
Chief of the Staff

85 A 40
JAN 30 1942
Received



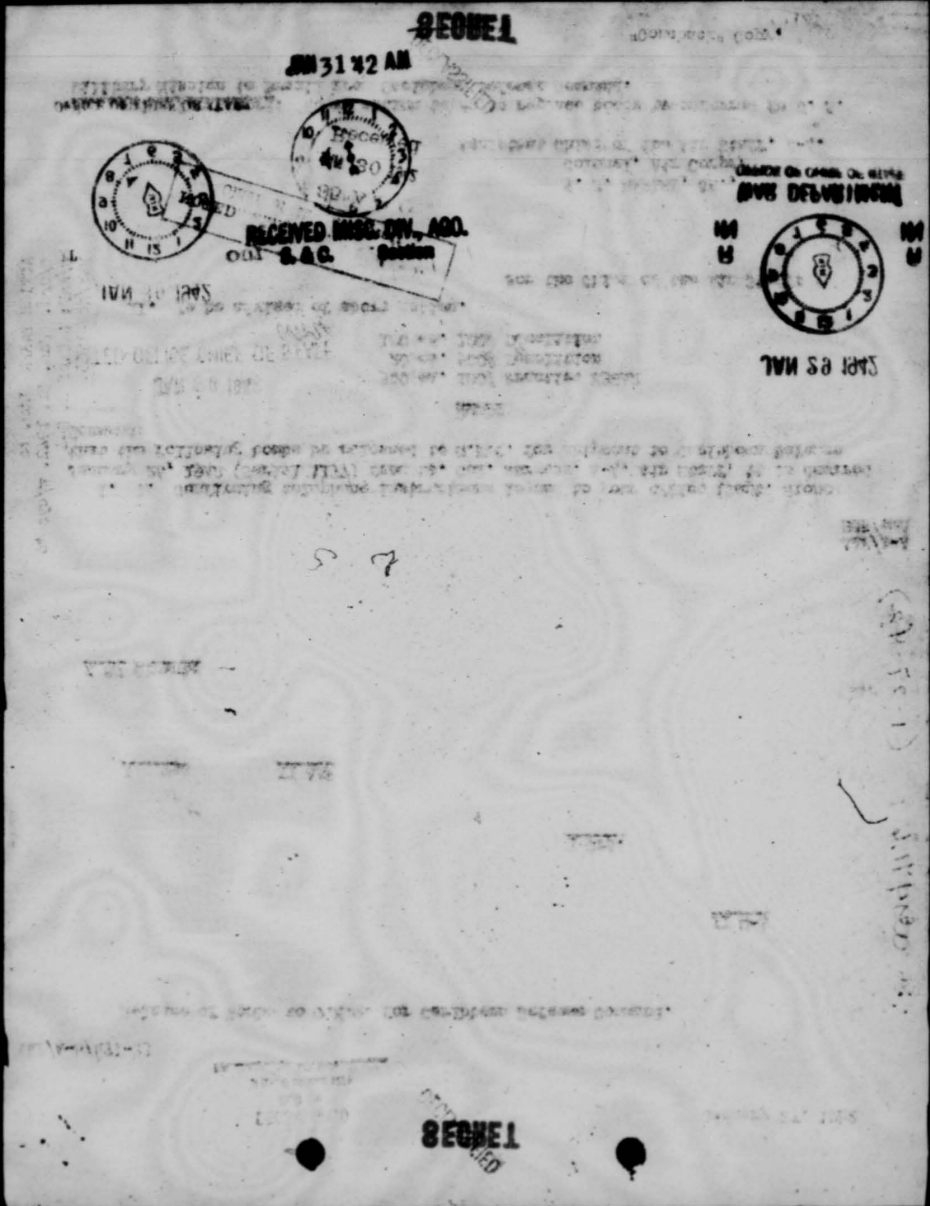
WAR DEPARTMENT
Colonel, Air Corps
Assistant Chief of the Air Staff, A-4.

Continuing Arrangements: Advise action taken to replace banks transferred to U. S.
Military Mission to Brazil from Caribbean Defense Command.

85 31 45 VN

SECRET

Homeback Corp
Air 25071-6 Carib. D.C. 11



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DDO WS.

By ESTEC on 20 June 1984
Sub 7

January 27, 1942

AAF/A-4/471-23

Release of Bombs to G.H.Q. for Caribbean Defense Command.

II C-4

I C-1

I C-2

II AAF

I H Directs

471.6 Cont'd by A-4
A-4

I. 1. Confirming telephone instructions issued to your office (Capt. Stone) January 26, 1942 (Serial 1277) from Lt. Col. Burgess, A-4, Air Staff, it is desired that the following bombs be released to G.H.Q. for shipment to Caribbean Defense Command:

Bombs

JAN 20 1942
AMS

300 ea. 100# Practice H30A2
20 ea. 500# Equalizer
100 ea. 100# Dumbfitter

II. To be advised of above action.

For the Chief of the Air Staff:

REC'D
EPC 471-23
of the Air Staff

HEADQUARTERS		ARMY AIR FORCES					COORDINATION		
Chief of Staff	Secy of Staff	A.A.G.	A-1	A-2	A-3	A-4	A-5	Budget	Statistics
						Assistant Chief of the Air Staff, A-4.			

Remember to advise above action taken to release bombs transferred to H. H. Williams Station to Serial 1 from Caribbean Defense Command.

AAF-39

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471.6 Cont'd by A-4

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DDI 100

1 Mar. & 20 June 1994
By *PLS* JG, DOD/SL/67

RECEIPT

DATE _____

SUBJECT: Release of Bonds to C.H.Q. for Caribbean Defense Command.

Received from Headquarters Army Air Force, Disposition Form
above subject.

Officer

Officer

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in 471.6 Carb. Def. Comm. ①

SAS 471.6 Grenades

(VJ)

UNCLASSIFIED
DOD HQ
8 Dec 88 June 1994
NY 50 JCI Date 5/1/77

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~~DECLASSIFIED~~

324

WAR DEPARTMENT
THE ADJUTANT GENERAL'S OFFICE

IN REPLY

REFER TO AG 471.61 (3-2-42)MSO-D

WASHINGTON LVE/ihw-1705

DECLASSIFIED
DOO 112
9 Jan. & 20 June 1974
By: *TC* / *CC* / *AC* Date: *11/27*

March 3, 1942

~~SECRET~~

SUBJECT: Hand Grenades for Air Corps in Australia.

Auth: T.A.G.

Initials: *TC*

TO: Chief of the Army Air Forces.

Date: **MAR 3 1942**

1. Reference is made to your memorandum to The Assistant Chief of Staff, G-4, February 24, 1942, on the above subject.

2. The Chief of Ordnance has been directed to ship 5,000 grenades, hand, fragmentation, to the Commanding General, United States Army Forces in Australia, in order to provide a sufficient supply of grenades to permit issues to Air Corps troops for local defense purposes.

3. The above quantity of grenades will provide approximately 200 grenades for each Air Corps Squadron.

By order of the Secretary of War:

Hq. Army A'

MAR 4 1942

AAO Received

J. H. Hensley
Adjutant General.

471.6 Grenades (2)

*File
Hers*

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*AAO/1575
Air AG 471.6 Grenades (3)*

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AAF/A-4
MFS/omd

Written February 20, 1942.

DECLASSIFIED

By: 13/4 2/1/97

FEB 24 1942

MEMORANDUM FOR THE ASSISTANT CHIEF OF STAFF, G-4:

Subject: Hand Grenades.

1. As part of the operation of securing or capturing an Airbase with parachute, infantry, or air-borne troops, some Airbases have been attacked with relatively light tanks for the purpose of creating centers to serve as entrenchments for the parachuteists. Once the attacking troops have taken shelter in the centers, it is extremely difficult to discharge them with rifles or machine gun fire. The hand grenade would appear to be of some value if sufficient supporting fire can be brought on the centers to cover the approach of the grenade thrower.

2. In stocking hand grenades in "X" it is requested that provision be made to provide sufficient supply to permit the issuance of such grenades to Air Corps troops for local defense purposes.

For the Chief of the Air Staff:

T. J. HANLEY, JR.,
Colonel, Air Corps,
Assistant Chief of the Air Staff, A-4.

4716 Grenades (2)

Disposition
FEB 25 1942
AAG

HEADQUARTERS		ARMY AIR FORCES -					COORDINATION				
Chief of Staff	Sec'y of Air Staff	A.A.G.	A-1	A-2	A-3	A-4	A-WPD	A-Insp.	Budget	Statistics	
						<i>MAS</i>					

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AAF-39

4716 Grenades (2)

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DOD IIS

~~SECRET~~

8 Jan. 4 20 June 1974
By: JAC/CC AC, Date: 3/1/87

SUBJECT: Instructions on Grenade Rifle M-9

desire inclosed duplicate letters to CG US Forces in X
and inclosure thereto be transmitted via planes of AFCC
enroute to that destination.

Adjutant General.

1 Incl
letr in dupl to
CG US AF in X 1-2-42 with
incls. thereto.

471.6 Grenade ①

1st Ind.

(Air AG)

WD HQ ARMY AIR FORCES, Washington, M. C. January 5, 1942
TO: The Chief of the Air Corps.

For compliance.

By Command of Lieutenant General ARNOLD:

Dispatched

JAN 5 1942

AAG

Incl. n-8

WILLIAM W. DICK
Colonel, A.G.D.
Air Adjutant General

HEADQUARTERS				ARMY AIR FORCES			COORDINATION				
Chief of Staff	Sec'y of Staff	AAG	A 1	A 2	A 3	A 4	A WFD	A Insp	Budget	Sta. & Logica	

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AAF 39

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SAS 471.6

Japan

RF
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DOD Form 1374
1 Feb 78
3/11/77

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DOD 833

Rev. & 20 June 1984
By: TS/CC MCI Date: 2/1/77

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By Authority of
The Commanding General
Army Air Force

8 1 JUL 1945 *mcp*

Date Initials

31 July 1945

MEMORANDUM FOR CHIEF OF THE AIR STAFF.

Subject: General Arnold's Query for Information on Japanese Petroleum Industry.

1. Attached as Tab A is the General Analysis on the petroleum industry, prepared and distributed by the Joint Target Group.

2. The salient features of this Analysis are as follows:

a. Refining capacity in the Inner Zone consists of 42,400,000 barrels per year of which 92% is in Honshu and Kyushu. However, crude oil production concentrated in Northern Honshu is estimated at not more than 2,250,000 barrels a year, making the bulk of the refining and cracking capacity redundant.

b. Synthetic and shale oil production in the Inner Zone totals 7,600,000 barrels per annum distributed as follows:

- 23% in Honshu
- 17% in Karafuto and Hokkaido
- 60% in Korea and Manchuria (largely a very low grade product)

c. Aviation gasoline production in the Inner Zone amounts to 1,500,000 barrels per year as follows:

- 35% synthetic (17% in Japan, 18% on the Continent)
- 21% from natural petroleum (almost entirely in Japan)
- 29% from ubiquitous alcohol plants
- 10% being butanol
- 5% being benzol.

On the whole productive facilities for aviation gasoline represent a dispersed target system.

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4. Estimated stocks of aviation gasoline are believed to be in the vicinity of 1,350,000 barrels, which was about 4 months' consumption requirement prior to the extreme conservation measures imposed upon the Japanese Air Force.

3. There is attached additionally as Tab B, a copy of a memorandum prepared for the Deputy Commander, Army Air Force, on 4 July 1945, which states the opinion of the Joint Target Group with respect to aviation fuel as a target.

Incls:

- Tab A - General Analysis
dtd 1 Jul 45
- Tab B - Memo for Deputy
Commander, AAF,
dtd 4 Jul 45

E. R. QUESADA
Major General, U. S. Army
Assistant Chief of Air Staff,
Intelligence

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File
4700 Japan

Secret by authority of
CG AAF

447 14 APR 1945

Date Initials

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DDO 1133

By EXIC 10. Date 3/16/77

14 APR 1945

MEMORANDUM FOR THE CHIEF OF AIR STAFF:

SUBJECT: Japanese Piloted Suicide Bomb

1. Representatives of this Office inspected an assembled captured Japanese piloted suicide bomb at Anacostia Naval Air Station 14 April 1945. The following conclusions were drawn:

a. This bomb, carrying in its warhead approximately 2700 pounds of explosives for a short period under power (possibly five minutes) at high speed, represents the most serious threat to surface vessels which the Japanese have thus far evolved.

b. Since the piloted bomb is apparently launched from a two-engine bomber at maximum altitudes not to exceed 22,000 feet, and since its duration in flight is quite brief, it is considered that this particular bomb cannot have been designed even for a secondary purpose of ramming B-29s and probably will present little threat in this connection.

DONALD WILSON,
Major General, U. S. Army,
Asst. Chief of Air Staff,
Operations, Commitments & Requirements

SAS 471.6 Japan (5)

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by FA/CS on 3/14/27

SAS 471.6 (5)

SAS 471.6 (5)

TO: Chief of Air Staff

Date: 9 APR 1945

FROM: AC/AS, Intelligence

Comment No. 2

JRC:ehk:72262

1. Pursuant to Comment No. 1, cable was sent on 7 April by Technical Air Intelligence Center to JICPOA, Attention: Technical Air Intelligence Unit, requesting that high priority research for piloted or rocket bombs be shipped to Technical Air Intelligence Center. Air shipment was requested but if not possible by fastest water.

2. In compliance with Para. 3, Comment No. 1, AC/AS, OC&R and AC/AS, MES are being informed of this action. They will be advised of any further developments.

