

# UNCLASSIFIED

## AD NUMBER

AD376825

## CLASSIFICATION CHANGES

TO: unclassified

FROM: confidential

## LIMITATION CHANGES

TO:

Approved for public release, distribution unlimited

FROM:

Distribution: USGO: others to Director, Defense Atomic Support Agency, Washington, D. C. 20301.

## AUTHORITY

DSWA ltr., 9 Apr 1997; DSWA ltr., 9 Apr 1997

THIS PAGE IS UNCLASSIFIED

AD No. 376825

DDG - FILE COPY

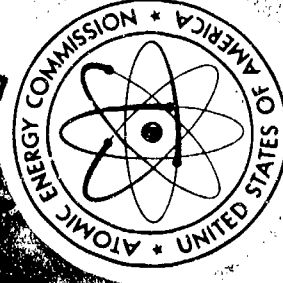
CONFIDENTIAL

1

*1*  
of 1586/65  
29 NOV 1965  
DEFENSE/ATOMIC  
SUPPORT AGENCY

# A Facsimile Report

DDC  
NOV 8 1965



Reproduced by  
**UNITED STATES  
ATOMIC ENERGY COMMISSION**  
Division of Technical Information  
P.O. Box 62 Oak Ridge, Tennessee 37831

This material contains information affecting the national defense of the United States within the meaning of the espionage laws, Title 18, U.S.C., Secs. 793 and 794, the transmission or revelation of which in any manner to an unauthorized person is prohibited by law.

CONFIDENTIAL

Incl 7 of 1

XRD-59

RESEARCH AND DEVELOPMENT REPORT



ACCESSION FOR	WHITE SECTION <input type="checkbox"/>
SECURITY	BUFF SECTION <input checked="" type="checkbox"/>
DOC	
UNANNOUNCED	
JUSTIFICATION	
DISTRIBUTION/AVAILABILITY CODES	
DIST.	AVAIL. sec./or SPECIAL
3	

IN ADDITION TO SECURITY REQUIREMENTS WHICH APPLY TO THIS DOCUMENT AND MUST BE MET, EACH TRANSMITTAL OUTSIDE THE AGENCIES OF THE U.S. GOVERNMENT MUST HAVE PRIOR APPROVAL OF THE DIRECTOR, DEFENSE ATOMIC SUPPORT AGENCY, WASHINGTON, D.C. 20301.

**CONFIDENTIAL**

**XRD**

**59**



XRD-59  
Pg. 47

CONFIDENTIAL

BUREAU OF SHIPS GROUP  
TECHNICAL INSPECTION REPORT

GROUP 3

Downgraded at 12 year intervals  
as Automatically Declassified

U.S.S. BRACKEN (APA64)

TEST ABLE [UMI]

*Changed from Restricted to U.S.S. Bracken with 1953-54*

This report contains information affecting the national defense within the meaning of the espionage laws, U.S.C. Sec. 793 and 794, and its revelation would be injurious to the national defense.

CONFIDENTIAL

Classification (changed to CONFIDENTIAL) by JCS 198753 on APRIL 1949  
by JCS 198753 on APRIL 1949  
by JCS 198753 on APRIL 1949  
MAY 18 1962

OPERATION CROSSROADS

DIRECTOR OF SHIP MATERIAL

JOINT TASK FORCE ONE

REG. NO. 41

CONFIDENTIAL

Security Information  
NOV 1964

DISTRIBUTION LIMITED  
CONTAINS WEAPON DATA

9

Operation Crossroads,

11 1946

12 30p

14 XRD-59

(193600)

ak

3

**CONFIDENTIAL**

**BUREAU OF SHIPS GROUP  
TECHNICAL INSPECTION REPORT**

**GROUP 3**  
Downgraded at 12 year intervals  
Not Automatically Declassified.

~~GROUP 3  
Downgraded at 12 year intervals  
Not Automatically Declassified.~~

**CONFIDENTIAL**

Classification (Declassified) (Changed to **CONFIDENTIAL**)  
By **John H. Hoge**, **U.S. Navy**, Date **MAY 16 1952**  
By **John H. Hoge**, **U.S. Navy**, Date **MAY 16 1952**

APPROVED:

**F. X. Forest,**  
Captain, U.S.N.

This material contains information affecting the national defense within the meaning of the espionage laws, Title 18, U.S.C., Sec. 793 and 794, the transmission or revelation of its contents in any manner to an unauthorized person is prohibited by law.

USS BRACKEN (APAS4)

Page 1 of 48 Pages

**CONFIDENTIAL**  
Security Information  
~~RESTRICTED DATA~~  
ATOMIC ENERGY ACT 1954

**CONFIDENTIAL**

**TABLE OF CONTENTS**

	PAGE NO.
Ship Characteristics Sheet - - - - -	3
Midship Section - - - - -	4
Overall Summary of Damage - - - - -	6
Hull Technical Inspection Report (Section I) - - - - -	12
Machinery Technical Inspection Report (Section II) - - - - -	18
Electrical Technical Inspection Report (Section III) - - - - -	24
Photographic Section (Section IV) - - - - -	31
Ship Measurement Data (Appendix) - - - - -	37
Commanding Officers Report (Appendix) - - - - -	39

**CONFIDENTIAL**

Classification (Declassified) (Changed to **CONFIDENTIAL**)  
By **John H. Hoge**, **U.S. Navy**, Date **MAY 16 1952**  
By **John H. Hoge**, **U.S. Navy**, Date **MAY 16 1952**

USS BRACKEN (APAS4)

Page 2 of 48 Pages

**CONFIDENTIAL**  
Security Information  
~~RESTRICTED DATA~~  
ATOMIC ENERGY ACT 1954



TECHNICAL INSPECTION REPORT

OVERALL SUMMARY

I. Target Condition After Test.

(a) Drafts after test, general areas of flooding, sources.

