DECLASSIFIED

Authority NND 943011

P SECRET DISPATCH SE ON, ROOM 5005

	<u> </u>		RECORDS SE	BUILDING
DRAFTER	EXT.		NEW WAR DEPARTMENT	PRECEDENCE
ROM_ JCS EVA	LUATION BOARD		ASTERISK (*) MAILGRAM ADDRESSEE	14
- KUM		72.		PRIORITY
RELEASED BY		ACTI ON	JCS	ROUTINE
DATEO	6 JULY 46	l .	003	PEFERRED
	aska \	FOR		BASEGRAM
OR CODEROOM	0143			
DECODED BY	MURPHY	*0		PRIORITY
PARAPHRASEDTENNA	NT CHEEMER BARNARE	FORMATION		ROUTINE
3Y	BY COLOR BARNARIE	FOR	2.50	DEFERRED
ROUTED BY TEN	INANT BY	2		BASEGRAM
NLESS OTHERWISE INDICAT	ED THIS DISPATCH WILL BE TRANSMITTED	ŴΙΤΙ	H DEFFREED PRECEDENCE AND AS ADMINISTRATIVE.	IF OPERATIONAL
	05173	1 Z	NCR 3647	CHECK BELOW
PAGE 1 OF 7			<u> </u>	
riginator fill	in DATE AND TIME GROUP	1	(0	se G. C. T.)
			ONE INCH CLEAR SPACE BEFORE BEGINNI	
POARD DAD	SECRET. FOR JOINT	CF	HIEFS OF STAFF FROM JCS E	VALUATION
BOARD. RAD	/(VCS	153	CHIEFS OF STAFF. Our	Annual or the definition of particular parti
1. IN COMP	LIANCE WITH A DIRECT	TIV	FE FROM THE JOINT CHIEFS JATION BOARD PRESENTS THE	OF STAFF
DATED 27 FE	BRUARY 1946, "THE EV	ALL	JATION BOARD PRESENTS THE	FOLLOWING
1 JULY 1946 EVALUATION	. THIS REPORT COVER MUST AWAIT FULL COLI	RS LEC	B TESTAA, HELD AT BIKINI GENERAL OBSERVATIONS ONL CTION AND ANALYSIS OF DAT	Y. DETAILE A FROM
OBSERVERS A	ND INSTRUMENTS AND V	۷IL	L BE REPORTED AT A LATER	DATE.
			PECTED TARGET SHIPS THE DIFFORM AN AIRPLANE 20 MIL	AY BEFORE
			MILES OF THE ATOLL FOR A SAFETY CLEARANCE HAD BEE	
THE MEMBERS	FLEW TO BIKINI AND	BF	GAN THEIR EXAMINATION OF	
			EN STUDIED, AND MILITARY	
ecientie:c	enecial iete intervis	-1.,,	D IN AN ATTEMPT TO OUT A	IN AN OVER
			D, IN AN ATTEMPT TO OBTA PRIOR TO THE COMPILATIO	IN AN OVER-
	The Company of the Co	. · ·	The Company of	., 01 755
THE DATA.				
3. FROM IT	S PREVIOUS STUDY OF	TL	IE PLANS FOR THE TEST, AN	D FROM ITS.
			THE BOARD CONSIDERS THAT	THE TESTION
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	No. 2 FILE. 05	1/3	1Z No. 3F-1 OR CHARING DISCO-CCS DI	CROUP
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MAY RE HAND	LED AS CORRESPONDEN	CE	OF THE SAME CLASSIFICATE	PENV :
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## P SECRET DISPATCH

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PAGE 2 OF 7	051731	Z	NCR 3647	CHECK BELOW
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WAS WELL CONCEIVED AND EXECUTED BY THE SERVICES IN CLOSE COOPERATION WITH A LARGE CIVILAAN STAFF. IT IS SATISFIED THAT THE CONDITIONS OF

THE TEST WERE WELL CHOSEN AND THAT THE HIGHEST SKILL AND INGENUITY HAVE BEEN USED TO OBTAIN A MAXIMUM AMOUNT OF DATA IN AN UNBIASED,

SCIENTIFIC MANNER. IT BELIEVES THAT THE COMMANDER, STAFF AND PERSONNEL OF TASK FORCE (1) DESERVE HIGH COMMENDATION FOR THEIR

EXCELLENT PERFORMANCE AND THEIR NOTABLE COOPERATIVE SPIRIT.

- 4. EFFECTIVE PRECAUTIONS APPEAR TO HAVE BEEN TAKEN TO SAFEGUARD PERSONNEL AGAINST RADIOACTIVITY AND ASSOCIATED DANGERS.
- 5. THE BOARDS PRESENT INFORMATION IS THAT THE BOMB EXPLODED, WITH AN INTENSITY WHICH APPROACHED THE BEST OF THE THREE PREVIOUS ATOMIC

BOMBS, OVER A POINT 1500 TO 2000 FEET WESTERLY OF THE ASSIGNED TARGET, AND AT APPROXIMATELY THE PLANNED ALTITUDE.