Signed
JOHN F. BURNETT
Colonel,
Executive Director of Air Staff,
Intelligence

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SAS 471.6 (5)

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DD FORM 1

1 Jan. & 20 June 1974
By: 24/CC SAC, Dallas 4/16/77

Japanese Piloted Bombs

AGAS, Intelligence

4/5/45

Chief of Air Staff

MAIL/oa/3373

1

With reference to the attached message and your comment thereto, you will note that General Giles has directed the Acting Chief of Air Staff to procure two or three of these weapons and have them sent to Wright Field and Eglin Field for study and evaluation.

In view of the fact that the JICFOA Intelligence Team appears to have these weapons in their possession, your Division is the proper agency to contact them to have this request fulfilled.

The Acting Chief of Air Staff desires that you monitor this project and keep AGAS, OCAF and AGAS, HNS informed of your actions in this regard.

H. A. LIBBY
Colonel, G.S.C.
Executive, Chief of Air Staff

1 Incl
Message (CM-IN-2419)

SAS 471.6 Japan (C)

DISPATCHED
6 APR 1945
AFSA

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SAS 471.6 Japan (C)

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JRC:ehk:72202

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By *33/4* ... *24/77*

(7)

~~SECRET~~
By Authority of
The Commanding General
Army Air Forces
H. H. ...
Date *...*

MEMORANDUM FOR DEPUTY COMMANDER, ARMY AIR FORCES:

4 APR 1945

Subject: Six Piloted Japanese Bombs.

1. Navy Department cable (CM-IN 2419) states six piloted bombs or rockets were captured in the Okinawa operations and are being held for JICFOA Intelligence Team. These were described as having a cigar shaped body sixteen feet long with wing spread of fifteen feet. No further details were given or have been received.

2. This is the first report referring to a Japanese piloted bomb or rocket aircraft. However, overall dimensions (wing span and length) conform approximately to a pilotless flying bomb described in a Japanese document captured on Leyte.

3. It is believed that such a piloted bomb would certainly be a capability of the enemy; however, so little technical information is available that an evaluation is not possible at this time.

4. A cable has been sent by Technical Air Intelligence Center requesting complete technical description of these weapons. Complete evaluation will be prepared and forwarded by this office upon receipt of additional information.

SAS 4-7-1-6 Japan (3)

JOHN F. TURNER
Colonel, Air Corps
Acting Deputy
Officer in Charge of Asst Chief of Air Staff,
Intelligence

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SAS 4-7-1-6 Japan (3)

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ON 03 1984

By *ESK* on 10/15/84 *4/127*

Written 2 March 1945
9 MAR 1945

SECRET
By Authority of
The Commanding General
AFMAG-20 Army Air Forces
BE/ep/5908
...P. MAR. 22... XX. M. S.
Initials

Japanese Acoustical Flying Bomb; Countermeasures Against

Chief of Naval Operations, Washington, D. C.

Attention: Deputy Chief of Naval Operations (AIR)

1. With reference to Op 21-F-2NF; col, (86) A28, Serial, 008131, from Chief of Naval Operations to Commanding General, Army Air Forces, dated 13 February 1945, the inclosed report from Army Air Forces Special Consultants is forwarded for information.

2. In view of the conclusions stated in the report, it is believed that a joint countermeasure project should be held in abeyance until such time as more information is available.

For the Commanding General, Army Air Forces:

Signed

HARVEY M. GILES
Lieutenant General, United States Army
Deputy Commander, Army Air Forces and
Chief of Air Staff.

1 Incl.
Cp. of Report fr.
AAF Special Consultants.

Copy for Chief of the Air Staff

DISPATCHED
9 MAR 1945
AFSAS

SAS 471.6 Japan

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SAS 471.6 Japan (2)

SECRET

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WAR DEPARTMENT

WASHINGTON

24 February 1945.

MEMORANDUM FOR: Lt. Col. A. V. Haseltine

SUBJECT: Semic Control Device in Flying Bomb.

This memorandum is in response to an inquiry from the AC/AS Intelligence, 22 February 1945, requesting information on the feasibility of a semic control mechanism in a Japanese flying bomb.

The information presented regarding the characteristics of the flying bomb and the "semic control device" is not sufficiently detailed to enable a valid evaluation of the effectiveness of the device in question. In the absence of further details, general comments on the feasibility of such a control system are presented in the paragraphs following:

Work done by the National Research Council Committee on Semic Control, described in ORRD Report No. 317, dated 15 December 1941, gives valuable information on the subject of acoustic direction finding as applied to aircraft interception. An investigation was made of a proposal to use a semic direction finder on board an airplane in the final stages of an airborne interception operation. It was postulated that the device would be used by an attacking plane which had been directed to a position approximately 1,000 feet directly behind the enemy airplane. It was proposed that the device would enable the attacking plane to follow the enemy while reducing the distance between the planes to approximately 500 feet, and then give accurate enough direction so that blind firing could be accomplished.

In the case considered in the above report, it was assumed that the acoustic pickup device would be mounted on an airplane which was itself generating high-level sounds. Such a condition is the natural result of the presence of the means of propulsion (i.e., engine driven propellers). It is probable that such a difficulty would be present in any flying-bomb device which functioned while being driven at a high speed by any form of propulsion. Severe difficulties would be experienced in discriminating between the noise produced by the vehicle carrying the acoustic pickup and the enemy aircraft. In the absence of human guidance, the acoustic mechanism would have to be essentially automatic in operation, distinguishing

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between the unwanted noises and the wanted sounds by means of characteristics incorporated in the equipment. Such a condition would be extremely difficult to realize.

In order to provide sufficient directivity in the microphone pickup system, it would be necessary to have an array of microphones $4\frac{1}{2}$ feet square if frequencies of the order of 500 cycles per second were used. If frequencies of the order of 1,000 cycles per second were used, the array could be cut down to 2×2 feet. The dimensions involved indicate the difficulty of installing such a device on a flying bomb, since the array must be installed with its maximum dimensions at right angles to the line of flight.

The practical difficulties associated with such a system are considerable. Quoting from the report above mentioned: "Wind diffraction caused a great deal of trouble with the measurements which have just been described. Although the wind was low enough so that noise created by it at the microphones was forty decibels below the sound from the loud speaker, it was found that wind caused the electrical output from the array to vary erratically with time. The output at a given angle θ normally varied by ± 3 decibels from the recorded value. This was presumably due to changes in the direction from which sound struck the array due to the effects of the wind."

Other limitations inherent in the construction of the acoustic pickup device would be extremely difficult to overcome. Again quoting: "There is a limit to the possible amount of discrimination which can be obtained from an array of microphones due to the fact that the sensitivity of any given microphone cannot be expected to remain perfectly constant, especially under the several conditions of vibration encountered in airplanes. The fact that an array can be made to give almost no response to sounds coming in at an angle near $\theta = 90^\circ$ depends on almost perfect cancellation of the outputs of all the microphones. If one of the microphones changes sensitivity, then the cancellation is no longer perfect and the discrimination is reduced. This consideration makes it seem unlikely that any array of microphones could be expected to maintain a discrimination of more than perhaps forty decibels for any length of service time and is, therefore, almost a sufficient reason for saying that acoustic aircraft interception is not practicable."

If the practical difficulties of constructing the acoustic pickup equipment were overcome, the auxiliary electrical apparatus required in order to make use of the data obtained from the sonic pickup would be of considerable complexity. Such complexity, translated into terms of weight, would mean that a considerable sacrifice in payload would be necessary in order to accommodate the control equipment. "It is instructive to consider what electrical equipment would be needed to make the array work on an airplane. It is necessary to obtain from the array one pair of crossed lobes for

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indicating 'horizontal direction' and another pair of crossed lobes for indicating 'vertical direction.' The electrical output of each microphone would first be fed into a single stage vacuum tube amplifier and the output of each of these amplifiers would be connected to four phase shifting networks (one for each of the four lobes of response). The total electrical equipment might be expected to weigh something of the order of three hundred pounds."

Added to the relatively impressive difficulties enumerated above, there are further difficulties associated with (1) the nature of the sound produced by a multi-engined aircraft, (2) peculiarities of the propagation of sound in the slip-stream of an aircraft, and (3) the relatively low margin of the velocity of propagation of sound over the speed at which the flying bomb would travel.

The OSRD report, after an evaluation of the difficulties involved in the original project, concludes: "A study of these factors and the directional characteristics of arrays shows that it is not feasible to build an array which is capable of maintaining sufficient discrimination against local sources. For this reason, it does not appear practicable to use acoustic means of direction finding for aircraft interception."

In view of the discouraging evidence presented above on the subject of acoustic direction finding as an aid to aircraft interception, it is considered unlikely that any successful device operating on this principle has been developed by the Japanese.

There is very little relation between the underwater acoustic homing problem and the airborne acoustic homing problem. The velocity of sound through water is approximately 5,000 feet per second, while the velocity of a submerged vehicle would probably never exceed 50 to 60 feet per second, a speed ratio of 100 to 1. The velocity of sound in air is of the order of 1,000 feet per second; aircraft speeds of half this value are common today, with higher speeds contemplated in the future.

Were a flying bomb to be effective in the interception of such a fast flying plane, the speed of the bomb would of necessity approach the speed of sound. The use of any acoustic device under such conditions would present many new problems, including those associated with high speed streamlining and the Doppler effect. It is considered likely that other means of directing the bomb would be more productive.

S/ Frank D. Lewis

- 3 -

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By: m...

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By: _____	Initials: _____
DECLASSIFIED	
Date: _____	Initials: _____

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GPO 1954

27 FEB 1945

737c *Sub?*

SUBJECT: Japanese Acoustical Flying Bomb; Countermeasures against.

TO: Chief of Naval Operations, Washington, D. C.

Attention: Deputy Chief of Naval Operations (Air)

1. With reference to Op 31-F-REF:col, (SG)A22, Serial, 006151, from Chief of Naval Operations to Commanding General, Army Air Forces, dated 15 February 1945, it is believed that sufficient information is not now available on sonic devices to make an evaluation or institute countermeasures against such a weapon.

2. Special consultants of the Army Air Forces have been requested to furnish information on the feasibility and possibility of the use of sonic devices in such missiles.

3. Should this report mentioned in paragraph 2 above be in the affirmative, we are in accordance with your suggestion for a joint project to study countermeasures. Upon receipt of this report, your office will be notified.

For the Commanding General, Army Air Forces:

Signed

BARRY M. GILES
Lieutenant General, U. S. Army
Deputy Commander, Army Air Forces and
Chief of Air Staff

SAS 471.6 Japan 2

28 FEB 1945

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SECRET

File
105471.6 Japan 2

NAVY DEPARTMENT
Office of the Chief of Naval Operations
Washington 25, D. C.

13 Feb. 1945

From: Chief of Naval Operations
To: Commanding General, Army Air Forces
Subj: Japanese Acoustical Flying Bomb; Countermeasures against
Refs: (a) CG, USAF, Hollandia Technical Air Intelligence Unit
conf ltr TAIU 171.6 dated 31 Dec 1944.
(b) CG, USTAF, Hollandia sec dis U 65453 of 1 Jan 1945
(c) TAIC sec memo on Japanese Flying Bomb dated
15 Jan 1945.

1. Reference (a) is a translation of a captured document on the subject bomb. References (b) and (c) are other documents presumably based on the information contained in reference (a).
2. Information is requested as to the evaluation of Headquarters AAF on this weapon and whether any action has been initiated for countermeasures.
3. The Navy will be very glad to cooperate in any way desired or enter into a joint project for countermeasures against the subject weapon if considered advisable.

/s/ Aubrey W. Fitch
Deputy Chief of Naval Operations
(Air)

CG: CominCH
Cp 25.

3 F.
COMBING FILE

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10/16/80
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UNITED STATES FLEET
Headquarters of the Commander in Chief
NAVY DEPARTMENT
Washington 25, D. C.

FPL/AA-3

Serial: 0460

17 Feb 1945

CONFIDENTIAL

From: Commander in Chief, United States Fleet
and Chief of Naval Operations.
To: The Commanding General, Army Air Forces.
Subject: Proposed Visit of Lieutenant Commander Ball
to Pacific Theaters.
Reference: (a) AAF Conf. Ltr. of 13 Feb. 1945.

1. The proposed visit of Lieutenant Commander Ball to the Pacific Ocean Area for the purpose of studying air sea rescue facilities in that theater, as noted in reference (a), is not considered necessary at this time. There has been for some time past a representative of the Fleet Air Arm assigned to the staff of Commander in Chief, U. S. Pacific Fleet, and there have been recent exchanges of liaison officers between the British Pacific Fleet and the United States Pacific Fleet. It is considered that these officers can provide any necessary information regarding air sea rescue organization in the Pacific Fleet which may be required by the British Admiralty. In view of the limited personnel accommodations in Pearl and throughout the forward area, clearance can not be given for visits which are not of an essential nature. Accordingly, the proposed visit by Lieutenant Commander Ball to the Pacific Ocean Area can not be approved.

2. It is understood that Commander in Chief, U. S. Pacific Fleet and Pacific Ocean Areas, has agreed to the proposed visit of Wing Commander Bicknell, Royal Air Force, and consequently there is no objection by this headquarters to his trip.

/s/
E. J. KING.

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ADDRESS REPLY TO
COMMANDING GENERAL, ARMY AIR FORCES
WASHINGTON 25, D. C.

ATTENTION:

HEADQUARTERS, ARMY AIR FORCES
WASHINGTON

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EOD Jrs.