There was no flooding, hence no change in drafts or

list.

(b) Structural damage.

HULL

None.

MACHINERY

No comment.

ELECTRICAL

1. Structural damage consists of a few light metal surfaces (6" or less) and lower part of #2 stack being dished in direction of blast; also expanded metal vent screens blown from both stacks.

2. There was no electrical damage incurred as a result of the above structural damage.

(c) Other damage.

HULL

Not observed.

~~SECRET~~

USS BRACKEN (APA64)

MACHINERY

None.

ELECTRICAL

1. Close visual inspection and operating test revealed only superficial damage to electrical equipment.
2. There was no damage observed to any electrical units associated with fire control, ship control and gunnery.

II. Forces Evidenced and Effects Noted.

(a) Heat.

HULL

Radiation emanated from relative bearing of about 205 degrees and an elevation of about 5 degrees. It caused scorching and blistering of painted surfaces normal to the blast. Scorching of exposed cordage is also noted.

MACHINERY

There was no evidence of heat on machinery or in machinery spaces, except for scorched paint in exposed areas.

ELECTRICAL

Paint surfaces of topside electrical equipment and exposed wiring approximately normal to direction of bomb burst (about 215° relative) are usually scorched and blackened. There are no localized heavy burns or damage other than to paint resulting from this flash of radiant heat.

(b) Fires and explosions.

SECRET

USS BRACKEN (APA64)

Page 6 of 43 Pages

HULL

Three signal halyards and unpainted canvas covered pads on the gripe of the forward port LCYP davit are the only items on the vessel that burned. These were ignited, it is believed, by direct heat radiation.

MACHINERY

Not evidenced.

ELECTRICAL

1. Several small fires were ignited in exposed topside combustible material, all of which are believed to have contained oil. Particularly susceptible were mops, mats, boat gripes, boat fenders and other fibrous materials.
2. There were no fires started in any electrical equipment or any damage resulting from the above fires.
3. There is no evidence of any explosions having occurred onboard this vessel.

(c) Shock.

HULL

None.

MACHINERY

Not evidenced.

ELECTRICAL

Approximately six lamps all inside of ship were broken apparently from shock transmitted through hull. The cover for a portable X-ray machine mounted on bulkhead, facing blast was dislodged. However this could be due to slight deflection of bulkhead on which mounted.

SECRET

USS BRACKEN (APA64)

Page 7 of 43 Pages

III. Results of Test on Target.  
(a) Effect on machinery, electrical, and ship control.

HULL

Not observed.

MACHINERY

None.

ELECTRICAL

No appreciable effect.

(b) Effect on gunnery and fire control.

HULL

Not observed.

MACHINERY

No comment.

ELECTRICAL

None.

(c) Effect on watertight integrity and stability.

HULL

None.

MACHINERY

No comment.

USS BRACKEN (APA64)

Page 9 of 43 Pages

SECRET

(d) Pressure.

HULL

There is slight dishing of light plating 5# or less in the superstructure which was exposed to the blast. The blast came from a point bearing 205 degrees relative.

MACHINERY

Not evidenced.

ELECTRICAL

The port 12" signal light located on signal bridge was thrown off support. There was no locking device installed to prevent vertical movement of this light. The cover for blinker light signal key located on port side of navigation bridge was blown off. Close examination revealed holding down bolts were rusted through.

(e) Effects peculiar to the atom bomb.

HULL

None.

MACHINERY

None.

ELECTRICAL

Radioactivity and radiant heat were the only effect observed that are apparently peculiar to the atom bomb. Neither of these caused any material damage to electrical equipment.

USS BRACKEN (APA64)

Page 8 of 43 Pages

SECRET

ELECTRICAL

None.

(c) Effect on personnel and habitability.

HULL

Exposed personnel may have suffered from flash burns and radiation sickness. Habitability is not affected.

MACHINERY

None.

ELECTRICAL

1. Personnel manning exposed topside stations would probably have suffered minor to moderate flash burns and possibly injuries from blast pressure wave to extent of a few bruises.

2. Habitability has in no way been affected.

(e) Effect on fighting efficiency.

HULL

None.

MACHINERY

None.

ELECTRICAL

None.

SECRET

USS BRACKEN (APA64)

Page 10 of 48 Pages

IV. General Summary of Observers' Impressions and Conclusions.

HULL

No comment.

MACHINERY

The BRACKEN was outside the effective range of the explosion in Test A.

ELECTRICAL

Due to the distance of this ship from center of burst, heat and blast of bomb was not sufficient to cause any appreciable damage to electrical equipment.

V. Preliminary Recommendations.

HULL

None.

MACHINERY

None.

ELECTRICAL

None.

SECRET

USS BRACKEN (APA64)

Page 11 of 48 Pages

TECHNICAL INSPECTION REPORT

SECTION I - HULL

GENERAL SUMMARY OF HULL DAMAGE

I. Target Condition After Test.

(a) Drafts after test general areas of flooding, sources.

1st. There was no flooding, hence no change in drafts or

(b) Structural damage.

None.

(c) Other damage.

Not observed.

II. Forces evidenced and effects noted.

(a) Heat.

Radiation emanated from relative bearing of about 205 degrees and an elevation of about 5 degrees. It caused scorching and blistering of painted surfaces normal to the blast. Scorching of exposed cordage is also noted.