6. THE TARGET ARRAY IN NO SENSE REPRESENTED AN ACTUAL NAVAL DISPOSITION, BUT WAS DESIGNED TO OBTAIN THE MAXIMUM DATA FROM A SINGLE EXPLOSION.

THE MOST IMPORTANT EFFECTS PRODUCED BY THE BOMB ARE THE FOLLOWING; (A) A DESTROYER AND 2 TRANSPORTS SANK PROMPTLY AND ANOTHER DESTROYER

CAPSIZED. IT LATER SANK. AND THE JAPANESE CRUISER SAKAWA SANK THE

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No. 2 FILE. 051731Z

No. 3F-1 OR CHARTROOM.

No. 4 SPECIAL 50

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FOLLOWING DAY	THE SUBERSTRUC	Tur	E OF THE SUBMESTATE SKATE	WAS SO
			E OF THE SUBMARINE SKATE E TO SUBMERGE THE VESSEL	<del>-</del>
			-	
			DLY WRECKED BY THE EXPLOS	
GUITED DI FIRE	. AND FURTHER DAM	AGE	D BY INTERNAL EXPLOSIONS	OF LOW
ORDER, INCLUDI	NG THOSE OF TORP	EDO	ES. ALL THE ABOVE VESSE	
WITHIN 1/2 MIL	E OF THE EXPLOSI	ON	POINT.	
	· · · · · · · · · · · · · · · · · · ·	FD	ON OTHER SHIPS, INCLUDING	
A SHIP/2 MILES	DISTANT, WHICH	WAS	APPARENTLY DUE TO SOME	UNUSUAL
TW.	NINCE THE OTHER E		e vede Mich et open - Henr	T 0::0::15
BF REMEMBERED	THAT THE TARGET	SHI	S WERE MUCH CLOSER. HERI P DECKS CARRITED A GREAT '	ARIFTY OF
	TIME TANGET	0,,,	DEGRO CARRED A GREAT	
			SED ON THE DECKS OF NAVAL	
(C) THE ONLY	MAJUR COMBATANT	SHI	PS WITHIN 1/2 MILE OF THE	EEXPLOSION
POINT WERE THE	BATTLESHIPS NEV	ADA	AND ARKANSAS AND THE HE	
			E FROM THE AFTER QUARTER	

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PUT OUT OF ACTION AND WOULD, ALONG WITH MANY OTHERS WITHIN 3/4 OF A MILE, HAVE REQUIRED EXTENSIVE REPAIRS AT A PRINCIPAL NAVAL BASE.

LITTLE DAMAGE WAS DONE TO THEIR HULLS OR THEIR MAIN TURRETS BUT THEIR SUPERSTRUCTURES WERE BADLY WRECKED. THESE SHIPS WERE UNQUESTIONABLY  $^{44}$ 

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(D) OTHER SHIPS IN THE TARGET ARRAY SUFFERED DAMAGE IN VARYING DEGREE, DEPENDING ON POSITION AND TYPE OF SHIP, BUT THERE WAS

RELATIVELY LITTLE DAMAGE AT DISTANCES GREATER THAN 3/4 OF A MILE. (E) THE PRIMARY MATERIAL EFFECTS NOTED WERE DUE TO BLAST; BUCKLING

OF DECKS AND BULKHEADS, AND DESTRUCTION OR DEFORMATION OF LIGHTLY CONSTRUCTED EXPOSED OBJECTS, INCLUDING STACKS, MASTS AND ANTENNAE.

SECONDARY EFFECTS WERE DUE TO FIRE, AND IT IS NOTEWORTHY THAT ARMY QUARTERMASTER STORES AND MISCELLANEOUS EQUIPMENT PLACED ON THE DECKS

FOR THE TEST PROVED MORE VULNERABLE THAN NORMAL NAVAL DECK GEAR. IT SHOULD BE POINTED OUT THAT SINCE THE TARGETS CARRIED NO PERSONNEL

THE FIRES WERE UNCONTROLLED AND UNDOUBTEDLY THERE WAS MORE DAMAGE THAN THERE WOULD HAVE BEEN UNDER BATTLE CONDITIONS. SINGULARLY.

ALTHOUGH CONSIDERABLE AMOUNTS OF EXPLOSIVE ORDNANCE WERE EXPOSED ON DECKS AND IN GUN TURRETS. THERE IS NO INDICATION ON SHIPS WHICH

42 REMAINED AFLOAT THAT ANY OF THIS MATERIAL WAS EXPLODED BY DIRECT ACT 43 ACTION OF THE ATOMIC BOMB. FIRE FIGHTING SHIPS ENTERED THE TARGET 44

AREA AS SOON AS THEY COULD OBTAIN RADIOLOGICAL SECURITY PERMISSION AND SUBDUED A NUMBER OF FIRES. THE SPEED AND EFFICIENCY WITH WHICH

THESE SHIPS ACTED PRESERVED FOR LATER EXAMINATION A GREAT DEAL OF

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PAGE 5 OF 7	this dispatch will be transmitte 05173		H DEFFRED PRECEDENCE AND AS ADMINISTRATIVE.  NCR 3647	IF OPERATIONAL CHECK BELOW	