5 Jan. & 22 June 1974
By *34/ce* AC, Date *4/1/87*

12 JAN 1945

FACTORY BUY
FOR THE
WAR
EFFORT

~~SECRET~~

By Authority of
The Commanding General
Army Air Force

11 Jan 45 *[Signature]*

Date Initials

MEMORANDUM FOR COMMANDING GENERAL, ARMY AIR FORCES

Subject: Japanese Flying Bombs

1. The following information, extracted from a captured document, was reported by cable from Hollandia, reference GM-IN 277.

a. Tactically stop-gap weapons, construction is of bamboo and other woods. Wing span is approximately 19.7 feet and length of fuselage 16.4 feet. The weapon is adaptable to launching from ship, airplane or ground site. After altitude is reached, flight path is directed by a sonic control device. Unit of speed is not given but it is suggested that speed is 260 to 300 meters per second.

2. Attached is evaluation prepared by Technical Air Intelligence Center, resulting in the following conclusions:

a. The Japanese are undoubtedly experimenting with flying bombs. There has been no direct evidence of use against us.

b. Control by sonic device has not successfully been utilized by any nation. Such control, if perfected, would constitute a real and serious menace.

c. Speed of 260 to 300 meters per second is equivalent to 585 to 675 miles per hour which seems excessive in view of German difficulties with compressability effects at speeds of over 500 miles per hour. If estimated in knots, the speeds indicated would be somewhat less than that of German flying bombs having an average maximum of 390 miles per hour at 2,000 feet.

Incl
Memo, subj
Japanese Flying Bomb

Copies sent to:
AC/AS, Plans
AC/AS, M & S
AC/AS, O C & R
AC/S, G-2

[Signature]
JAMES P. HODGES
Major General, U. S. Army
Assistant Chief of Air Staff,
Intelligence

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Noted by [Signature]
[Signature]

945 4.71.6 848-10

NO A P
13 JAN 1945
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TECHNICAL AIR INTELLIGENCE CENTER

U. S. NAVAL AIR STATION

ANACOSTIA, 201, D. C.

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000 000

EX-100 20 June 1984
100 Dec 1987MEMORANDUMJapanese Flying Bomb

An undated, captured Japanese intelligence document (reference Secret Cable U 86453, 1 January 1945, USAFFE Hollandia) reveals the intent to immediately equip the Japanese Army with flying bombs. Their tactical employment is to be considered "as a stop gap and not as a basic weapon".

Salient features of the document are as follows:

- (1) The wing span is given as approximately 6 meters (19.7 ft.) and the length as approximately 5 meters (16.4 ft.)
Comment: The German flying bomb has a span of 17 feet and a fuselage length of 21.5 feet. There has been evidence that the Japanese have been given information by the Germans on flying bombs and various radio controlled missiles.
- (2) Construction is of bamboo and other woods so that mass production can be obtained at a low manufacturing cost.
Comment: The Japanese have been attempting for some time to replace metal aircraft parts with wooden ones and have been closely following the German developments on the FW 154 twin-engine wooden fighter (comparable to the Mosquito) and Ju 352 and Siebel 204 composite wood and metal transports. The further development and use of wood and bamboo in Jap aircraft can be expected.
- (3) Flight path is automatically controlled and once general directions and altitude are gained, a sonic control device accurately directs the robomb on to an aircraft or formation of aircraft.
Comment: German automatic control in the "VI" flying bomb is limited to three gyros in the automatic pilot that are driven by compressed air and, acting on the rudder and elevators through air operated servo motors, control the bomb's flight.

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DECLASSIFIEDMEMORANDUM

Japanese Flying Bomb

Sonic control onto a target has not been operationally used by the Germans and would represent a real and serious threat if it is actually perfected to direct flying bombs onto aircraft formations.

- (4) Speed ranges are from "260 to 300", unit not stated.
Comment: The meaning of "260 to 300" speed range is not clear as the units are not given. It seems quite possible that the reference covers speed in knots in which event the rated velocity would be 300 to 345 mph. Assessments of the German flying bomb show an average maximum speed of 390 mph/2000 feet and a maximum speed of 450 mph in some cases where a larger motor is used.
(If the speeds were assumed to be in metric units of kilometers per hour or meters per second, the former would range from 160 to 185 mph; far too low to be effective as an aerial weapon. The latter would vary from 582 to 670 mph; an extremely high figure that seems improbable in view of the bamboo or wood construction and German difficulties with compressibility effects at speeds in excess of 500 mph).
- (5) An explosive charge is carried in the nose.
Comment: Comparable to German design although the size of the warhead is not given. The Germans carried a warhead equivalent to an explosive charge of 2200 lbs. forward of the fuel compartment.
- (6) Launching is stated to be relatively simple and the bomb is suitable for launching from an aircraft, a ground position or a ship.
Comment: The Germans have primarily launched their flying bombs from the ground altho launchings from aircraft are now being used. In this latter event, the parent plane launching the missile would be vulnerable to attack by fighter cover. Potential ship launchings against an aircraft formation would not seem very practical from a standpoint of both expected results and possible hazard to the ship.
- (7) No information given as to tactical use or manufacturer.
Comment: Rocket attacks have been repeatedly reported by our bombers in recent months. It is believed that rockets have been launched both from the ground and from wing mounts on aircraft.

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MEMORANDUM

Japanese Flying Bomb

No direct evidence exists, however, that pilotless planes have been used against us. It would seem probable that well defined observations would have been made by our bomber crews if such missiles had already been tactically employed.

Summary

In view of the information received from German sources, the Japs are undoubtedly experimenting on flying bombs and other controlled missiles. The main threat would lie in the effectiveness of the reported "sonic control device". No country so far has successfully placed into service such a device to accurately direct a bomb to a given aircraft. The extent of Jap development in this direction is not known, this being the first direct reference to such a control. The reference to this flying bomb being a "temporary or stop gap" weapon would seem to indicate that it is not fully perfected.

A. J. M. Hamon
A. J. M. HAMON
Lieutenant Commander, USNR
Officer-in-Charge, TAIU

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825471.6 Japan

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SAS 471.6 Netherlands

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4 Jan 80 June 1976
NYG JG; Date 3-11-77

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GPO: 1963

13/6
JAN 31 1942

AS 400,2288 (1-27-42)H28-6

HW/28-1706

January 31, 1942

SUBJECT: Transfer of 500 ea. 500# Demolition Bombs to the Netherlands Government.

TO: Chief of Ordnance.

DECLASSIFIED
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T.A.G.....

J-G-B

Initials:

Date: JAN 31 1942

1. Confirming telephone instructions issued to your office (Lt. Colonel Rice) January 28, 1942 (Serial 1167) from Lt. Colonel Burgess, Air Staff, A-4, it is desired that the following bombs be transferred to the Government of the Kingdom of the Netherlands:

~~Bombs~~
500 ea. 500# Demolition Bombs M48

2. Shipping instructions will be furnished later, by Defence Aid.

3. Cash reimbursement is to be made by the Netherlands Government, and funds will be made available by the Budget Officer, War Department in subsequent letter.

By order of the Secretary of War:

J. G. Breakbridge

Adjutant General.

COPIES TO: Chief of the Army Air Forces,
ref. his memo. 1/27/42.
(AAW/A-4/471-24).

A. C. of S., G-4.

File H28

4716
Netherlands
D3

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AWG/176
Air AD 471.6 Netherlands D3

SECRET
DECLASSIFIED

January 27, 1942

AAF/A-4/471-24

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GPO 1942

1/27/42
1/27/42

Transfer of 500 ea. 500/ Demolition Bombs to the Netherlands Government.

II G-4

I. G-4

I. For

II. AAF

I. In Circuits

471.6 Netherlands

①

1/27/42

I. 1. Confirming telephone instructions issued to your office (Lt. Col. Rice) January 25, 1942 (Serial 13877) from Lt. Col. Burgess, Air Staff, I-4, it is desired that the following bombs be transferred to the Government of the Kingdom of the Netherlands:

Bombs

500 ea. 500/ Demolition Bombs H43

JAN 29 1942
15270-1761

2. Shipping instructions will be furnished later, by Defense Aid.

3. Cash reimbursement is to be made by the Netherlands Government will be made available by the Budget Officer, War Department in subsequent months.

II. To be advised of above action.



WAR DEPARTMENT
COVER OF COVER OF COVER
(See over)

ACTION TAKEN: 1/31/42.
by ltr. to Ch/Ord., v/cys
to Ch/Army Air Forces &
R.C. of S., G-4.
MEX/cr-1705

SECRET

471.6 Netherlands ①
"Comeback" Copy.

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DECLASSIFIED

For the Chief of the Air Staff:

T. J. HENRY, JR.,
Colonel, Air Corps,
Assistant Chief of the Air Staff, A-4.

Memorandum for Bureau: Above action taken to comply with request of Netherlands Government approved by the Deputy Chief of Staff.

JAN 30 1942

NOTED-OFFICE CHIEF OF STAFF

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JAN 30 1942

Rec'd Back

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S & C S&C

JAN 30 1942

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OUT



OFFICE OF CHIEF OF STAFF

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Air 25 471-6 Netherlands

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D. W. ...

January 27, 1942

AAF/A-4/471-24

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100-20-1000-1071
100-20-1000-1071
100-20-1000-1071

Transfer of 500 ea. 500# Demolition Bombs to the Netherlands Government.

II C-4

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I T-6

II AAF

I SE directs

471.6 Netherlands

27 JAN 1942

AAF/A-4
SEB/and

I. 1. Confirming telephone instructions issued to your office (Lt. Col. Rice) January 25, 1942 (Serial 11677) from Lt. Col. Burgess, Air Staff, A-4, it is desired that the following bombs be transferred to the Government of the Kingdom of the Netherlands:

Bombs

500 ea. 500# Demolition Bombs M43

2. Shipping instructions will be furnished later, by Defense Aid.

3. Cash reimbursement is to be made by the Netherlands Government, and funds will be made available by the Budget Officer, War Department in subsequent letter.

II. To be advised of above action.

HEADQUARTERS		ARMY AIR FORCES			COORDINATION					
Chief of Staff	Sec'y Air Staff	A.A.G.	A-1	A-2	A-3	A-4	A-WPD	A-Insp.	Budget	Scat- istica (See cover)

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AAF-39

471.6 Netherlands

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For the Chief of the Air Staff:

T. J. HENRY, JR.,
Colonel, Air Corps,
Assistant Chief of the Air Staff, A-4.

Memorandum for Record: Above action taken to comply with request of Netherlands Government approved by the Deputy Chief of Staff.

AF 277342

AF, Beneficial

HEADQUARTERS		ARMY AIR FORCES					COORDINATION				
Chief of Staff	Sec'y of Staff	A.A.G.	A-1	A-2	A-3	A-4	A-WPD	A-Insp.	Budget	Sta- tistics	
	<i>WJF</i>					<i>HCB</i>					

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Can file 471.6 Netherlands (D)

AAF-39

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DECLASSIFIED
DOD 832

By SP/EC on 20 June 1984 21177

R E C E I P T

DATE _____

SUBJECT: Transfer of 500 ea. 500# Demolition Bombs to the Netherlands Government.

Received from Headquarters Army Air Forces, Disposition Form above subject.

Officer Rank

Office

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in 05 471.6 Netherlands ①

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SAS 471.6 Smoke Screens + Bombs

DECLASSIFIED
DOD IAW
8 JAN 20 June 2007
BY: SP6/CLG/DAB/SLF/77

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HEADQUARTERS ARMY AIR FORCES
ROUTING AND RECORD SHEET

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Note. -- A line will be drawn across sheet after each comment.

File No.

Tally No. AAF:

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DOD Irs.

By: *BJC* LC Date: *3/1/77*

SUBJECT: Smoke Protection During Bombing.

NO.	FROM	TO	DATE	COMMENTS
1	General Arnold	General Spaatz	1942 1/22	<p>Experience of the Germans at Brest and other cities indicates that smoke is of great importance in preventing accurate bombing of objectives. On several occasions the whole harbor of Brest has been obliterated by smoke so that the British bombers had no points of reference from which they could bomb when they tried to with the Griesenau and Scharnhorst in the Harbor at Brest.</p> <p>We, in the United States, have several critical facilities which should be provided with smoke protection, for instance, the Boeing Plant, the Bremerton Navy Yard, Mare Island Navy Yard, Los Angeles Airplane Plants and San Diego Airplane Plants.</p> <p>It is desired that the Air Staff prepare the necessary letter to insure that steps will be taken to secure smoke protection for these and other coastal critical facilities.</p> <p style="text-align: center;"><i>(Signature)</i></p> <p><i>Directive issued to A-4.</i></p> <p><i>File</i></p> <p style="text-align: right;"><i>270</i></p>

air 20 4716 Director's Office

(Do not use reverse side)

W-4071, AC, Rev. 8/14/41

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air 20 4716 make 2

HENRY HARLEY ARNOLD

Box 134 Folder 8

MILITARY

DECIMAL

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through
471.94

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DOD
ON 20 June 1981
BY: [signature] / [initials]

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DDO Ans

1000 & 20 JUL 1974

1000 Dec 4/1/77

Subject: Policy on the Employment of Proximity Fuses.

TO: AC/AS, Plans --ATT: Gen Kuter

21 Sept 1944

FROM: Chief of the Air Staff.

Comment No. 1.
MAL/hd/3373

1. General Giles observed to the undersigned that as a matter of general policy the Army Air Forces should support the broad proposition that the proximity fuse should not be employed in the present war with Germany. He feels that when the war with Germany is concluded this device should then be used in full force against the Japanese.

2. I understand that certain limitations have been imposed on the release and employment of this device by the Combined Chiefs of Staff. I do not know whether or not any change has been made in the employment of the proximity fuse other than the instruction that it could be employed in the antiaircraft defense of England when that country was being subjected to the robot bombing. I also recall that the proximity fuse could be used when fired from Naval vessels over water where it could be safely assumed that should the device fail to function it would be lost in the water and not be readily recoverable by the enemy.

3. I think that either you or some well qualified expert in your Division should discuss this whole matter with General Giles to ascertain exactly what he wishes us to do.