(b) Fires and Explosions.

Three signal halyards and unpainted canvas covered pads on the gripe of the forward port LCVP davit are the only items on the vessel that burned. These were ignited, it is believed, by direct heat radiation.

(c) Shock.

None.

SECRET

USS BRACKEN AP664

Page 12 of 43 Pages

VI. Instructions for loading the vessel specified the following:

ITEM	LOADING
Fuel oil	50%
Diesel oil	50%
Ammunition	50%
Potable and reserve feed water	95%
Salt water ballast	620 tons

Details of the actual quantities of various items aboard are included in Report 6, Stability Inspection Report, submitted by the ship's force in accordance with "Instructions to Target Vessels for Tests and Observations by Ship's Force" issued by the Director of Ships Material. This report is available for inspection in the Bureau of Ships Crossroads Files.

(d) Pressure. There is slight dishing of light plating (5# or less) in the superstructure which was exposed to the blast. The blast came from a point bearing 205 degrees relative.

(e) Effects peculiar to the Atom Bomb.

None.

None.

None.

(a) Effect on machinery, electrical, and ship control.

Not observed.

(b) Effect on gunnery and fire control.

Not observed.

(c) Effect on watertight integrity and stability.

None.

(d) Effect on personnel and habitability.

Exposed personnel may have suffered from flash burns and radiation sickness. Habitability is not affected.

(e) Effect on fighting efficiency.

None.

IV. General Summary of Observers' Impressions and Conclusions.

No comment.

V. Preliminary General or Specific Recommendations of Inspection Group.

None.

SECRET

USS BRACKEN (APA64)

SECRET

USS BRACKEN (APA64)

### DETAILED DESCRIPTION OF HULL DAMAGE

#### A. General Description of Hull Damage.

The damage is negligible.

#### B. Superstructure.

Damage is limited mainly to slight dishing of light plating (54 or less). This included the crumpling of the port flag bag, slight dishing of the after centerline flag bag, and the slight dishing of the after side of the projection bootin. (photo 1730-11, page 38). The glass in at least one sprinkler control station was shattered by the blast. An instrumentation mirror was shattered and wrecked. Vent screens in the stacks are pushed in.

Three signal halyards and canvas covered pads (unpainted) on the belly gripe of the forward port LCVVP davit are burned.

#### C. Turrets, Guns and Directors.

No damage.

#### D. Torpedo Mounts, Depth Charge Gear.

Not applicable.

#### E. Weather Deck.

A few hatch boards, in the cargo hatches on the upper deck, were dislodged and fell to the deck below. There is no other damage. Recordings of scratch gages installed to measure deflection of the weather deck are tabulated on page 38.

#### F. Exterior Hull.

No damage.

SECRET

USS BRACKEN (APA64)

Page 15 of 48 Pages

#### G. Interior Compartments (above w.l.).

No damage.

#### H. Armor Decks and Miscellaneous Armor.

Not applicable.

#### I. Interior Compartments (below w.l.).

No damage.

#### J. Underwater Hull.

No damage.

#### K. Tanks.

No damage.

#### L. Flooding.

None.

#### M. Ventilation.

No damage.

#### N. Ship control.

No damage.

#### O. Fire Control.

No damage.

#### P. Ammunition Behavior.

No damage.

SECRET

USS BRACKEN (APA64)

Page 16 of 48 Pages

**Q. Ammunition Headings.**

No damage.

**R. Strength.**

No damage.

**S. Miscellaneous.**

No comment.

**T. Coverings.**

Paint is blistered and scorched over large areas. This is noticeable principally on portions of the superstructure facing the blast and on port quarter of the freeboard. No blistering or scorching is found on any of the decks. Zinc chromate primer, formula 84, when exposed, seems to blister and scorch worse than the usual top coats. (Photos 1730-8, 10, 11; pages 34, 35, and 36) show typical damage to paint.

**TECHNICAL INSPECTION REPORT**

**SECTION II - MACHINERY**

**GENERAL SUMMARY OF MACHINERY DAMAGE**

**I. Target Condition After Test.**

(a) Drafts after test; list; general areas of flooding, sources.

No data taken by machinery group.

(b) Structural damage.

No comment.

(c) Other damage.

None.

**II. Forces Evidenced and Effects Noted.**

(a) Heat.

There was no evidence of heat on machinery or in machinery spaces, except for scorched paint in exposed areas.

(b) Fires and explosions.

Not evidenced.

(c) Shock.

Not evidenced.

(d) Pressure.

Not evidenced.

SECRET

USS BRACKEN (APA64)

SECRET

USS BRACKEN (APA64)

(e) Effects apparently peculiar to the atom bomb.

None.

### III. Effects of Damage.

(a) Effect on machinery and ship control.

None.

(b) Effect on gunnery and fire control.

No comment.

(c) Effect on water-tight integrity and stability.

No comment.

(d) Effect on personnel and habitability.

None.

(e) Total effect on fighting efficiency.

None.

### IV. General Summary.

The BRACKEN was outside the effective range of the explosion in Test A.

### V. Preliminary Recommendation.

None.

## DETAILED DESCRIPTION OF MACHINERY DAMAGE

### A. General Description of Machinery Damage.

(a) Overall condition.

The overall condition of the machinery of this vessel was not changed by Test A.

(b) Areas of major damage.

None.

(c) Primary cause of damage in each area of major damage.

Not applicable.

(d) Effect of target test on overall operation of machinery plant.

The target test had no effect on the operability of the machinery plant.

