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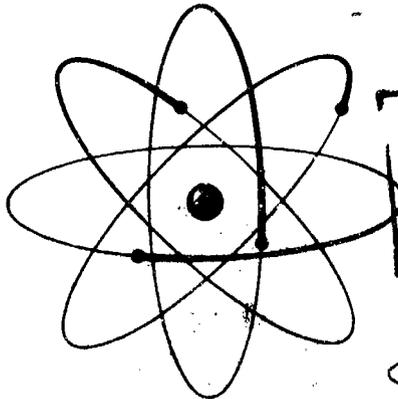
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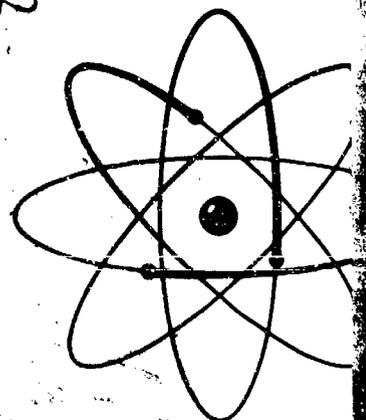
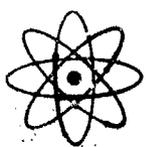
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XRD-135  
Report Number

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United States Atomic Energy Commission  
Division of Technical Information

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(14) XRD-135

(9)

BUREAU OF SHIPS GROUP  
TECHNICAL INSPECTION REPORT

(6) Operation Crossroads,  
U.S.S. Geneva (APA86)

(11)

1946

GROUP 4  
Downgraded at 3 year intervals;  
Declassified after 12 years

(12) 35p.

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...revolution  
...is prohibited~~

APPROVED:

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

SECRET

USS GENEVA (APA86)

Page 1 of 35 Pages

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Classification ( )  
by [unclear]  
on [unclear]

CONFIDENTIAL

Security Information

U.S. 1752/30-DATE-19 APRIL 1963  
MAY 16 1962

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ATOMIC ENERGY ACT

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USS GENEVA (APA86)

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Classification Authority: CHIEFS OF STAFF JCS 1795  
 BY: *John H. ...* DATED: 16 APRIL 1952  
 SECURITY INFORMATION  
 RESTRICTED DATA  
 ATOMIC ENERGY ACT 1946

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U.S.S. GENEVA (APA 86)

## SHIP CHARACTERISTICS

Building Yard: Consolidated Steel Corp.; Wilmington, California.

Commissioned: 22 March 1945.

### HULL

Length Overall: 426 feet 0 inches.  
Length on Waterline: 400 feet 0 inches.  
Beam (extreme): 58 feet 0 inches.  
Depth (molded to upper deck): 37 feet 0 inches.  
Drafts at time of test: Fwd. 11 feet 4 inches.  
Aft. 17 feet 4 inches.  
Limiting displacement: 7,080 tons.  
Displacement at time of test: 8,268 tons.