/s/ MAL
MILLARD A. LIBBY
Colonel, G. S. C.
Executive, Chief of the Air Staff.

TO : Chief of the Air Staff (ATT: Col Libby)
FROM: AC/AS, Plans
ATTN: Gen Timberlake

Date: 22 Sept 1944

Comment No: 2
LSK:msh;5633

1. This subject has been reopened in a Joint Chiefs of Staff sub-committee. The AAF representative on this sub-committee has been given a written statement of policy guidance by General Timberlake which, in my opinion, conforms exactly with the policy statement set forth by General Giles above.

2. I believe you should acquaint Colonel Dean and the Advisory Council with General Giles' views and the action we have taken in order that the JCS paper on this subject may be presented to General Arnold with the views of General Giles and the Air Staff.

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continued.....

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Policy on the Employment of Proximity Fuses

Chief of the Air Staff (ATT: Col Libby)

22 Sept 1944

AG/AS, Plans

THH: Gen Timberlake

cont'd.,.... LSK:amb:5833

2

3. Other than the above I believe no further action is in order at this time.

L. S. KUTER,
Major General, U.S.A.

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801 47182 (19)

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DOO 10-2

DECLASSIFIED
SECRET

8 Jan. & 20 June 1974
By: Falk JG: Daw 2/11/77

Policy on the Employment of Proximity Fuses

Assistant Chief of Air Staff, Plans
Atten: General Euter
Chief of the Air Staff

21 Sept. 1944

MAL/hd/3373

1

1. General Giles observed to the undersigned that as a matter of general policy the Army Air Forces should support the broad proposition that the proximity fuse should not be employed in the present war with Germany. He feels that when the war with Germany is concluded this device should then be used in full force against the Japanese.

2. I understand that certain limitations have been imposed on the release and employment of this device by the Combined Chiefs of Staff. I do not know whether or not any change has been made in the employment of the proximity fuse other than the instruction that it could be employed in the anti-aircraft defenses of England when that country was being subjected to the robot bombing. I also recall that the proximity fuse could be used when fired from Naval vessels over water where it could be safely assumed that should the device fail to function it would be lost in the water and not be readily recoverable by the enemy.

3. I think that either you or some well qualified expert in your Division should discuss this whole matter with General Giles to ascertain exactly what he wishes us to do.

Signed

MILLARD A. LIBBY
Colonel, G. S. C.

Executive, Chief of the Air Staff

471.822 (19)

RECEIVED
21 SEP 1944
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540 471.822 (19)

ADDRESS REPLY TO
COMANDING GENERAL, ARMY AIR FORCES
WASHINGTON, D. C.

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*Sp 7 mgs.
Bomb*

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DOO lrs.

~~SECRET~~
WAR DEPARTMENT

HEADQUARTERS OF THE ARMY AIR FORCES
WASHINGTON, D. C.

8 Jan. & 20 June 1978
BY: *TS/CC* LG: *Wm* *Sub/ST*

December 3, 1943

MEMORANDUM FOR: GENERAL FERRIN.

Subject: Message No. D-1887 Dated 11/27/43 From London.

1. Cable D1887 (IN-17564) from the Eighth Air Force concerns the supply of M126A1 fuzes needed for M47A1 or A2 incendiary bomb, 100-lb., oil filled, to the Eighth Air Force. The fuze and the case for this bomb are procured by the Chief of Ordnance and turned over to the Chief of the Chemical Warfare Service for filling, storage, and issue.
2. The use of this bomb has increased greatly in the past two months. One reason is due to the strapping together of at least two bombs at 100-lb. stations on Heavy Bombers. Fuzes (M126A1) were being manufactured by the Chief of Ordnance at an agreed monthly rate of about 50,000 from July thru November. Of this quantity, the Chief of Chemical Warfare Service was able to ship 201,000 to the end of November to the 8th Air Force. Twenty-eight thousand (28,000) more are available for shipment now.
3. There are more bombs in the Eighth Air Force than there are fuzes, because the bombs were sent with the M108 fuze, which is no longer considered safe for use except when bombs are hung and dropped singly. The Eighth Air Force reported 80,377 fuzes on hand 31 October 43. November shipments were 46,339 fuzes. November expenditures are not known, but October was about 29,000 bombs. The cable states there are 50,000 fuzes short, but no statement of what is available there, has been made. All available fuzes are being shipped as soon as they are turned over to Chief, Chemical Warfare Service.
4. At a conference held 1 December 43, attended by representatives of Requirements Division of Army Service Forces; Chief, Chemical Warfare Service, Chief of Ordnance, Air Chemical Officer, Air Ordnance Officer, and Requirements Branch of AG/AS, CG&R, the entire incendiary problem was taken up. It was pointed out that revised Army Air Force requirements for 1944 would be submitted at once. The fuze production rate was to be scheduled at about 300,000 for December and 500,000 for January, which, if delivered, will relieve the situation for M126A1 fuzes for incendiary bombs in all theaters. To date, operational requirements have been met, but stocks could not be built up.

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Memo. to General Ferrin. (Continued).

5. In this same connection, the 500-lb. incendiary bomb, and 500-lb. incendiary aimable cluster will soon become available (an initial shipment of 5,000 aimable clusters were shipped during November with an additional 5,000 clusters due for early December shipment). These will relieve the requirement for 100-lb. bombs on a ratio of 3 - 100-lb. to 1 - 500-lb.

R. C. Coupland
R. C. COUPLAND,
Brigadier General, U. S. Army,
Air Ordnance Officer. ✓

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Ch. 47182 15

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NO. 7 AF
4 DEC 1943
MAIL SECTION

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 By Authority of
 The Commanding General
 Army Air Forces
 10-5-43 *APL*
 Date Initials

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 8 JUL 20 1974
 BY *SP-5/SC* LC *2/10/72*
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W. J. ...
PAVE

MEMORANDUM FOR MR. ROBERT LOVETT.

SUBJECT: Influence Type Fuses.

1. Description of Types and Principles of Operation.

a. Various types of proximity fuses have been made that will fire when the projectile is in the neighborhood of a target, of which the radio and photo-electric proximity fuses have been successfully designed, constructed and tested. A radio type proximity fuse is actuated by interaction between the radio wave transmitted by the fuse and the wave reflected by the target. The photo-electric proximity fuse is actuated by the change of light incident on a photocell as the projectile approaches an enemy airplane.

b. A major project has been the development of photo-electric and radio proximity fuses for the 4.5" plane-to-plane rocket. The photo-electric fuse, T6, P.E., has the advantage that it is not readily jammed; however, it is subject to sun firing or blinding, and is sensitive to discontinuities in ground illumination. Further, it is inapplicable for night use. The radio fuse T6, P.R., is unaffected by the sun and is operable day and night. At first it was thought that the radio fuse might be more easily jammed by enemy countermeasures; however, recent tests have shown that in order to jam the fuse effectively, a prohibitive amount of equipment would have to be carried on the enemy aircraft.

c. Radio proximity fuse design for bombs has been directed toward the development of fuses for plane-to-plane bombing and fuses which will operate on approach to the ground. These fuses are designed to operate in any of the standard size bombs. The proximity fuses for operation on approach to ground are intended for use as anti-personnel weapons or chemical warfare purposes.

d. The radio type (700) that utilizes the body of the bomb as an antenna has been selected for immediate application because of its dual roll as a plane-to-plane fuse and a fuse for ground targets. This fuse has been drop-tested from an altitude of about

APL 471-82 (17)

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MEMO FOR MR. ROBERT LOVETT, SUBJECT: "Influence Type Fuses" (Cont'd.).

5,000 feet with about 75% of the 100 fuses tested functioning properly at heights of from 20 to 50 feet. This type of fuse is for use in all bombs from 100 to 2,000 pounds. The initial designs are for 500 pound bombs and it will probably be possible to accommodate a complete range of bomb sizes with two fuses. The operating height for ground operation would be of the order of 40 feet. The effective range for use against airplanes would be from 80 to 100 feet.

2. Development. -- The present Army Ordnance developments include the following:

- Fuse, 4.5" Aircraft Rocket, T4, P.D. (Photo-electric type).
- Fuse, Rocket, T5, P.D. (Radio type).
- Fuse, Bomb, T50 (Radio type).
- Fuse, Bomb, T51 (Radio type).
- Fuse, Bomb, T52 (Photo-electric type).
- Fuse, Shell, 75mm, T73.
- Fuse, Shell, 90mm, T74.
- Fuse, Shell, 105mm, Howitzer, T80.
- Fuse, Shell, 4.7 AA, T75.
- Fuse, Shell, 155mm, T76.
- Fuse, Shell, 8 inch Howitzer, T84
- Fuse, Shell, 240mm, Howitzer, T85.

3. Procurement. -- The Army Air Forces have under procurement the following quantities of proximity fuses:

- 1,000,000 T50 Series. For use in Aircraft Bombs.
- 500,000 T73 Fuses. For use with 75mm Aircraft Cannon Shells.
- 500,000 T5, P.D. For 4.5" Aircraft Rockets (T4, P.D. alternate fuse).

4. Use to Date. -- A radio type proximity fuse MK 52 for the 5" anti-aircraft shell has been used by the Navy in the South Pacific. These fuses were used in a sea action in which duds could not be recovered by anyone, either enemy or supposed friend; this in accordance with the stipulation put upon the use of influence fuses by the Joint Chiefs of Staff. Other uses than this are prohibited unless specifically authorized by the Joint Chiefs of Staff, and it appears that other authority will not be granted until sufficient stocks of fuses are on hand for extended tactical use.

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File
42-148

air 4, 47182 (17)

DECLASSIFIED

TO: Deputy Chief of Air Staff (General Hall)

Date 18 Dec 43

FROM: Air Communications Officer

Comment No. 2
HHS/ansv 6324

- 1. Attached is memorandum called for in comment No. 1 above.

Incl:

H. M. McCLELLAND
Brig Gen, USA

Handwritten: 471.82

Handwritten: 71

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AFACO
HQM/mmv/6324

DECLASSIFIED
DOD IAW
& 20 June 1974
By: *SP/CC* LQ, Date: *4/6/77*

MEMORANDUM FOR THE COMMANDING GENERAL, ARMY AIR FORCES:

SUBJECT: Development of Proximity Fuses.

1. There follows a brief story of the development of proximity fuses and countermeasures therefor.

a. Initial work on proximity fuses in the United States was begun in 1940 by Section T of the NDRC under the joint sponsorship of the Army and Navy. It contemplated proximity fuses for bombs first, then rockets, then shells. However, the Navy had more interest in proximity fuses for shells, particularly for anti-aircraft use, than in bombs or rockets. Section T of NDRC then concentrated its efforts on fuses for shells while work for fuses on bombs and rockets was begun by a new division (Division 4) for the Army. It was agreed at that time by the Chief of Ordnance and the Chief of Bureau of Ordnance that the Navy would be responsible for development and procurement for proximity fuses for rifled projectiles for both services and the Army for proximity fuses for all other weapons. Within the Army, the Ordnance Department is responsible for the missiles while the fuses are procured through the Signal Corps.

b. Rocket Fuses.

1. Two types of proximity fuses have been developed for rockets. One is a photo-electric fuse (Type T-4) and the other a radio fuse (Type T-5). 200,000 of the photo-electric fuses and 300,000 of the radio fuses have been manufactured to date. A total of 389,000 fuses of each type are on order. Either fuse will function if the missile passes within about 60 feet of a plane the size of a medium bomber or larger.

2. The photo-electric fuse has made a score of 90% successful functioning in proof tests of production models. These tests were of the fuse alone and did not take into account the erratic action of the rockets. The use of photo-electric fuses is of course limited to day-light hours. The fuse has a further limitation in that it will fire prematurely if the projectile is launched into the sun. This indicates a tactical restriction which however, if properly handled, should

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not be a serious limitation. The fuse is considered ready for combat use as soon as rockets are made which will perform consistently.

3. The radio fuse at present is subject to premature functioning which is caused by the after-burning of the rockets now available. The propelling charge in the rocket is almost all burned in the early part of the flight, before the fuse is armed. However, there is frequently a small amount of powder left which burns long after the fuse is armed. This burning produces ionized gas and the fuse is caused thereby (electronic reaction) to function prematurely. Proof firing of the radio fuse shows better than 80% satisfactory functioning; however until the after-burning of the rocket is licked, this fuse is not ready for combat.

2- Bomb Fuses.

1. There are two types of bomb fuses under development, both of which are of the radio type. One, the T-50, is for anti-personnel fragmentation bombs, the other, the T-51, is for high burst chemical bombs.

2. The T-50 for the anti-personnel bomb can be fitted to any of the common bombs (100 to 2000 pounds size). It is now in the final development stage. When dropped from high altitudes, it will cause the bomb to detonate 15 to 20 feet above the ground. When dropped from a lower altitude, so that the angle of approach to the ground is somewhat less than nearly vertical, the fuse will function at about 40 feet above the ground. Proof tests at present indicate about 80% satisfactory functioning. It is estimated that quantity production will start about March 1944.

3. The T-51 fuse to give a high burst and chemical bomb is only in the medium stage of development. It is too early as yet, to say anything about its performance.

3- Fuses for rifled projectiles.

1. The Navy is using radar fuses in their 5 inch anti-aircraft guns in the Pacific with considerable success. The use of this fuse, like all proximity fuses, is at present limited by the Joint Chiefs of Staff directives to over-water firing. Use of any type of proximity fuse over land is prohibited.

2. The Army is procuring through the Navy, proximity fuses of the Navy type for 75% of the 1944 requirements for anti-aircraft shell.

3- Countermeasures.