### B. Boilers.

1. Undamaged.

2. No. 1 boiler was left under 450 lbs/sq. in. steam pressure and No. 2 boiler was left under 450 lbs/sq. in. hydrostatic pressure when the crew left the ship at 0345 on 1 July. At 1100 on 2 July, when the ship was reboarded, the pressure in both boilers had dropped to zero.

3. Both boilers were steamed after Test A. Operation was normal.

SECRET

USS BRACKEN (AFA 94)

Page 19 of 43 Pages

SECRET

USS BRACKEN (APAG 4)

Page 20 of 43 Pages

C. Blowers.

Undamaged. All four blowers have been tested at pressure of 9 inches of water for a minimum of one hour. No change was found in the condition of the blowers.

D. Fuel Oil Equipment.

Undamaged. All fuel oil equipment was used in operation after Test A.

E. Boiler Feedwater Equipment.

Undamaged. All boiler feedwater equipment was used incident to operation of the boilers after Test A.

F. Main Propulsion Machinery.

Undamaged. Both turbines were tested in operation for 2 hours at speeds from 1000 R.P.M. to 5400 R.P.M. Both propellers were turned over under power in both directions. Performance was normal.

G. Reduction Gears.

Not applicable.

H. Shafting and Bearings.

Undamaged. All shafting, bearings, stern tubes, and packing glands were inspected while the shafting was being turned over by power.

I. Lubrication System.

Undamaged. The lubrication system was tested in operation and functioned normally.

SECRET

USS BRACKEN (APA64)

Page 21 of 43 Pages

J. Condensers and Air Ejectors.

Undamaged. All condensers have been in normal operation and maintained a vacuum of 28-1/2 inches.

K. Pumps.

Undamaged. All pumps were operated under service conditions after Test A.

L. Auxiliary Generators (Turbines and Gears).

Undamaged. All of the ships' service generators were operated under load after Test A. Performance was normal.

M. Propellers.

Undamaged. The propellers have been inspected and turned over. They were checked while the main motors were in operation. Performance was normal.

N. Distilling Plant.

Undamaged. Both evaporators have been in operation since Test A. Performance has been normal.

O. Refrigeration Plant.

Undamaged. The refrigerating plant has been in normal operation since Test A.

P. Winches, Windlasses, and Capstans.

Undamaged. All deck machinery was operated after Test A. Performance was normal.

Q. Steering Engine.

Undamaged. The steering engine was tested from all three stations after Test A. Performance was normal.

SECRET

USS BRACKEN (APA64)

Page 22 of 43 Pages

R. Elevators, Ammunition Hoists, etc.

Undamaged. The gasoline hoist and the two ammunition hoists were operated after Test A. Performance was normal.

S. Ventilation (Machinery).

Undamaged. The ventilation machinery has been in normal operation since Test A. No defects have been found.

T. Compressed Air Plant.

Undamaged. The air compressor has been in operation since Test A. Performance has been normal.

U. Diesels (Generators and Boats).

Undamaged. Both diesel fire pumps and the emergency diesel generator were operated under load after Test A. Performance was normal.

V. Piping Systems.

Undamaged. All piping systems have either been tested under pressure or used in operation since Test A. Performance was normal.

W. Miscellaneous.

Laundry, galley, and machine shop equipment were used in normal operation after Test A. No defects were found.

SECRET

USS BRACKEN (APA64)

Page 23 of 43 Pages

TECHNICAL INSPECTION REPORT

SECTION III - ELECTRICAL

GENERAL SUMMARY OF ELECTRICAL DAMAGE

I. Target Condition After Test.

(a) Draft after test, list, general areas of flooding, sources.

1. Drafts after test.

(a) Not observed.

2. List.

(a) Not observed.

3. Flooding.

(a) None.

(b) Structural damage.

1. Structural damage consists of a few light metal surfaces (5# or less) and lower part of #2 stack being dished in direction of blast; also expanded metal vent screens blown from both stacks.

2. There was no electrical damage incurred as a result of the above structural damage.

(c) Damage.

1. Close visual inspection and operating test revealed only superficial damage to electrical equipment.

2. There was no damage observed to any electrical units associated with fire control, ship control and gunnery.

SECRET

USS BRACKEN (APA64)

Page 24 of 43 Pages

## II. Forces Evidenced and Effects Noted.

### (a) Heat.

1. Paint surfaces of topside electrical equipment and exposed wiring approximately normal to direction of bomb burst (about 215° relative) are usually scorched and blackened. There are no localized heavy burns or damage other than to paint resulting from this flash of radiant heat.

### (b) Fires and explosions.

1. Several small fires were ignited in exposed topside combustible material, all of which are believed to have contained oil. Particularly susceptible were mops, mats, boat gripes, boat leadders and other fibrous materials.

2. There were no fires started in any electrical equipment or any damage resulting from the above fires.

3. There is no evidence of any explosions having occurred onboard this vessel.

### (c) Shock.

1. Approximately six lamps all inside of ship were broken apparently from shock transmitted through hull. The cover for a portable X-ray machine mounted on bulkhead, facing blast was dislodged. However this could be due to slight deflection of bulkhead on which mounted.

### (d) Pressure.

1. The port 12" signal light located on signal bridge was thrown off support. There was no locking device installed to prevent vertical movement of this light. The cover for blinker light signal key located on port side of navigation bridge was blown off. Close examination revealed holding down bolts were rusted through.