### MAIN PROPULSION PLANT

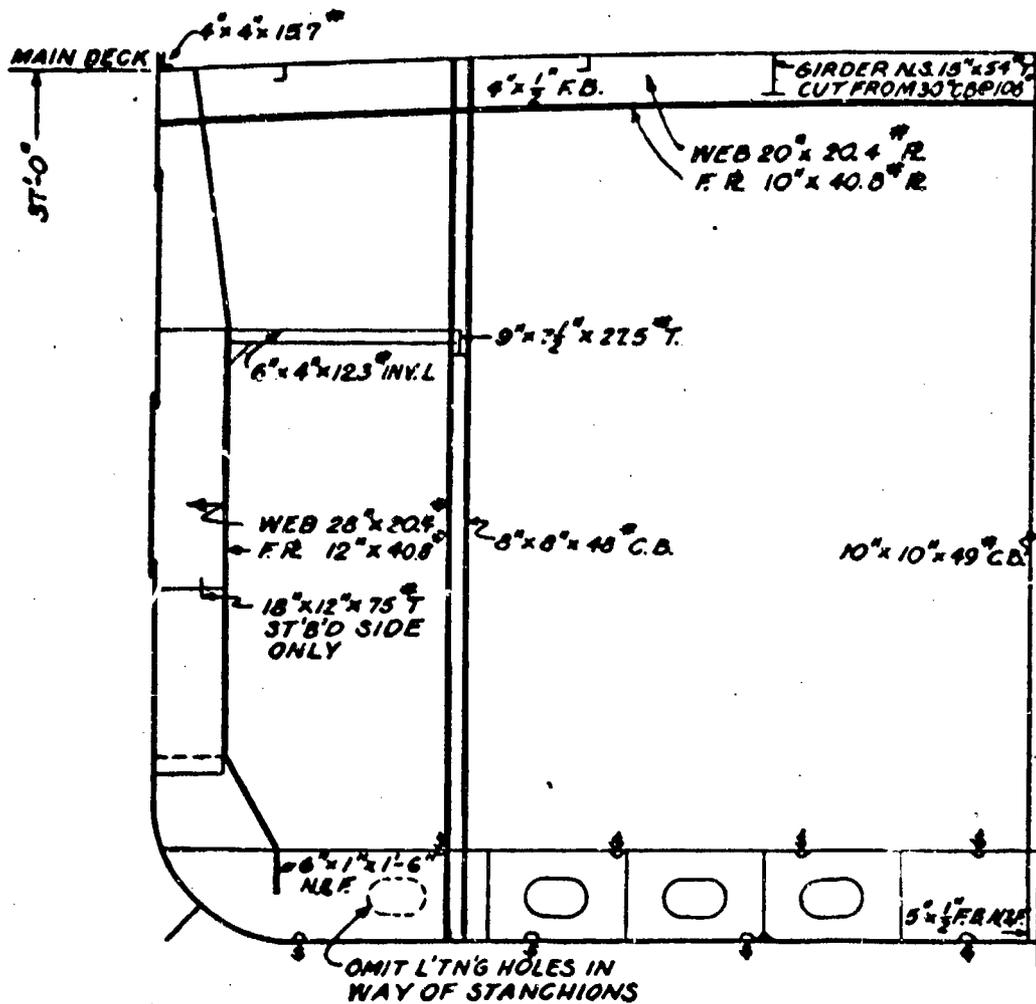
Main Engines: Two sets of Westinghouse steam turbines, directly connected to Westinghouse main generators. Two main propulsion motors.  
Main Condensers: Two are installed in ship.  
Boilers: Two Babcock and Wilcox boilers are installed in ship. 465 psi gauge - 750° F.  
Propellers: Two are installed in ship.  
Main Shafts: Two are installed in ship.  
Ships Service Generators: Five units are installed. Three - 250 KW. - 450 V. - A.C. and Two - 100 KW. 120/240 V. - D.C.

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USS GENEVA (APA86)

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by authority of SECRETARIES OF STATE to Security Information  
by John H. Hight USAF JCS 17187/06 DATED 19 MAY 1954  
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FRAME 78 LOOKING AFT

## MIDSHIP SECTION TEST B

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USS GENEVA (APA 86)

TECHNICAL INSPECTION REPORT

OVERALL SUMMARY

I. Target Condition After Test.

(a) Drafts after test; list; 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

Not observed.

(c) Other damage.

HULL

Not observed

MACHINERY

The machinery of this vessel was not damaged by

Test B.

ELECTRICAL

There was no damage to electrical equipment.

USS GENEVA (APA86)

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II. Forces Evidenced and Effects Noted.

(a) Heat.

HULL

None.

MACHINERY

No evidence.

ELECTRICAL

No evidence of heat.

(b) Fires and explosions.

HULL

None.

MACHINERY

No evidence.

ELECTRICAL

No fires or explosions.

(c) Shock.

HULL

Several dozen light bulbs were broken.

MACHINERY

No evidence.

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USS GENEVA (APA86)

ELECTRICAL

There was no evidence of shock damage to electrical equipment.

(d) Pressure.

HULL

None.

MACHINERY

No evidence.

ELECTRICAL

There was no evidence of pressure damage to electrical equipment.

(e) Effects apparently peculiar to the atom bomb.

HULL

None.

MACHINERY

None.

ELECTRICAL

No effects peculiar to the atom bomb were noted.

III. Effects of Damage.

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

HULL

None.

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MACHINERY

None.

ELECTRICAL

There was no effect from Test B.

(b) Effect on gunnery and fire control.

HULL

None.

MACHINERY

No comment.

ELECTRICAL

There was no effect on gunnery or fire control.

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

HULL

None.

MACHINERY

No comment.

ELECTRICAL

There was no effect from Test B.

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USS GENEVA (APA86)

(d) Effect on personnel and habitability.

HULL

None.

MACHINERY

None.

ELECTRICAL

No effect on habitability of the vessel from electrical damage.

(e) Total effect on fighting efficiency.

HULL

None.

MACHINERY

None.

ELECTRICAL

There would be no effect on the fighting efficiency of the vessel from electrical damage.

IV. General Summary of Observers' Impressions and Conclusions.

HULL

No comment.

MACHINERY

The GENEVA was outside the effective range of the explosion during Test B.