1. For the Navy type proximity fuse for anti-aircraft shell, there has been developed an airborne jammer which causes premature firing of the shell. The Army radio proximity fuse, type T-5, for rockets and the T-50

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for bombs are somewhat more difficult to jam inasmuch as they use more powerful transmitters than the Navy type and therefore require less sensitive receivers. However, both types have been successfully jammed during tests at Eglin Field.

2. Both the photo-electric fuse and radio fuse can be caused to fire prematurely by the use of a radar countermeasure device known as "Angel". This is a kite shaped device of cloth packed by metal foil. It was designed to fool enemy radar stations as it gives a signal equivalent to a bomber. Its use as a countermeasure for proximity fuses was recently conceived. Tests to date, indicate that success can be expected if a means can be found to project these devices in the path of the missile equipped with a proximity fuse. This requires the development of a projectile (air-gun or rocket type) to shoot the angels into the path of the rocket. This device or smoke puffs offer the only promise of success at present as a countermeasure for the photo-electric fuse.

II. Summary.

Two types of proximity fuses are available for rockets and one for bombs. The erratic behaviour of rockets at present is the principal problem remaining to be overcome. Proximity fused bombs should be ready for use early in 1944. Countermeasures against our own types of proximity fuses indicate that these types can be jammed. The prohibition by the Joint Chiefs of Staff directive prevents the use of any proximity fuses except over water.

BARNEY M. GILES
Major General, U. S. Army
Chief of Air Staff

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Air Ab 471.82 (16)

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DOD Itrs.

9 Jan. & 20 June 1974
By: *SP/lec* LC Date: *4/6/77*

Development of Proximity Fuses

Air Communications Officer, General McClelland

15 Nov 45

Deputy Chief of the Air Staff (General Hall)

1
RHM/ee/78161

General Hall desires that you prepare a memorandum to the Commanding General for General Giles' signature giving in brief the story of the development of proximity fuses and their countermeasures.

ROBERT H. HARPER
Lt. Colonel, Air Corps
Asst Secretary, Air Staff

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DOO lra

By ESTC on 10 June 1978

Development of Proximity Fuses

Air Communications Officer, General McClelland

16 Nov 48

Deputy Chief of the Air Staff (General Hall)

RHR/ee/72141

1

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ROBERT H. HARPER
Lt. Colonel, Air Corps
Asst Secretary, Air Staff

Dispatched
17 Nov 1948
-RHR

471.82-16

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File
C-11/1/43

471.82-16

HEADQUARTERS ARMY AIR FORCES
ROUTING AND RECORD SHEET

TALLY NO.	
FILE NO.	471.82

~~SECRET~~
DECLASSIFIED

SUBJECT: > Influence Type Fuses.

TO: Secretary of the Air Staff.
FROM: AC/AS, MM&D, Air Ordnance Officer.

DECLASSIFIED

DD Form

1 Jul 62 June 1959

By: *ESTC* / J.C. Date: *1/1/77*

DATE 5 OCT 1943

COMMENT NO. 1

JMG:med 72857

Memo prepared on the subject of influence type fuses is attached herewith for signature covering the description of types, principles of operation and present procurement.

471.82 (15)

R. C. Coupland
R. C. COUPLAND
Brig. Gen., U.S.A.

1 Incl.-
Memo to Mr. Robert Lovett,
above subject.

*File
10/7/43*

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PAGE 1

as 471.82 (15) 3-1109 A.F.

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HEADQUARTERS
FIFTH AIR FORCE
APO 925

25 July, 1943

General H. H. Arnold,
Army Air Forces,
Washington, D. C.

Dear General Arnold:

Advice indicates that a proximity fuze of great accuracy is being used by the United States Navy in Hawaii. I have sent Lt. Col. John R. V. Dickson, Ordnance Officer, Advance Echelon, Fifth Air Force, to Hawaii to investigate the situation, obtain the Navy fuze and to present the facts to you for your consideration.

Efforts have been made to develop an air burst fuze in this Theatre, but developments to date have not attained a fuze of high accuracy. The air burst fuze we have used has established, however, the tremendous tactical importance of this type of bombardment. It is desired that arrangements be made to obtain or to manufacture this fuze in sufficient volume to supply the Fifth Air Force with the least possible delay.

Sincerely,

George C. Kenney
GEORGE C. KENNEY,
Lieutenant General, USA,
Commanding.

HP

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No reply necessary
File
MAR
17 Aug 1943

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DOD Itra
Jan. & 20 June 1974
By: [unclear] LC: Date: 2/1/77

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File
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HEADQUARTERS
FIFTH AIR FORCE
APO 925

DECLASSIFIED
EO 13526

Apr & 22 June 1954
J.C. Davis *Auto*

25 July, 1945

General H. H. Arnold,
Army Air Forces,
Washington, D. C.

Dear General Arnold:

Advice indicates that a proximity fuse of great accuracy is being used by the United States Navy in Hawaii. I have sent Lt. Col. John R. V. Dickson, Ordnance Officer, Advance Echelon, Fifth Air Force, to Hawaii to investigate the situation, obtain the Navy fuse and to present the facts to you for your consideration.

Efforts have been made to develop an air burst fuse in this Theatre, but developments to date have not attained a fuse of high accuracy. The air burst fuse we have used has established, however, the tremendous tactical importance of this type of bombardment. It is desired that arrangements be made to obtain or to manufacture this fuse in sufficient volume to supply the Fifth Air Force with the least possible delay.

Sincerely,

GEORGE C. KENNEY,
Lieutenant General, USA,
Commanding.

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EX-111

2/1/77
m. z. l. c.

Lieutenant General George C. Kenney
APO Number 925
c/o Postmaster San Francisco
California

Dear George,

Your letter of July 25th was delivered to me by Colonel John H.V. Dickson, and I discussed the subject fuze you requested at length with him. The efforts that have been made to develop an air burst fuze in your theater are appreciated, and it may be said that the development status you have attained has reached a stage commensurate with the progress shown on such special fuzes in this country at about mid year 1940. The present status of such special fuzes has been reached during the past three years by the expenditure of a sum greater than \$10,000,000 and by the full-time employment of more than 400 engineers and highly skilled technicians in the offices of the Chief of Ordnance and the Chief Signal officer. The greater portion of the work accomplished during the past two years has been devoted to making this type of fuze technically perfect in order to insure functioning under all conditions and to be certain that no item will be recovered by anyone, enemy or supposed friend, where it may be reproduced. Further, there have been numerous obstructions overcome so that the final type would contain safety factors permitting its employment in standard munitions under extremely adverse combat conditions.

The type fuze of greater accuracy that you noted is being employed by the United States Navy, Pacific Fleet, and has been released for such employment under certain rigid restrictions by the Joint Chiefs of Staff. One of the restrictions was that the fuze should never be used in the vicinity of land where an unexploded shell could be recovered for possible duplication by anyone. Upon the 4th of August 1943, the Commander

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Ltr. to Lt. General George C. Kenney (Cont'd.)

in Chief U. S. Fleet and Chief of Naval Operations again requested the Joint Chiefs of Staff to restate the decision reaffirming the withholding of such fuzes as you requested from bombs that would be employed over enemy territory. The COMINCH believed that the compromise of the fuze would result in early adoption by the enemy of plane-to-plane bombing against our bomber flights, and stated that he believed that this would do our offensive effort harm that would more than outweigh any advantage that we would gain in bombing operations over land where we would compromise such type fuzes. That is our belief here in Air Forces, and we shall go along with these recommendations from the Joint Chiefs of Staff to the Combined Chiefs of Staff so that the weapons would be restricted at this time to the presently approved uses where all such fuzed munitions will fall into water and be unrecoverable.

The fuze you requested that will be suitable for use in general purpose bombs has progressed beyond the design-development stages in the laboratories of Army Ordnance, and an extensive test program in the actual release of such fuzed bombs is now in progress to determine functional reliability. Great promise has been indicated in the progress so far shown, but it must be realized that the employment of these special fuzes may only be done when a sufficient quantity is on the shelf to allow release of munitions with such fuzes in a sustained effort in more than a single sphere of operations. Of course, that only will be done when the restrictions are lifted by the Joint Chiefs of Staff.

I directed Colonel Dickson to proceed to the Air Forces Proving Ground, to learn the latest upon progress on the item, and I believe that he can fully describe to you the prospective developments that are in the offing so that tactical plans can be shaped for their employment at some future date.

Sincerely,

Signed

BARNEY M. GILES
Major General, U.S. Army
Chief of the Air Staff.

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(18)

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EXC 102
DATE 20 June 1994
BY SP2 J.C. Davis

Use of Special-Fused Bombs over Enemy Territory.

1 SEP 1943

Deputy Chief of Air Staff

AC/AS M&B, Air Ordnance Officer

REF/0.m./71175

1

Reference the letter Lt. General. G.C. Kenney prepared by Air Ordnance on 12 Aug 43 and signed by General Giles, attention is invited to the attached copy of an indorsement from the acting Asst. Chief of Staff, OPD, to the Commanding General, Army Service Forces, stating that the combined Chief of Staff have agreed that special fuses will never be used in the vicinity of land without specific authority in each case. It may be noted in paragraph 2, subject indorsement that the distribution of such fuses to using arms for operational use is forbidden, but this restriction does not preclude the experimental and service testing of such fuses prior to there being placed upon the shelf pursuant to the directive of General Arnold.

Is it desired that another letter be written to General Kenney reiterating this decision by the combined Chief of Staff.

H. C. PORTER
Colonel, Ord. Dept.
Actg. Air Ord. Officer

- 2 Incl.
- #1 - Ltr to Lt.Gen. Kenney dtd 12 Aug 43
- #2 - WD Disp. form

ANG 471.82
WB

TO: AC/AS, M&B, Air Ordnance Officer.

DATE 2 September 43

FROM: Chief of the Air Staff.

COMMENT NO. 2
MAL/mdg/5.65

General Perrin has indicated that no other letter need be written General Kenney reference the above.

Dispatched
2 SEP 1943
AMG

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MILLARD A. LIBBY,
Colonel, G. S. C.,
Secretary of the Air Staff.

File
9/15/43

Incl. m/c

ANG 471.82 WB

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E.O. 13526

17/2/82 J.C. Dow 4/1/77

Use of Special-Fused Bombs over Enemy Territory.

1 SEP 1943

Deputy Chief of Air Staff

AG/AS M&D, Air Ordnance Officer

EXP/b.n./71175

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Actg. Air Ord. Officer

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FROM: Chief of the Air Staff.

COMMENT NO. 2
MAL/mdg/5:65

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Dispatched
2 SEP 1943
AMG

SECRET

HILLARD A. LIBBY,
Colonel, G. S. C.,
Secretary of the Air Staff.

Incl. n/c

*File
9/13/43*

AMG 471.82 WB

AMG 471.82 WB

HEADQUARTERS ARMY AIR FORCES
ROUTING AND RECORD SHEET

1139

File No. 1197

Note -- A line will be drawn across sheet after each comment.

Tally No. AAF _____

CONFIDENTIAL
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SUBJECT: Nose Fuse Extension for Bombs.

DECLASSIFIED
GPO 1963
8 Nov. 2, 1977
7-216 U.C. Date 1/67

NO.	FROM	TO	DATE	COMMENTS
1.	AFCAS	AFRDB (Attention AFRDB)	7-11	<p>1. The following radio is quoted to you for <u>necessary action</u> and preparation of reply, if deemed necessary:</p> <p>"FOR ARNOLD FROM HANLEY STOP ABOVE SURFACE EXPLOSION OF THE BOMBS ESSENTIAL IN THIS TYPE DESERT WARFARE STOP RECOMMEND IMMEDIATE ACTION TO FURNISH TWO FOOT NOSE FUSE EXTENSION FOR ALL FIVE HUNDRED POUND BOMBS SENT THIS AREA STOP LEAVING ACCRA FOR NATAL JULY 10 END FITZGERALD"</p> <p><i>[Signature]</i> G.E.S. AFCAS</p>
2.	AFRDB	AFCAS	1942 7-15	<p>AFRDB R-2:mar</p> <p>This office has requested the Chief of Ordnance to furnish us information on which to base a requirement for a fuse of the type mentioned above. Conversation with Ordnance personnel indicates we have no such fuse on hand or under development. Fuses of this type were used at one time on fragmentation Bombs and artillery shells, but were discontinued as unsatisfactory.</p> <p><i>[Signature]</i> PSE F.L.A. Acting Dir./Bomb. R-2</p>
3.	CAS	HDB	7-17	<p>Is this the end of action in this case?</p> <p><i>[Signature]</i> W.E.H. Asst. S/AS</p>

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FORM 1, AF. Rev. 8/10/61

Page No. -1-

CONFIDENTIAL

1942 JUL 12 PM 4 19
DIRECTOR OF
MILITARY REQUIREMENTS
A. A. F.

1942 JUL 13 AM 10 50
DIRECTOR OF
MILITARY REQUIREMENTS
A. A. F.

JUL 18 42 AM



OFFICE OF
DIRECTOR OF BOMBARDMENT

JUL 13 42 AM



OFFICE OF
DIRECTOR OF BOMBARDMENT

1706

HEADQUARTERS ARMY AIR FORCE
ROUTING AND RECORD SHEET

Note - A line will be drawn across sheet after each comment.