SECRET

USS BRACKEN (APA64)

Page 25 of 43 Pages

### (e) Any effects peculiar to the atom bomb.

1. Radioactivity and radiant heat were the only effect observed that are apparently peculiar to the atom bomb. Neither of these caused any material damage to electrical equipment.

## III. Effect of Electrical Damage.

### (a) Effect on electrical equipment and ship control.

1. No appreciable effect.

### (b) Effect on gunnery and fire control.

1. None.

### (c) Effect on water-tight integrity and stability.

1. None.

### (d) Effect on personnel and habitability.

1. Personnel manning exposed topside stations would probably have suffered minor to moderate flash burns and possibly injuries from blast pressure wave to extent of a few bruises.

2. Habitability has in no way been affected.

### (e) Total effect on fighting efficiency.

1. None.

## IV. General Summary of Observers' Impressions and Conclusions.

(a) Due to the distance of this ship from center of burst, heat and blast of bomb was not sufficient to cause any appreciable damage to electrical equipment.

## V. Recommendations.

(a) None.

SECRET

USS BRACKEN (APA64)

Page 26 of 43 Pages

DETAILED DESCRIPTION OF ELECTRICAL DAMAGE

A. General Description of Electrical Damage.

(a) Overall condition.

1. The overall condition of the electrical equipment remained unchanged.

(b) Areas of major damage.

1. There was no area of major damage. Minor damage only in vicinity of bridge.

(c) Primary causes of damage in each area of major damage.

1. Minor damage in bridge area caused by blast pressure.

(d) Effect of target test on overall operation of electrical plant.

1. Ship's service generator plant.

(a) No effect.

2. Engine and boiler auxiliaries.

(a) No effect.

3. Electric propulsion.

(a) No effect.

4. Communications.

(a) No appreciable effect, one 12 signal light dislodged and damaged due to falling.

SECRET

USS BRACKEN (APA64)

6. Fire control circuit.

(a) No effect.

6. Ventilation.

(a) No effect.

7. Lighting.

(a) No effect, except for approximately six lamps broken.

(e) Types of equipment most affected.

1. No particular type equipment appeared to suffer more than others. Minor damage to electrical equipment was determined more by location than by type.

B. Electric Propulsion Rotating Equipment.

(a) No damage.

C. Electric Propulsion Control Equipment.

(a) No damage.

D. Ship's Service Generators.

(a) No damage.

E. Emergency Generators.

(a) No damage.

F. Switchboards and Distribution Panels.

(a) No damage.

SECRET

USS BRACKEN (APA64)

- O. Gyro Compass Equipment.  
No damage.
- P. Sound Powered Telephones.  
No damage.
- Q. Ship's Service Telephones.  
Not applicable.
- R. Announcing Systems.  
No damage.
- S. Telegraphs.  
No damage.
- T. Indicating Systems.  
No damage.
- U. L.C. and A.C.O. Switchboards.  
No damage.
- V. F.C. Switchboards.  
No damage.
- W. Miscellaneous.  
(a) Cover for portable X-ray machine secured to outboard bulkhead at frame 106 on port side of O1 deck was dislodged due to deflection of bulkhead on which mounted. Securing screws were not bent or sheared and are believed to have been loose prior to test.  
(b) Special electrical equipment installed by BuShips, Code 660 was undamaged by this test.

SECRET  
USS BRACKEN (APA64)

G. Wiring, Wiring Equipment and Wireways.

(a) No damage.

H. Transformers.

(a) No damage.

I. Submarine Propelling Batteries.

(a) Not applicable.

J. Portable Batteries.

(a) No damage.

K. Motors, Motor-Generator Sets and Motor Controllers.

(a) No damage.

L. Lighting Equipment.

(a) Approximately six lamps located in sick bay area on O1 deck were broken.

(b) Cover for signal light blinker key located on port side of navigation bridge at frame 60 was blown off by blast pressure. Close up inspection revealed holding down bolts were rusted through.

M. Searchlights.

(a) Port 12" signal light located on signal bridge at frame 60 was dislodged from socket and damaged due to falling on deck. Damage consist of broken shutter handle, front glass and lamp. Locking device usually installed on these lights to prevent vertical motion was missing from this unit.

N. Degaussing Equipment.

No damage.

SECRET  
USS BRACKEN (APA64)

SECTION IV

PHOTOGRAPHS

TEST ABLE



USS BRACKEN (APA64)

Page 31 of 43 Pages

SECRET

AA-CR-227-50-99. View from off starboard bow after Test A.