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USS GENEVA (APA86)

ELECTRICAL

As there was no damage from Test B no conclusions were made by the observers.

V. Preliminary General or Specific Recommendations of Inspection Group.

HULL

None.

MACHINERY

None.

ELECTRICAL

No recommendations.

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USS GENEVA (APA86)

TECHNICAL INSPECTION REPORT

SECTION I - HULL

GENERAL SUMMARY OF HULL DAMAGE

I. Target Condition After Test.

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

There was no flooding, hence no change in drafts  
or list.

- (b) Structural damage.

None.

- (c) Other damage.

Not observed.

II. Forces Evidenced and Effects Noted.

- (a) Heat.

None.

- (b) Fires and explosions.

None.

- (c) Shock.

Several dozen light bulbs were broken.

- (d) Pressure.

None.

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USS GENEVA (APA86)

(e) Effects apparently peculiar to the atom bomb.

None.

III. Effects of Damage.

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

None.

(b) Effect on gunnery and fire control.

None.

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

None.

(d) Effect on personnel and habitability.

None.

(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.

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USS GENEVA (APA86)

VI. Instructions for Loading the Vessel Specified the following:

ITEM	LOADING
Fuel Oil	95%
Diesel Oil	95%
Ammunition	100%
Potable and reserve feed water	95%
Salt water ballast	None

Details of the actual quantities of the various items aboard included in Report 7, 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.

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USS GENEVA (APA86)

## DETAILED DESCRIPTION OF HULL DAMAGE

### A. General Description of Hull Damage.

Damage negligible.

### B. Superstructure.

No damage.

### C. Turrets, Guns and Directors.

No damage.

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

Not Applicable.

### E. Weather Deck.

The canvas covers on both cargo hatches, upper deck, are slightly torn. Several of the hatch boards were shaken loose and were found on the deck below. The six scratch gages installed under the upper deck recorded no movement.

### F. Exterior Hull.

No damage.

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

No damage.

### H. Armor Decks and Miscellaneous Armor.

Not Applicable.

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USS GENEVA (APA86)

J. Interior Compartments (below w.l.).

No damage. Four scratch gages were installed in the after machinery space to record movement of the shell plating and between the inner bottom and main deck. No movement was recorded by any of these gages.

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.

Q. Ammunition Handling.

No damage.

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USS GENEVA (APA86)

**R. Strength.**

**No damage.**

**S. Miscellaneous.**

**No comment.**

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**USS GENEVA (APA86)**

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.

The machinery of this vessel was not damaged by  
Test B.

II. Forces evidenced and Effects Noted.

(a) Heat.

No evidence.

(b) Fires and explosions.

No evidence.

(c) Shock.

No evidence.

(d) Pressure.

No evidence.

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USS GENEVA (APA86)

(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 GENEVA was outside the effective range of the explosion during Test B.

### V. Preliminary Recommendations.

None.

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USS GENEVA (APA86)

## DETAILED DESCRIPTION OF MACHINERY DAMAGE

### A. General Description of Machinery Damage.

#### (a) Overall condition.

The re was no damage to the machinery of this vessel during Test B.

#### (b) Areas of major damage.

None.

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

None.

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

The overall operation of the machinery plant was not affected by Test B. Full operation was resumed immediately after the test.

### B. Boilers.

Undamaged. Both boilers were steamed after Test B, and functioned normally. Hydrostatic tests indicate no change in the tightness of the boilers.

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USS GENEVA (APA86)

## HYDROSTATIC TEST ON BOILER #2

	Before Test B	After Test B
Initial pressure.	450 lb/sq. in	450 lb/sq. in
Time required for pressure to drop		
100 lb.	50 minutes	43 minutes
200 lb.	4 hours	3 hours
Pressure after		
12 hours	170 lb/sq. in.	140 lb/sq. in.
24 hours	120 lb/sq. in.	60 lb/sq. in.

### C. Blowers.

Undamaged. All four blowers were tested in operation.

### D. Fuel Oil Equipment.

Undamaged. All fuel oil equipment was operated after Test B.

### E. Boiler Feedwater Equipment.

Undamaged. All feedwater equipment has been operated.

### F. Main Propulsion Machinery.

1. Undamaged. The main engines were operated after Test B. Performance was normal.

2. Leads left in the bearings of the forward main turbo-generator indicate no measurable movement of the rotor during the test.

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USS GENEVA (APA86)

**G. Reduction Gears.**

Not Applicable.

**H. Shafting and Bearings.**

Undamaged. Shafting and bearings were checked while the ship was underway. Performance was normal.