CONFIDENTIAL

File No. _____

Tally No. AAF _____

SUBJECT: Nose Fuse Extension for Bombs

NO.	FROM	TO	DATE	COMMENTS
4.	AFRDB	AFCAS	1942 7-18	<p>AFRDB R-2:har R-2</p> <p>1. Further action will be taken as soon as the information requested from the Chief of Ordnance is received.</p> <p>2. Your office will be advised of action taken.</p> <p>Hq. Army Air Force JUL 20 1942 AAC RECEIVED</p> <p>Acting Dir. F.L.A. Acting Dir./Bomb.</p>
5.	AFCAS	AFRDB	1942 7-21	<p>For suspense until further report of action taken is available.</p> <p>W.H.H. S/AS</p>
6.	AFRDB	AFCAS	7/30	<p>AFRDB 20/epw</p> <p>1. The Ordnance Department has forwarded results of tests, on which they base their recommendation that no material increase in blast and fragmentation effect would result from the use of a 2 ft. extension on the nose end of a bomb. This recommendation, together with the consideration that the mounting of 2 ft. extensions on the nose of 500 lb. bombs would limit radically the ability to carry them in standard bomb bays, is the basis for the decision that the 2 ft. spike is not practicable.</p> <p>2. A cablegram summarizing the information, substantially as follows, was sent to AMCAC:</p> <p>"TESTS HAVE BEEN CONDUCTED ON BOTH DEMOLITION AND FRAGMENTATION BOMBS WHICH INDICATE CONCLUSIVELY</p>

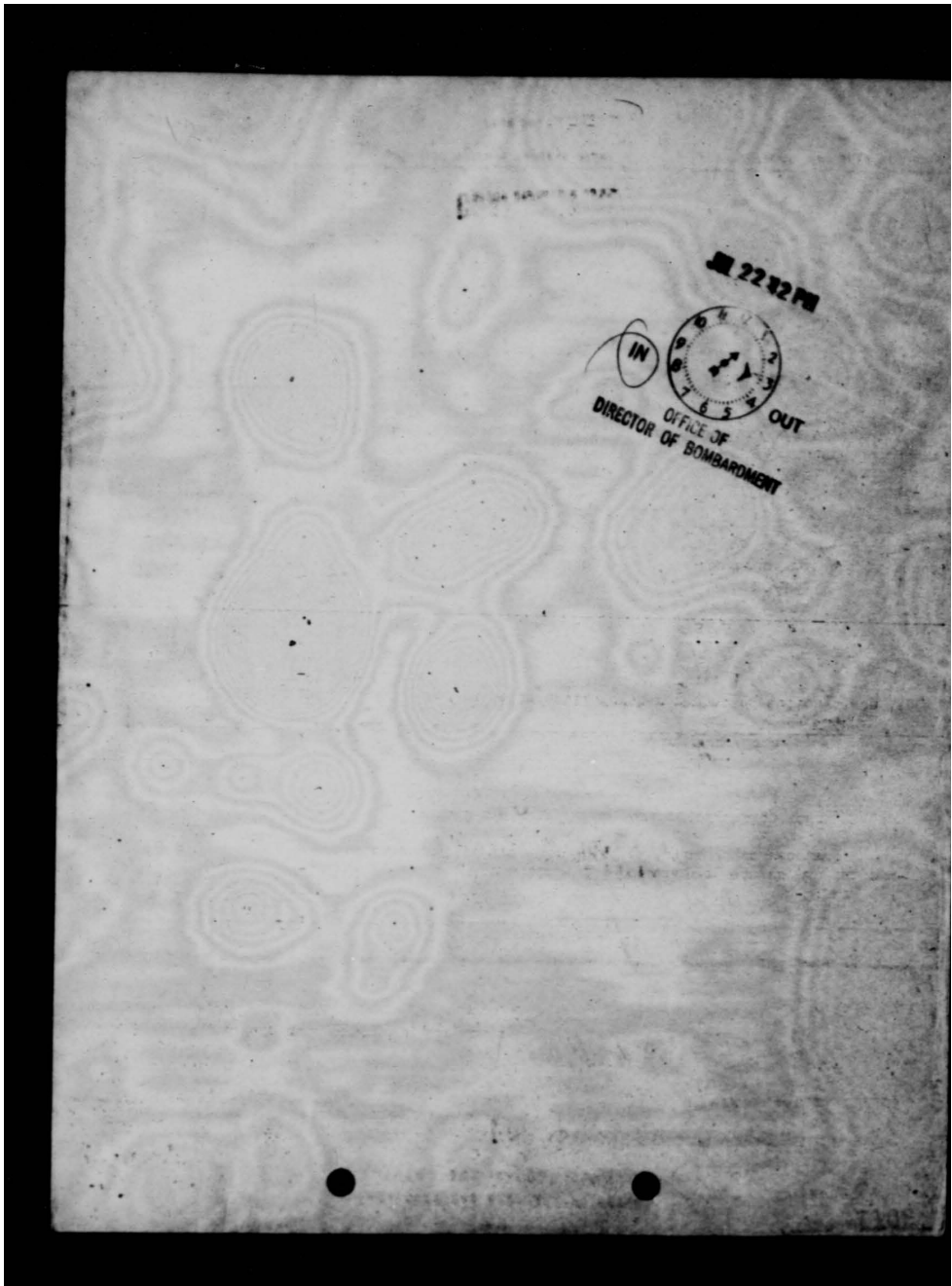
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F-4071, AF. Rev. 8/18/41

Page No. -2-

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HEADQUARTERS ARMY AIR FORCE
~~CONFIDENTIAL~~
 RECORD SHEET

Note -- A line will be drawn across
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File No. _____

Tally No. AAF _____

SUBJECT: Nose Fuse Extension for Bombs.

NO.	FROM	TO	DATE	COMMENTS
6. Cont.	AFRDB	AFCAS	1942 7/30	<p style="text-align: right;">AFRDB</p> <p>THAT NO MATERIAL INCREASE IN BLAST AND FRAGMENTATION EFFECT WILL RESULT FROM USE OF TWO FOOT EXTENSION ON NOSE FUZE SET AT INSTANTANEOUS ACTION STOP RECOMMEND THAT NOSE FUZE BE SET INSTANTANEOUS ACTION FOR THIS DESERT CONDITION"</p> <p style="text-align: right;"><i>FJA</i> F. L. A. Actg. Dir/Bomb. <i>28</i></p>
7.	AFCAS	File thru AFDAS	1942 8-1	<p>File</p> <p><i>not 5/AS</i></p>

*Noted
4/8*

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9-4091, AF. Rev. 8/16/61

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221 471.82 (9)

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07/10/2

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DDO Hqs.

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7/11/4
Gen. [Signature]

1 BOZ 2 OC 53

By ESTER L.C. Date 7/6/7

ACCRA JULY 10 1942 0015

CG ATC WASHINGTON

FOR ARNOLD FROM HANLEY STOP ABOVE SURFACE EXPLOSION OF THE
BOMBS ESSENTIAL IN THIS TYPE DESERT WARFARE STOP RECOMMEND
IMMEDIATE ACTION TO FURNISH TWO FOOT NOSE FUSE EXTENSION
FOR ALL FIVE HUNDRED POUND BOMBS SENT THIS AREA STOP LEAVING
ACCRA FOR NATAL JULY 10 END FITZGERALD

T.C.

NO. 502

0127

D.B. A. Seamans

RECD 0159

COMP. 0235

7/9/42

7/11/4

~~CONFIDENTIAL~~

Office, C., A.F.

JUL 11 1942

Received

7/11

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DDP 105
By SP/CC on 10/1/87

471.827

6th Ind.

(AG AAF)

WD HQ ARMY AIR FORCES, Washington, D. C. March 16, 1942.
TO: Chief of Ordnance.

Attention is invited to preceding 3rd Indorsement.

For the Commanding General:

1 Incl. n/c.

Dispatched
MAR 17 1942
AAG

JOHN B. GOOLEY
Lt. Col., A.G.D.
Assistant Adjutant General, A.A.F.

HEADQUARTERS			ARMY AIR FORCES				COORDINATION			
Chief of Staff	Secy of Staff	A.A.G.	A-1	A-2	A-3	A-4	A-WPD	A-Inspr.	Budget	Statistics

117-30

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anal. 471.827

AAF/A-4
HCB/mhh
(Written 3/3/42)

Subject: 00400.356/122 Puerto Rico (s) (on Radio)

End Inf.

War Department, Headquarters, Army Air Forces, Washington, D. C.
MAR 5 1942 To: Commanding General, Field Forces, Army War College,
Washington, D. C.

1. Forwarded as a matter pertaining to your jurisdiction.
2. In connection with the request for fuses, no tail fuses, other than the MLOG are available for issue at this time.

FOR THE CHIEF OF THE ARMY AIR FORCES

JOHN B. COOLEY
Lt. Colonel, A. G. D.,
Assistant Air Adjutant General

Dispa
MAR 5
AAG

MAR 4 1942
AAG

47182-5

HEADQUARTERS ARMY AIR FORCES							COORDINATION			
Chief of Staff	Per. of Staff	A. A. G.	A-1	A-2	A-3	A-4	A-4PH	A-4DP	Director	Section
						WES MAY TIB				

11P-39

all 47182-5

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DDO Ref.

1 Jul 64 20 June 1984

100 Data

35/2 4/17

OO 400.386/122 Puerto Rico (s)
Attn. F.I., Am. Sup. Div.

1st Ind.
(On Radio)

A.G. STONE/am

War Department, Ordnance Office, Washington, D. C., March 2, 1942.
To: A-4, War Department, Air Staff, Washington, D. C.

1. Referred to your office for such action as you may deem necessary.

2. There are no MOC or MOC-1 fuses available.

For the Chief of Ordnance;

s/ P.M. SELBY,
Lt. Col., Ord. Dept.,
Executive Assistant

2nd Ind.

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DDI WTS
10/10/80

COPY SECRET RADIOGRAM

10/10/80
BY: ELC JC. Date: 4/27

War Department Message Center
Wash. D. C.

Feb 27, 1942

From San Juan
to Chief of Ordnance

NO. 381 TWENTY SEVENTH

ATTN F S AMMUNITION SUPPLY DIVN AS THE M ONE ZERO SIX
T
TAILFUZE IS UNSUITABLE FOR USE AGAINST WATER TARGETS
REQUEST FOLLOWING SUBSTITUTE TAIL FUZES BE SUPPLIED THIS
DEPT SEMICOLON THREE SIX FOUR ZERO AN DASH M ONE HUNDRED
A ONE OR M ONE HUNDRED COMMA NINE NINE NINE AN DASH M
ONE HUNDRED ONE A ONE COMMA ONE HUNDRED SEVEN AN DASH
M ONE HUNDRED TWO A ONE OR M ONE HUNDRED TWO STOP
REQUEST SHIPMENT OF DEPTH BOMBS BE EXPEDITED COMMA
URGENTLY NEEDED STOP QUESTION IF LONGER DELAY PELLETS
FOR ABOVE MENTIONED FUZES HAVE BEEN EFFECTED REQUEST
INFORMATION ON SAME

SKINNER

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DECLASSIFIED
1000 HZ
8 Dec 8 10 10 AM 1972
By: *SLG* / *10/10/72*

RECEIPT

DATE _____

SUBJECT: 00400.556/122 Puerto Rico (s) (on Radio).

- 1. Received from the Headquarters, Army Air Forces, second indorsement, above subject.

OFFICER NAME

OFFICE

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Communication No. 1953

412.41 (2-27-42)

1st Ind.

DECLASSIFIED

DDI HRS

18 June 1978

by *[initials]* JC, Date *4/1/87* M-5

War Department, OCSigO, Washington, D. C. February 28, 1942. TO: The Chief of the Army Air Forces

Shipment ordered diverted as directed in basic communication.

For the Chief Signal Officer:

J. M. Piner

J. M. Piner,
Major, Signal Corps.

3-4/98

*File
mac*

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air 471.82 (7)*

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WAR DEPARTMENT
HEADQUARTERS OF THE ARMY AIR FORCES
WASHINGTON

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DDO IIS

APR 6 20 June 1974
BY 278 AC Date 3/6/77

R-3809-42
2/28/42

FEB 27 1942

SUBJECT: Shipment of Detonator Fuses.

TO: Chief Signal Officer
Attention: Storage and Issue Division.

1. Information has been received at this Headquarters that twelve (12) cases of detonator fuses from the British Naval Liaison Officer, Vallejo, California, are now in the Brooklyn Freight Yards, and are consigned to the Philadelphia Signal Depot.
2. It is requested that these items be shipped to the Ordnance Property Officer, Patterson Field, Fairfield, Ohio.

FOR THE CHIEF OF THE ARMY AIR FORCES

John B. Cooley

JOHN B. COOLEY
Lt. Colonel, A. G. D.,
Assistant Air Adjutant General

RECEIVED
FEB 27 1 11 PM '42
OFFICE OF THE
CHIEF SIGNAL OFFICER



~~DECLASSIFIED~~
~~SECRET~~

AAG/1327
Air 25471.82(4)

COMMUNICATION NO. 1953

Div. No. M-5

WAR DEPARTMENT
Office of the Chief Signal Officer
Washington

File No. 412.41(2-27-42) Date _____

SUBJECT: Shipment of Detonator Fuses

Received of the Chief Signal Officer the following
described communication(s):

Letter dated _____

1st Indorsement(s) dated 2-28-42

_____ Inclosure(s)

Officer

Rank

Office

NOTE: Return to the Chief Signal Officer.

*AAC/329
2002071.52*

DECLASSIFIED

FEB 14 1942

Written 2-13-42

AAF/A-4/471-38

DECLASSIFIED CONFIDENTIAL

Fuse storage unit, Portable - Recommended as Standard.

II USW

I Ord

I TAG

I SW directs

Dispatched
FEB 20 1942
AAG

471.82 (2)

AAF/A-4
RCC/mab

- I. 1. The fuse storage unit, Portable is not favorably considered.
 - 2. Under present shipping methods the fuses are hermetically sealed in tin containers and well protected from the weather. They are stored with the bombs or fin assemblies and dispersed with bombs.
 - 3. The use of a portable storage unit would tend to defeat the policy of dispersal and congregate fuses in vulnerable storage where quantities of fuses may be lost through enemy action or fire immobilizing a large number of bombs on hand.
- II. To be advised of the action taken.