SECRET

Page 32 of 43 Pages

USS BRACKEN (APA64)  
#660



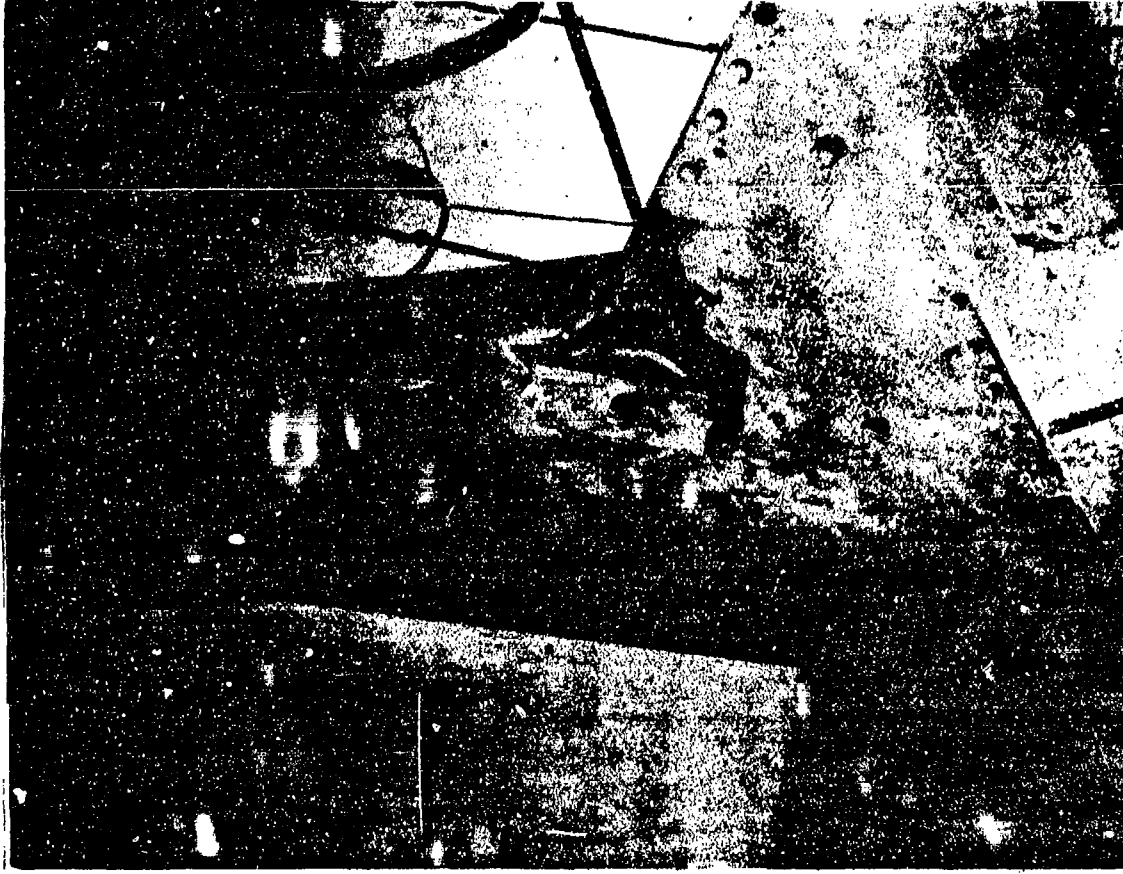
AA-CR-227-50-95. View from off port quarter after Test A.

SECRET

USS BRACKEN (APA64)

8860

Page 33 of 43 Pages



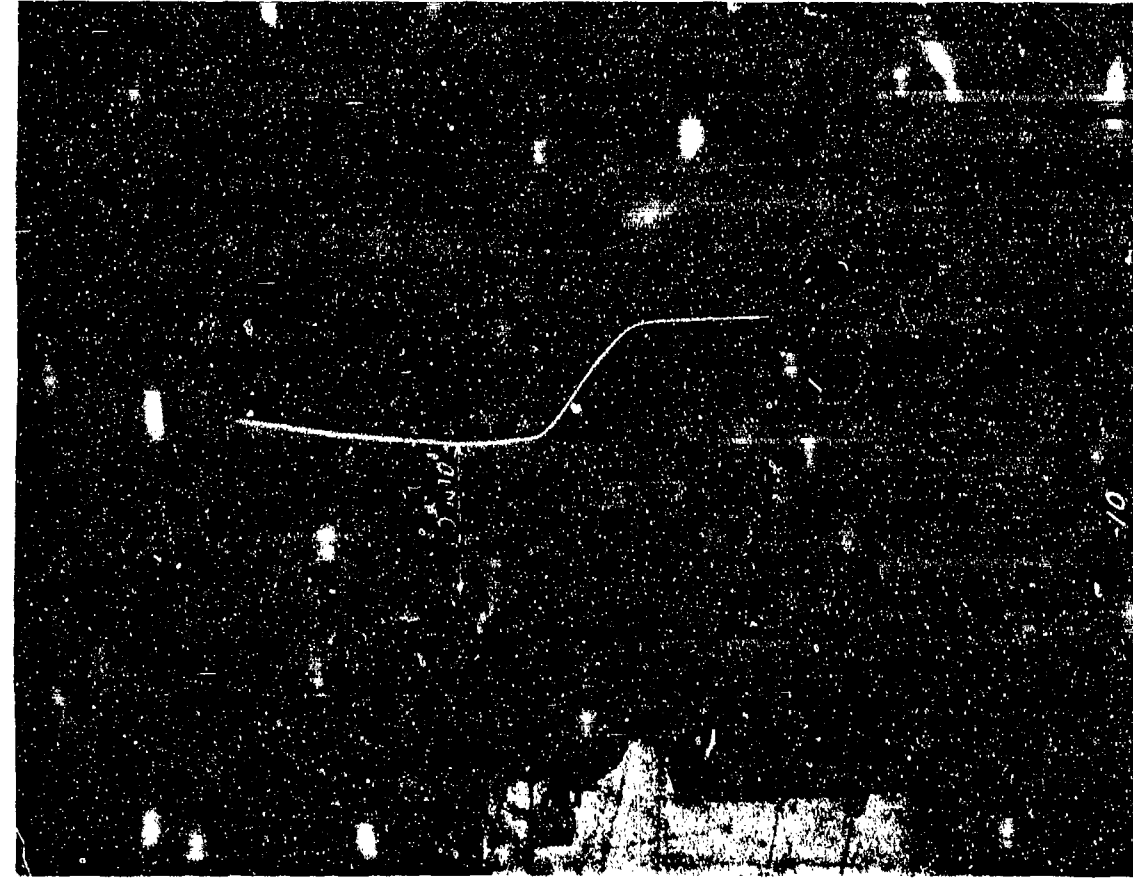
AA-CR-65-1730-9. Boat Davit - Port side - paint blisters.