**I. Lubrication System.**

Undamaged. The lubrication system was checked during operation of the main engines. Performance was normal.

**J. Condensers and Air Ejectors.**

Undamaged. All of the condensers were used in operation, and functioned normally.

**K. Pumps.**

Undamaged. All of the pumps have been tested since Test B.

**L. Auxiliary Generators (Turbines and Gears).**

Undamaged. All turbo-generators were operated after Test B and functioned normally.

**M. Propellers.**

Undamaged. Propellers were checked while the ship was underway. They functioned normally.

**N. Distilling Plant.**

Undamaged. The evaporators were placed in service immediately after Test B. They functioned normally.

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USS GENEVA (APA86)

O. Refrigeration Plant.

Undamaged. The refrigerating plant was placed in operation immediately after Test B. It functioned normally.

P. Winches, Windlasses, and Capstans.

Undamaged. The deck machinery was all operated after Test B and functioned normally.

Q. Steering Engine.

Undamaged. Both steering units were operated from all stations and functioned normally.

R. Elevators, Ammunition Hoists, Etc..

Undamaged. The gasoline and ammunition hoists were tested after Test B, and functioned normally.

S. Ventilation (Machinery).

Undamaged. The ventilation machinery has all been in use since Test B, and functions normally.

T. Compressed Air Plant.

Undamaged. The air compressor has been tested in operation since Test B.

U. Diesels (Generators and Boats).

1. The diesel emergency generator was operated for two hours and no damage was found.

2. The diesel fire pumps were operated and no damage was found.

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USS GENEVA (APA86)

V. Piping Systems.

Undamaged. All piping was tested at normal operating pressures.

W. Miscellaneous.

Undamaged. Laundry, galley and machine shop equipment was operated after Test B, and functioned normally.

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USS GENEVA (APA86)

TECHNICAL INSPECTION REPORT

SECTION III - ELECTRICAL

GENERAL SUMMARY OF ELECTRICAL DAMAGE

I. Target Condition After Test.

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

Not observed.

- (b) Structural damage.

Not observed.

- (c) Other damage.

There was no damage to electrical equipment.

II. Forces Evidenced and Effects Noted.

- (a) Heat.

No evidence of heat.

- (b) Fires and explosions.

No fires or explosions.

- (c) Shock.

There was no evidence of shock damage to electrical equipment.

- (d) Pressure.

There was no evidence of pressure damage to electrical equipment.

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USS GENEVA (APA86)

- (e) Any effects apparently peculiar to the atom bomb.

No effects peculiar to the atom bomb were noted.

### III. Effects of Damage.

- (a) Effect on propulsion and ship control.

There was no effect from Test B.

- (b) Effect on gunnery and fire control.

There was no effect on gunnery or fire control.

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

There was no effect from Test B.

- (d) Effect on personnel and habitability.

No effect on habitability of the vessel from electrical damage.

- (e) Total effect on fighting efficiency.

There would be no effect on the fighting efficiency of the vessel from electrical damage.

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

As there was no damage from Test B, no conclusions were made by the observers.

### V. Any Preliminary General or Specific Recommendations of the Inspecting Group.

No recommendations.

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USS GENEVA (APA86)

## DETAILED DESCRIPTION OF ELECTRICAL DAMAGE

### A. General Description of Electrical Damage.

#### (a) Overall condition.

Very good. The vessel suffered no damage from  
Test B.

#### (b) Areas of major damage.

Not damaged.

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

Not damaged.

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

1. Ship's service generators - not damaged.
2. Engine and boiler auxiliaries - not damaged.
3. Electric propulsion - not damaged.
4. Communications - not damaged.
5. Fire control circuits - not damaged.
6. Ventilation - not damaged.
7. Lighting - not damaged.

#### (e) Types of equipment most affected.

No electrical equipment affected from Test B.

### B. Electric Propulsion Rotating Equipment.

Not damaged.

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USS GENEVA (APA86)

- C. Electric Propulsion Control Equipment.  
Not damaged.
- D. Generators - Ships Service.  
Not damaged.
- E. Generators - Emergency.  
Not damaged.
- F. Switchboards, Distribution and Transfer Panels.  
Not damaged.
- G. Wiring, Wiring Equipment and Wireways.  
Not damaged.
- H. Transformers.  
Not damaged.
- I. Submarine Propelling Batteries.  
Not Applicable.
- J. Portable Batteries.  
Not damaged.
- K. Motors, Motor Generator Sets and Motor Controllers.  
Not damaged.
- L. Lighting Equipment.  
Not damaged.