Incl.

NOTED... GRC 2/19/42
Chief of the Air Staff

Ltr fr HQ/ASST to
AAG with REPLY SHEETS ARMY AIR FORCES - COORDINATION

Chief of Staff	ASST. CHIEF OF STAFF	ASST. CHIEF OF STAFF	ASST. CHIEF OF STAFF	ASST. CHIEF OF STAFF	ASST. CHIEF OF STAFF	ASST. CHIEF OF STAFF	ASST. CHIEF OF STAFF	ASST. CHIEF OF STAFF	ASST. CHIEF OF STAFF

Acting Assistant Chief of the Air Staff, A-4
TUN/ASST
RCC

DECLASSIFIED (Over)
CONFIDENTIAL

AAF-39

471.82 (2)

DECLASSIFIED

AAF/A-4
RCC
Written 2-17-42

MEMORANDUM FOR RECORD: Fuse storage unit recommended by the Subcommittee of the Ordnance Technical Committee as standard item of issue was not favorable considered due to the fact that fuses are dispersed with bombs or fin assemblies in hermetically sealed containers, well protected from the weather and the congregation of fuses as contemplated in a storage unit would make it very vulnerable to enemy action. The Under Secretary of War is to be advised of this action.

hnh

HEADQUARTERS ARMY AIR FORCES - COORDINATION										
Chief of Staff	Sec'y Air Staff	A.A.G.	A-1	A-2	A-3	A-4	A-WPD	A-Insp.	Budget	Statistics
	JRC									

DECLASSIFIED

AAF-39

DECLASSIFIED
4000 103

Class. & Declass. Authority: 3/10/77
By: 397cc, LC, Date: 3/10/77

DECLASSIFIED

DECLASSIFIED

COMMUNICATIONS SHOULD BE ACCOMPANIED BY CARBON COPY AND ADDRESSED TO

~~CONFIDENTIAL~~

WAR DEPARTMENT

Adelman/inf

OFFICE OF THE CHIEF OF ORDNANCE

WASHINGTON

February 10, 1942

TO INSURE PROMPT ATTENTION
IN REPLYING REFER TO

Ammunition Division
Industrial Service

O. O. WAR DEPT.
334.8 / 167 (C)
FEB 10 1942

Subject: Fuse Storage Unit, Portable - Recommended as Standard.

To : The Adjutant General THROUGH
The Under Secretary of War.

1. There is being forwarded herewith a copy of the report of the Sub-committee of the Ordnance Technical Committee, dated February 4, 1942, which report has been approved by the Ordnance Committee and by the Chief of Ordnance and is recorded as Item 17774, Ordnance Committee Minutes. This report contemplates the classification as standard of a portable fuse storage unit to be designated, Fuse Storage Unit, Portable, for use at dispersed airdromes for the storage of bomb fuses.

2. The requirement as well as the design originated with the Air Force Bombard Command and therefore considerations which led up to the development are not known to this office. Bomb fuses as issued are already in sealed metal containers which protect them from moisture. The fuses, arming wire and other accessories are packed in the same crate with the bomb fin to assist in insuring that complete units are available. This applies to bombs larger than the 100-lb, these larger bombs being issued in two units, the bomb body and the fin crate. Bombs of 100-lb. size are issued complete with fins assembled and with accessory box in a single crate.

3. It is recommended that clearance for procurement be granted by the Under Secretary of War and that the communication be forwarded to The Adjutant General in the matter of classification. It is further recommended -

a. that the item be designated:

Fuse Storage Unit, Portable.

b. that it be classified:

Required type
Adapted type
Standard

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CONFIDENTIAL

OFFICE OF THE CHIEF OF ORDNANCE



CONFIDENTIAL

~~CONFIDENTIAL~~

DECLASSIFIED

February 10, 1943

Subject: Fuse Storage Unit, Portable - Recommended as Standard.

To : The Adjutant General THROUGH
The Under Secretary of War.

1. that the Ordnance Department be charged with the storage and issue.
2. that the item be classed: Essential, Non-critical.
3. that the basis of issue as given in paragraph 2_a of the Sub-committee report be approved.
4. that the requirements of 1504 Units, Fuse Storage, Portable @ \$400.00 - \$601,600.00 be added to the Fourth Supplemental Expenditure Program, as recommended in paragraph 4 of the Sub-committee report.

EARL McFARLAND
Brigadier General
Assistant to the Chief of Ordnance

1 Inclosure:
Cy. Item 17774, O.C.N.

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+

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DDO 11a

1777A
Feb. 4, 1942

Ed. Jan. & 20 June 1974
By: JSC/LC, Date: 4/1/77

From: Subcommittee on Ammunition Storage

To: The Ordnance Committee, Technical Staff

PORTABLE FUZE STORAGE UNIT - Recommended as standard.

1. REFERENCES:

a. O;O. 400.34/937

2. DISCUSSION:

a. Reference 1a is a communication from the Headquarters Air Force Combat Command to the Chief of the Army Air Forces requesting that the table of basic allowances No. 9, Ordnance Department, October 1, 1941 be amended to provide for the issue of portable fuze storage units on a basis as follows:

	1	v	2	3	4	5	
Item	For Mobilization		for Peace				Remarks and Basis of issue.
Fuze Storage Unit (Portable)	6		6	-			Per Ordnance Co. Avn. (Air Base)
	5		5	-			Per Platoon Ord. Co. Avn. (B)

b. The storage unit referred to is required in order to provide a means of sheltered storage for bomb fuzes under field conditions and where bombs are in open storage. This storage unit has exterior dimensions approximately 18 feet long, 6 1/2 feet high, and 5 feet wide. It is made up of 12 gage corrugated iron sheets and has an arched roof. The entire structure is shipped knocked down and is so designed that it can be readily erected in the field with ordinary hand tools by unskilled labor. The storage units will be transported with vehicles now authorized for issue to Ordnance units. An outline drawing of the storage unit is shown on Drawing 19-19-87A, title "Details of Units in Bomb Storage Area at Dispersed Airdromes", dated December 11, 1941.

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g. This recommendation was approved by the Chief of the Army Air Forces by first indorsement on reference 1g and it was forwarded to The Adjutant General through the Chief of Ordnance for necessary action. The Adjutant General stated that it would be necessary to standardize this item in accordance with Army Regulation 850-25.

3. RECOMMENDATIONS:

The Sub-Committee accordingly recommends:

- a. that the necessary steps be taken to have the storage unit referred to herein adopted as standard and that it be designated Fuse Storage Unit, Portable.
- b. that the basis of issue be 6 per Ordnance Company Aviation (AB) and 5 per Platoon Ordnance Company Aviation (B)
- g. That this material be placed in the unclassified category.

Appendum:

- 1. Total quantity involved if above basis of issue is approved is 1504.
- 2. Total cost of this quantity is \$601,600.00.
- 3. Availability of funds - None allocated for this purpose.

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COPI

Subject: PORTABLE FUZE STORAGE UNIT- Recommended as Standard.

FUNDS:

4. The following addition is recommended to the Fourth Supplemental Expenditure Program:

1504 Units, Fuze Storage, Portable - \$400.00 - \$601,600

This is a new item and does not require removal from the program of any displaced item.

5. Funds for this procurement should be taken from the "Reserve for future recommendation of the Chief of Ordnance" shown on page 6 of the Fourth Supplemental Expenditure Program of which a sufficient balance still remains.

Action by: Fiscal and Legal Division, General Office
War Plans Division, General Office,

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DDI 102

By Z/S/C & 29 June 1978
Date 2/1/77

Sub-Committee on Ammunition Storage

Subject: PORTABLE FUSE STORAGE UNIT - Recommended as Standard.

J. K. CRAIN
Brig. Gen., Ord. Dept.

G. M. BARNES
Brig. Gen., Ord. Dept.

S. R. STRIBLING
Col., Ord. Dept.

*R. S. COUPLAND
Lt. Col, (O.D.), A. C.

JOHN G. MOORE
Lt. Col., Air Corps

Action by: Ammunition Division, Industrial Service.
(Approval of higher authority is required)

*Signed, subject to understanding that such storage of fuses will be in small quantities, and well dispersed or protected, precluding the possibility of immobilizing bombs on hand for lack of fuses through enemy action or fire.

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AAF/A-2
MFO-24

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DECLASSIFIED
DDG 113

1 Jan & 30 June 1974
25/72 LC Data 4/67

November 1, 1941

MEMORANDUM FOR: Assistant Chief of Staff, G-2.

**SUBJECT: Treaty S.A. of Geneva and Tennesse
Machine Company.**

471820

Attached herewith is a copy of letter received
in this office from Dunsmuir Airmen to Switzerland, con-
cerning the affairs of Geneva and Tennesse Machine Co.

HERMAN F. SCARSON,
Brig. General, U. S. A.
Asst Chief of the Air Staff, A-2.

1 Incl.
Copy of ltr. fr.
Dunsmuir Airmen to
Switzerland, 8/4/41

Dispatched
NOV 4 1941
AA3

HEADQUARTERS ARMY AIR FORCES - COORDINATION													
Chief of Staff	Secy of Staff	Air Staff	A. A. O.	A-1	A-2	A-3	A-4	A-5	A-6	A-7	A. Insp.	Budget	Sta- tistics
					7125								

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AAF-30

COPY

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DDO #72

BRITISH CONFIDENTIAL
~~CONFIDENTIAL~~
WASHINGTON, D. C.

By ELC J.C. Date: 4/6/77

By Safe Hand

BAC/3156

October 31st, 1941

Personal and Confidential

Major Charles W. Kerwood,
U.S. Army Air Staff,
Room 3105, Munitions Bldg.,
Washington, D. C.

Dear Chuck:

Herewith copy of letter from Buenos Aires to Switzerland concerning the affairs of Tavaré S.A. of Geneva and Tavannes Machine Company.

One of your colleagues may possibly be interested in this information as to the present state of affairs in the Argentine.

Kindest regards,

Sincerely yours,

/s/ Biddie.

CHB/mf

~~CONFIDENTIAL~~
DECLASSIFIED

COPY

No. BER 52295
From: G. Gradenwits,
Echeverria 2835,
Buenos Aires.
To: Dr. Walter S. Schliess,
Freiestrasse 111,
Basle, Switzerland.
Date: 4th August, 1941.

~~CONFIDENTIAL~~
~~DECLASSIFIED~~

DECLASSIFIED
DDO HRS
10/23/80 June 1974
By: *Exp. Sec. Mr. Dale Slub?*

Subject: Machinery for a fuse-factory in the Argentine. Covering letter and copies of letters, both August 4th, to Tavano S.A. Geneva and Tavannes Machines Co., S.A. Tavannes. Originals sent by air mail to one of writers' daughters (names not given) to be transmitted to addressee.

Through Mefina S. A. Binningen (a financing company) writer represents both Tavano S.A. and Tavannes S.A. in the Argentine. "Trustee of the companies in Switzerland is Dr. P. Anliker."

Writer is in contact with Colonel BMS E. Gallo who is now Chief of General Staff of the 1st Division and has no direct activity in connection with the Argentine Defence Programme, and also with Major Juan M. Galgano who was for several years in Bofors and is known to the Addressees. He is now Director of the Artillery Munitions Factory at Rio Tercero. This factory is at present being equipped, and without exception the machines were supplied with, writer's collaboration, by Carl Hasse & Wreide G.m.b.H. Berlin. The fuse-factory is to adjoin the munitions factory, and, preliminary to the drawing up to a lay out for this, Tavano S.A. and Tavannes S.A. are requested to send particulars of machines for the production of time-fuses of two types (Brenn-Zunder and Zeitzunder - combustion and mechanical fuses).

The production of the smallest Tavannes machine will be the basis of the installation. At present only general data are required; but it is virtually certain that the Tavano (mechanical) time-fuses will be adopted and that the works for them will need to be bought ready-made for a long time to come.

Fuses constructed by Argentine Officers are held inferior. An offer is also required for a loading plant for 2 cm. Cerlikon shell cases, 2/3000 in eight hours. Cerlikon (i.e. Maschinenfabrik Cerlikon, Zurich) will be approached direct.

Writer states in the covering letter that he is in a uniquely favourable position in regard to order for the Argentine Army and Navy.

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SAS 471.86

KAR
DECLASSIFIED
DOD IAW
20 June 1971
BY *[Signature]* JLC; Date 3/11/77

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DDO ltr
1 Jan. & 23 June 1974
By: *ES/RC* M.C. Date: *4/6/77*

Defense Against Attack of Air Bases with Spikes and Booby Bombs.

MAL/Imm 5265

1 AFCAS AFADS 1942 12-11

General Arnold has noted the attached.

M. A. LIBBY,
Lt. Col., G. S. C.

3 Incls.

Dispatched
DEC 11 1942
AAG

File
ei

- Incl. #1 M&R 11-24-42 fr AFCAS to A-4
Subj: Explosive Pencils and Pocketsbooks
- #2 M&R 11-24-42 fr AFCAS to A-4
Subj: Magnet to pick up spikes in North Africa
- #3 Memo for CAS fr A-4, dated 12/8/42, above subject.

all out 471.86 (2)

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as a's 471.86 (2)

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~~CONFIDENTIAL~~

DDO Ins.

1 Jan. & 20 June 1972

Sp. File 31467 LC Date

Explosive Pencils and Pencilbooks.

3773
GHS/hd

1 AFGAS Assistant 1942
Chief of - 11-24
Air Staff
A-4

1. You will investigate and issue the necessary instructions to the Material Command as to what can be done to eliminate these explosive pencils and pencilbooks as reported in recent cable from Klambever. What can we do to eliminate these explosive gadgets? Possibly a steel roller will take care of it. Anyway follow through and take necessary action.