SECRET

USS BRACKEN (APA64)

8860

Page 34 of 43 Pages

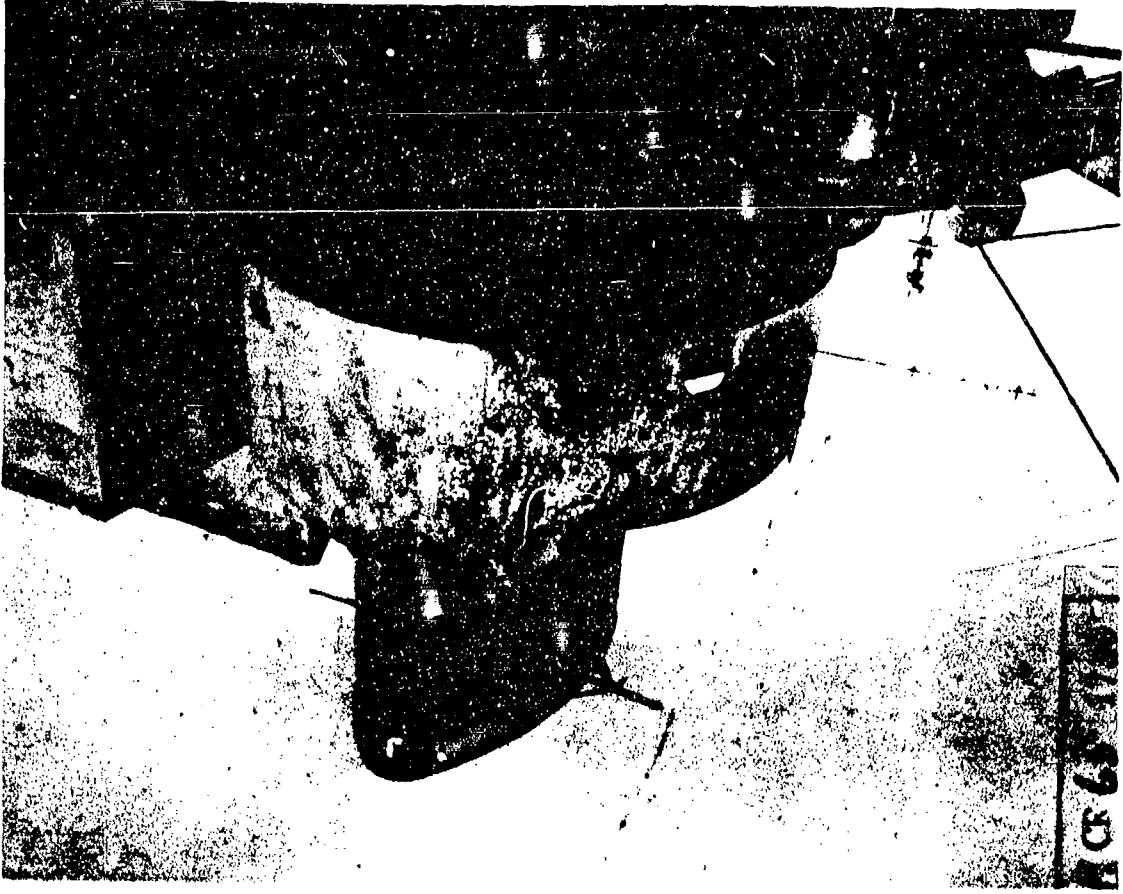


AA-CR-65-1730-10. Guns shield on Top Side - Port - blisters showing angle of radiation.

SECRET

Page 35 of 43 Pages

USS BRACKEN (APA64)  
8860



AA-CR-65-1730-11. After end of superstructure port showing paint blistering on gun shield and dished plating of projection booth.

SECRET

Page 36 of 43 Pages

USS BRACKEN (APA64)  
8860

APPENDIX

SHIP MEASUREMENT DATA

TEST ABLE

SECRET

USS BRACKEN (APA64)

Page 37 of 48 Pages

**SHIP U.S.S. BRACKEN (APA-64)**

**DECK DEFLECTION GAGES**

**TEST A**

FR. NO.	LOCATION		DIST. OFF $\epsilon$	MAXIMUM COMP.	MAXIMUM EXP.	PERMANENT DISTANCE	SET EXP./COMP.	REMARKS
	DECK							
53	MAIN	PORT.		NONE	NONE	NONE	NONE	NONE
53	"	STBD.		"	"	"	"	"
116	"	PORT		"	"	"	"	"
116	"	STBD.		0-0-1/2	0-0-3/16	"	"	"
129 1/2	"	PORT		NONE	NONE	"	"	"
129 1/2	"	STBD.		"	"	"	"	"

REPORT #11

COMMANDING OFFICERS REPORT

SECTION I

Ship U.S.S. BRACKEN (APA-64); ship located 1800 yards, 160°  
from center of array.

All openings, inside and outside closed, except air intake to  
emergency diesel generator. All firemain, and other stop valves  
closed, except to and from sea for one main, and one auxiliary  
condenser.

All equipment in place, including liferafts, canvas hatch covers,  
etc., except no boats aboard.

5"/38 and 20 MM ready boxes half full. 40 MM clipping rooms  
(but not ready stowage) half full. Magazines half full. (NOTE: No. 2  
magazine is not used on this ship.)