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ON OUTGOING DISPATCHES PLEASE LEAVE ABOUT ONE INCH CLEAR SPACE BEFORE BEGINNING TEXT EVIDENCE OF BOMB ACTION WHICH MIGHT OTHERWISE HAVE BEEN LOST (F) EXAMINATION OF THE FLASH BURN EFFECTS PRODUCED BY THE INITIAL

RADIATION FROM THE EXPLOSION INDICATES THAT CASUALTIES WOULD HAVE BEEN HEGH AMONG EXPOSED PERSONNEL. HOWEVER, IT IS THE OPINION OF

THE BOARD THAT PERSONS SHELTERED WITHIN THE HULL OF A SHIP OR EVEN 27 ON DECK IN THE SHADOW OF RADIATION FROM THE BOMB WOULD NOT HAVE BEEN 28

IMMEDIATELY INCAPACITATED BY BURNS ALONE, WHATEVER MIGHT HAVE BEEN THE SUBSEQUENT RADIOLOGICAL EFFECTS.

(G) WITHIN THE AREA OF EXTENSIVE BLAST DAMAGE TO SHIP SUPERSTRUCTURES THERE IS EVIDENCE THAT PERSONNEL WITHIN THE SHIPS WOULD HAVE BEEN 35

EXPOSED TO A LETHAL DOSAGE OF RADIOLOGICAL EFFECTS.

7. PERSONNEL CASUALTIES DUE TO BLAST WOULD NO DOUBT HAVE BEEN HIGH FOR THOSE IN EXPOSED POSITIONS ON VESSELS WITHIN A/1/2 MILE OF THE

TARGET CENTER. BEYOND THIS, ANY DISCUSSION OF THE BLAST EFFECT UPON 41 PERSONNEL WILL HAVE TO AWAIT THE DETAILED REPORTS OF THE MEDICAL 42

SPECIALISTS.

8. IN GENERAL NO SIGNIFICANT UNEXPECTED PHONOMENA OCCURED, ALTHOUGH 46 THE TEST WAS DESIGNED TO COPE WITH CONSIDERABLE VARIATION FROM 47

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ON OUTGOING DISPATCHES PLEASE LEAVE ABOUT ONE INCH CLEAR SPACE BEFORE BEGINNING TEXT
PREDICTIONS. THERE WAS NO LARGE WATER WAVE FORMED. THE RADIOACTIVE
RESIDUE DISSIPATED IN THE MANNER EXPECTED. NO DAMAGE OCCURRED ON
BIKINI ISLAND, ABOUT 3 MILES FROM THE EXPLOSION CENTER.
9. FROM WHAT IT HAS SEEN AND FROM WHAT IT HAS ASCERTAINED FROM DATA NOW AVAILABLE, THE BOARD IS ABLE TO MAKE CERTAIN GENERAL
DATA NOW AVAILABLE, THE BOARD TO ABLE TO MAKE CERTAIN GENERAL
OBSERVATIONS:
-(A) THE ATOMIC BOMB DROPPED AT BIKINI DAMAGED MORE SHIPS THAN HAVE
EVER BEFORE BEEN DAMAGED BY A SINGLE EXPLOSION.
(B) THE TEST HAS PROVIDED ADEQUATE DATA OF A SORT NECESSARY FOR THE
REDESIGN OF NAVAL VESSELS TO MINIMIZE DAMAGE TO SUPERSTRUCTURES AND
DECK PERSONNEL FROM THIS TYPE OF BOMB. BECAUSE OF THE NATURE OF THE
FIRST TEST (AIR BURST) LITTLE INFORMATION HAS BEEN OBTAINED ON HULL
EFFECTS. DAMAGE TO SHIPS HULLS WILL BE STUDIED SPECIFICALLY IN THE
SECOND TEST WHEN A BOMB WILL BE EXPLODED UNDER WATER.
(C) A VAST AMOUNT OF DATA WHICH WILL PROVE INVALUABLE THROUGHOUT
SCIENTIFIC AND ENGINEERING FIELDS HAS BEEN MADE AVAILABLE BY THIS
TEST ONCE MODE THE IMPORTANCE OF LABOR SCALE DESCRIPTION OF THE
TEST. ONCE MORE THE IMPORTANCE OF LARGE SCALE RESEARCH HAS BEEN DRAMATICALLY DEMONSTRATED. THERE CAN BE NO QUESTION THAT THE EFFORT
CHARLICALL DENOMOTIVATED. THENE CAN DE NO GOLDITON THAT THE EFFORT
AND EXPENSE INVOLVED IN THIS TEST HAS BEEN AMPLY JUSTIFIED BOTH BY
No. 1 ADMIRAL. No. 2 FILE 051731Z No. 3F-1 OR CHARTROOM. No. 4 SPECIAL.
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SPECULATION AND ARGU	MENT. MOREO	۷E	R, IT IS CLEAR TO THE BO	ARD THAT
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