Dispatched

NOV 20 1942

AAG

J. De
Da

Cy to
General Hanley
Mat. Command

GEORGE E. STRATHEMER,
Major General, U.S.A.,
Chief of the Air Staff.

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Miss Ingram
air 04 471.86 (2)

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17/CC 3/11/77

JUL 28 1947

Air Marshal Arthur T. Harris
1434 Sixteenth Street
Washington, D. C.

My Dear Air Marshal:

With reference to your letter of July 14, I have been checking with the Ordnance Department and find that R.D.X. explosive production is progressing quite rapidly.

There seems to be no question of stability at this time, and the Bureau of Ordnance of the Navy Department is conducting a very thorough and complete investigation of this material. To date, this explosive has been found to be more powerful than T.N.T., and about the same power as tetryl. It is particularly effective under water, and for that reason, is of particular interest to our navy.

Some \$70,000,000 has been appropriated for the production of R.D.X., and a contract has been made with the Dupont Company for building a plant. This Company now has several engineers on their way to England to obtain full information on the production of R.D.X. It will be some time before this plant is completed and production can be set up in the United States, and the use of R.D.X. will of necessity be confined to very special projects.

While results indicate that R.D.X. is superior to T.N.T. in many ways, the cost of \$1.80 per pound as opposed to \$.15 per pound for T.N.T. is a considerable item. The transfer to this new explosive would require a complete revamping of bombs and bomb loading establishments.

The production of R.D.X. is being pushed as rapidly as possible, and will augment and replace T.N.T. as it becomes available. While every effort is being made to push this production, it is not being allowed to slow down or interfere with the production of ammonium nitrate and T.N.T. explosives.

Sincerely yours,

H. H. ARNOLD,
Major General, U.S.A.
Deputy Chief of Staff for Air

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AAG 471 86 (1)

AAG 471 86 (1)

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SAS 471.88

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LAD 105
MAY 20 1962
BY: 15/KCS
3/16/67

Subject: Ammunition Storage Area - Borinquen Field, Puerto Rico.

8th Ind.

Headquarters, Army Air Forces, Washington, D. C., FEB 2 1942
To The Adjutant General, Washington, D. C.

1. The matter pertaining to the acquisition of additional land for a magazine area at Borinquen Field is being handled by separate correspondence by the General Staff, War Plans Division, in coordination with the General Headquarters, U. S. Army.

2. Attention is invited to Paragraph 4 of the preceding 6th Indorsement regarding the use of concrete instead of steel material for the construction of the igloo magazines proposed for the Borinquen Air Base. The decision as to whether these igloos should be constructed of concrete or steel will be a matter to be determined by the Office, Chief of Engineers in coordination with the Air Base Commander, Borinquen Field. In the choice of these materials, it is believed expedient to consider the following factors:

- (a) The relative availability of each type of material.
 - (b) The length of time required for the construction of concrete as compared with steel igloos.
 - (c) The comparative cost of construction of igloos from each type of material.
 - (d) The requirements as to permanency of these structures.
- IDC/fed

3. Steel igloos are not considered by the Ordnance Safety Section as "barricaded" magazines, unless an earth embankment is constructed almost entirely surrounding these structures, whereas the concrete igloo requires a barricade in front only, to meet Ordnance safety requirements. The safety requirements required for a barricaded magazine are one-half (1/2) of those required for an unbarricaded magazine. (Ref. Ordnance Safety Manual O.O. Form No. 7224, dated September 2, 1941).

4. It is understood that this magazine installation is under the direction of the Commanding General of the Caribbean. It is requested that final layout plans showing the proposed location of the magazines with relation to the flight field, Post buildings and runways, be furnished (in quadruplicate) to the Office, Chief of the Air Corps, Buildings and Grounds Division, Ordnance Sub-Unit, for its files.

FOR THE CHIEF OF THE ARMY AIR FORCES

1 Incl. n/c

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EX. 1011
AIR ARMS

TJH/hw
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Case 08471 886

EXECUTIVE
ADJUTANT GENERAL
Being planned
Defense Command
RESEARCH
INSPECTION
INTELLIGENCE
LEGAL
MAY
MEDICAL
MILITARY PERSONNEL
PLANS
TRAIN & OPER

17/8/1942

Griffin
G.P.

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HEADQUARTERS
Office of the Air Adjutant General
Washington, D. C.

DECLASSIFIED

DATE 4 20 June 1988 BY *SP10* *1/17?*

Date Jan. 3, 1941

To:

Chief of the Air Corps

for necessary action

Wm W. Dick (initials)
Lt. Col., A.C.G.
Air Adjutant General.

A.A.F.-10-2.

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REF ID: A67092

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DOD ITC

1 Jan. & 30 June 1975
10, Dec. 1967

4th Ind.

6-3.

MEMORANDUM, PUERTO RICO AREA SERVICE COMMAND, CARLETON AIR FORCE, Leedy Field, Ponce, Puerto Rico, November 23, 1941. TO: Commanding General, Puerto Rican Department, San Juan, Puerto Rico.

1. This headquarters concurs in the opinions expressed in the fourth indorsement.

/s/ Thomas V. Hasty
THOMAS V. HASTY.
Colonel, Air Corps,
Commanding.

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DOD REG.

DATE 2/12/82 BY J.C. DEAN

471

3rd Ind.

(S: 11-11-41)

HEADQUARTERS, PUERTO RICAN AREA, CARIBBEAN AIR FORCE SERVICE COMMAND, Lacey Field, Ponce, Puerto Rico, November 7, 1941. TO: Commanding Officer, Borinquen Field, Puerto Rico.

For Compliance with preceding indorsement through this Headquarters not later than November 11, 1941.

By order of Colonel HASTY:

/s/ L. O. Zimmerman
L. O. ZIMMERMAN,
Second Lieut., Air Corps,
Adjutant

471.

4th Ind.

WGH/t&p

BASE HEADQUARTERS, Borinquen Field, Puerto Rico, November 10, 1941. TO C. O., Headquarters, Puerto Rican Area, Caribbean Air Force Service Command, Lacey Field, Ponce, Puerto Rico.

1. Possible sites for location of a magazine area conforming to the Ordnance Safety Regulations do not exist on the present reservation. Excellent sites exist in the low range of foothills about one mile South of the reservation, or that part of the platted area South of the runway could be made to conform to the regulations for peace time storage by the purchase of a strip of land adjacent to and South of the present boundary of the reservation of ample size to accommodate an adequate installation. This location, however, would present an ideal target for enemy water or aircraft weapons during periods of hostilities.

2. In the opinion of the Base Commander, no military necessity exists which would warrant the violation of safety regulations.

/s/ Edward A. Hillery
EDWARD A. HILLERY,
Lieut. Colonel, Air Corps,
Commanding

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1903 803
8 Jan 20 1988
BY: *ES/CC* 101 Date: *Jul 97*

NOTE: Basic ltr. OGAG (12-83) to CG, Puerto Rican Department, San Juan, Puerto Rico, TRHU: The Adjutant General., 10/22/41

SUBJECT: Ammunition Storage Area - Borinquen Field, Puerto Rico.

AG 600.12 (10-22-41)MG 1st Ind. HPM/hm - 1712.

War Department, A.S.O., October 24, 1941. - To: Commanding General, Puerto Rican Department.

For the necessary action.

By order of the Secretary of War:

/s/ Y
Adjutant General.

1 Incl. n/c.

471 - General 2nd Ind. S:11-12-41 HDP:m/c

HEADQUARTERS PUERTO RICAN DEPARTMENT, San Juan, P. R., November 5, 1941
TO: Commanding Officer, P. R. Area, Caribbean Air Force Service Command, Lacey Field, P. R.

It is requested that the information called for by paragraph 3, basic letter be obtained and furnished this headquarters.

For the Commanding General:

/s/ E. F. McCurdy
E. F. McCURDNEY
Major, A. G. D.,
Assistant Adjutant General.

- 2 -
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~~SECRET~~

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500 100

by *JF/SC* on *1/10/77*

IMMEDIATE ACTION

SUBJECT: Air Force Combat Command Ammunition War Reserve.

AG 471.88 (6-26-41)MC-D 3rd Ind. LFL/gwd - 1712.

War Department, A.G.O., July 16, 1941. - To: The Commanding General, Air Force Combat Command.

The present limited stocks of antiaircraft ammunition are required for the combat allowances of Task Forces. Until such time as these stocks are materially augmented by deliveries from future production, the recommendation to establish reserves for the anti-aircraft units which may be assigned to the Interceptor Command cannot be favorably considered.

By order of the Secretary of War:

Adjutant General.

COPY TO: Chief of Coast Artillery,
Ref. his 2nd Ind., 471.308/AA, 7, July 5, 1941.
✓ Chief of the Army Air Forces.

471.880
①

DECLASSIFIED -3

SECRET

AG 471.880

COPY COPY COPY

~~SECRET~~
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DDI file

30 June 1974
By: *ES/CS* SAC, Date: *11/27*

471
AG 600.12 (10-22-41)MD
PMO 471.88/26-1

6th Ind.

HEADQUARTERS PUERTO RICAN DEPARTMENT, San Juan, P. R., December 23, 1941.
To: Adjutant General, Washington, D. C.

1. This Headquarters concurs in the 6th Ind. in that no military necessity exists for the location of 22 igloos, referred to in the attached inclosure, within the present limits of Borinquen Field reservation, and that an excellent site exists in the low range of foothills about one mile south of the present reservation.
2. In compliance with par. 4, 6th Ind. to AG 600.12 (3-22-41) MC-3, dated October 10, 1941, a restudy is being made of the requirements for ammunition storage facilities for the Puerto Rican Department.
3. It is believed desirable to concentrate storage near Borinquen Field in one area, and it is therefore recommended that the plans for the construction of the above mentioned 22 igloos and the three small arms magazines, intended for location on the Borinquen Field reservation, be grouped with other magazines and included in one installation in the area referred to which is approximately 1 mile south of Borinquen Field.
4. For the necessary change in location of the 22 magazines and 3 small arms magazines, additional funds will be required due to the fact that some construction had already been undertaken, and that concrete instead of steel igloos are desired at the new location. The additional funds will be included in the restudy of ammunition storage in Puerto Rican Department. It will also be necessary to acquire the land for the proposed new installation. A complete description of the project for the proposed area south of Borinquen Field will be furnished by the 6th Ind. to the letter mentioned in par. 2.

For the Commanding General:

Handwritten signature
/s/ Joe H. Dalton
JOE H. DALTON
Col. A.G.D.
Adjutant General

SUBJECT: Ammunition Storage Area - Borinquen Field, Puerto Rico.

AG 600.12 (1022041)MSO

7th Ind.

RMW/rm-1705

War Department, A.G.O., December 31, 1941. - To: Chief of the Army Air Forces.

(initials)

1 Incl. n/c

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SAS 471.94

(Handwritten initials)
DECLASSIFIED
DOO ltr. 1974
8 20 & 20 June 1977
BY *(Handwritten initials)* JCI DAW/1/77

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5 JUL 1945

Fleet Admiral Ernest J. King
Commander-in-Chief, U.S. Fleet &
Chief of Naval Operations
Navy Department
Washington 25, D. C.

Dear Admiral King:

Recent intelligence from Germany emphasizes the interest the Japs have had in aircraft developments along the lines of the No 163 and 262.

Present evidence indicates the probability of the early appearance of a rocket type interceptor, patterned along the lines of the No 163. Its appearance in some numbers is undoubtedly delayed by their difficulties in producing adequate rocket fuel. It is improbable that the No 262 turbo-jet type aircraft will appear as early with difficulties the Jap has had in developing a satisfactory jet unit. Nevertheless, we know he is working energetically along these lines in a desperate attempt to stave off defeat from the air.

I consider it imperative that we examine constantly evidence coming to hand for confirmation of Jap progress in the rocket and jet field. I have so informed Generals Hummy and Lenny urging them to alert all sources of intelligence for reports of aircraft of unusual design, lengthening of, lengthened or paved runways, blast marks and other evidence of such development.

Constant vigilance will prevent the Jap from exploiting any air developments he may have learned from the Sun. Toward that end, the Army Air Forces will welcome any information along these lines which may come to the attention of your people.

Sincerely,

Signed

H. H. ANNEB
Commanding General, Army Air Forces

*Re-written in Gen. Arnold's office 7/14/45
GMB*

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5 JUL 1945

General George G. Henny
HQ. Far East Air Force
APO 925, c/o Postmaster
San Francisco, California

Dear George:

Recent intelligence from Germany emphasizes the interest the Japs have had in aircraft developments along the lines of the Me 163 and 262.

Present evidence indicates the probability of the early appearance of a rocket type interceptor, patterned along the lines of the Me 163. Its appearance in some numbers is undoubtedly delayed by their difficulties in producing adequate rocket fuel. It is improbable that the Me 262 turbo-jet type aircraft will appear as early, with difficulties the Jap has had in developing a satisfactory jet unit. Nevertheless, we know he is working energetically along these lines in a desperate attempt to stave off defeat from the air.

I consider it imperative that we examine constantly evidence coming to hand for confirmation of Jap progress in the rocket and jet field. I urge that your photo reconnaissance people and your P/W interrogators, indeed, all sources of intelligence, be alert for aircraft of unusual design, lengthening of, lengthened or paved runways. It is to be noted that blast marks and tail-tale signs such as the aforementioned gave us our first clues in Germany.

We have the Hip where we want him and constant vigilance will prevent his having a chance to exploit anything he may have learned from the Hun.

Sincerely,

Signed

H. H. ARNOLD
Commanding General, Army Air Force

*As rewritten in
Gen. Arnold's
office 7/4/45*

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By: JS

31/1/77

THE END

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