APPENDIX

COMMANDING OFFICERS REPORT

TEST ABLE

SECRET

USS BRACKEN (APA64)

Page 38 of 43 Pages

~~SECRET~~

USS BRACKEN (APA64)

Page 40 of 43 Pages

CONFIDENTIAL

SECTION II

Heat.

Paint surfaces approximately normal to direction of bomb (about 215° relative) are usually scorched and blistered, or blackened. Manila blackened. Other paint surfaces are affected only in few cases. No localized heavy burns.

There were only 8 fires aboard - all except one (e), in fibres that may have contained oil:

- (a) Mops in rack on starboard quarter.
- (b) Fibre mat on deck on starboard side of house at foot of mainmast. This was partly sheltered from direct flash.
- (c) Mops in rack on port main deck gallery.
- (d) Rope fender, port main deck gallery. Similar one nearby not affected.
- (e) Kapok life jacket over rat cage on poop.
- (f) Small burned spots in hatch cover.
- (g) Boat gripe at No. 2 davits burned in 2 places.
- (h) One part of 2-1/2" manila guy triced against boom burned through.

Pressure.

A few very light metal surfaces were dished in several inches flag bags and movie booth.

The lower part of one funnel is slightly dished in the direction of the blast.

The decks, which beforehand were scaled and rusty beneath paint, showed by loose paint, that they had been dished and had sprung back. Spot check shows welds between deck plates and deck beams all intact.

Expanded metal door to spud locker dished and hinge broken.

~~SECRET~~

USS BRACKEN (APA64)

Page 41 of 43 Pages

CONFIDENTIAL

CONFIDENTIAL

Shock and/or Pressure.

About one-third of the hatch boards, which had been battened down "for sea", were out of place and had in most cases fallen to the deck below.

In each hatch, one of the main deck (deck below the weather deck in this class APA) pontoons had jarred loose. One fell to the deck below and the other would have fallen had it not been held by a light stanchion.

A few other items were thrown off their supports:

- (a) Port 12" signal searchlight thrown off its support. There was nothing to prevent vertical motion of this light.
- (b) Captain's port bridge seat thrown off its support. There was nothing to prevent vertical motion of this seat.
- (c) The top of the box containing blinker telegraph key on port side of the bridge, was thrown off. Its holding down bolts were found to have rusted through.
- (d) Metal cover of #3 davit winch thrown off. Cover of #4 (on blast side of ship) not affected.
- (e) Metal cover of dental X-ray machine half off. Machine is secured to bulkhead facing blast.
- (f) Not over 6 electric light bulbs (all inside ship) broken.
- (g) One table jarred down in mess hall.
- (h) One screen jarred out of ventilator in each stack.

At 28 hours after bomb burst there was negligible radio-activity on board, the water alongside showed some.

Ability to remain in action and fighting efficiency not impaired.

~~SECRET~~

USS BRACKEN (APA64)

Page 42 of 43 Pages

CONFIDENTIAL

CONFIDENTIAL

SECTION III

Effect of Test "A" on this ship negligible. Anti-flash cream sufficient to protect personnel from heat of "detonation". Injuries to personnel resulting from blast estimated to be minor.

CONFIDENTIAL

Classification (Continued) (Changed to

by JOINT CHIEFS OF STAFF

on *John H. Snyder to Lt. Col. Eric* MAY 16 1962

USS BRACKEN (APA64)

Page 48 of 48 Pages

CONFIDENTIAL

Security Inc.  
~~RESTRICTED~~  
ATOMIC ENERGY ACT 1946

# **CAUTION**

This Document Contains  
**ATOMIC WEAPONS INFORMATION**

# **NOTICE**

This document contains atomic weapons information. Distribution is limited to recipients authorized by the Defense Atomic Support Agency (DOD) and/or the Division of Military Application (AEC)



**Defense Special Weapons Agency**  
6801 Telegraph Road  
Alexandria, Virginia 22310-3398

TRC

9 April 1997

MEMORANDUM FOR DEFENSE TECHNICAL INFORMATION CENTER  
ATTENTION: OMI/Mr. William Bush

SUBJECT: Declassification of Reports

The Defense Special Weapons Agency (formerly Defense Nuclear Agency) Security Office has reviewed and declassified the following reports:

*+ ST-A*

AD-366748 -	XRD-65
AD-366747 ~	XRD-64
AD-366746 ^	XRD-63
AD-376826 ~	XRD-60
AD-376824 ~	XRD-58
AD-376825 -	XRD-59
AD-376823 -	XRD-57
AD-376822 -	XRD-56
AD-376821 ~	XRD-55
AD-366743 ~	XRD-54
AD-376820 ~	XRD-53
AD-366742 ~	XRD-52
AD-366741 ~	XRD-51
AD-366740 -	XRD-50-Volume-2
AD-366739 -	XRD-49-Volume-1
AD-366738 -	XRD-48
AD-366737 ^	XRD-47

TRC

9 April 1997

SUBJECT: Declassification of Reports

AD-366736 -	XRD-46
AD-366735 -	XRD-45
AD-366723 -	XRD-37
AD-366721 -	XRD-35
AD-366717 -	XRD-31-Volume-2
AD-366716 -	XRD-30-Volume-1
AD-366751 -	XRD-68-Volume-2
AD-366750 -	XRD-67-Volume-1
AD-366752 -	XRD-69
AD-366744 -	XRD-61.

All of the cited reports are now **approved for public release**. **Distribution statement "A"** now applies.

*Ardith Jarrett*  
ARDITH JARRETT  
Chief, Technical Resource Center

*Completed  
1 Mar 2000  
B.W.*