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USS GENEVA (APA86)

- M. Searchlights.  
Not damaged.
- N. Degaussing Equipment.  
Not damaged.
- O. Gyro Compass Equipment.  
Not damaged.
- P. Sound Powered Telephones.  
Not damaged.
- Q. Ship's Service Telephones.  
Not Applicable.
- R. Announcing Systems.  
Not damaged.
- S. Telegraphs.  
Not damaged.
- T. Indicating Systems.  
Not damaged.
- U. I.C. and A.C.O. Switchboards.  
Not damaged.
- V. F.C. Switchboard.  
Not damaged.

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USS GENEVA (APA86)

**SECTION IV**

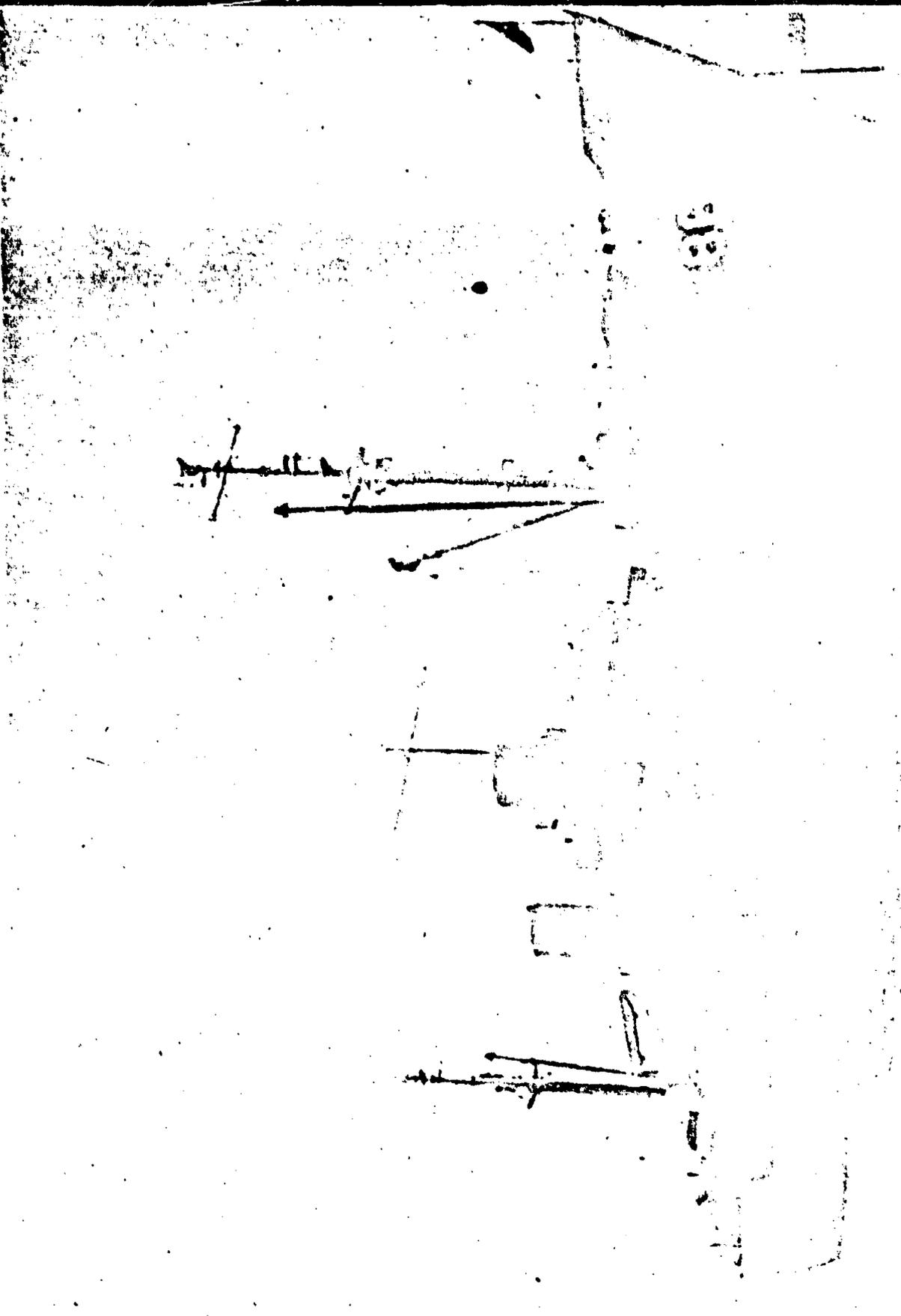
**PHOTOGRAPHS**

**TEST BAKER**

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**USS GENEVA (APA86)**

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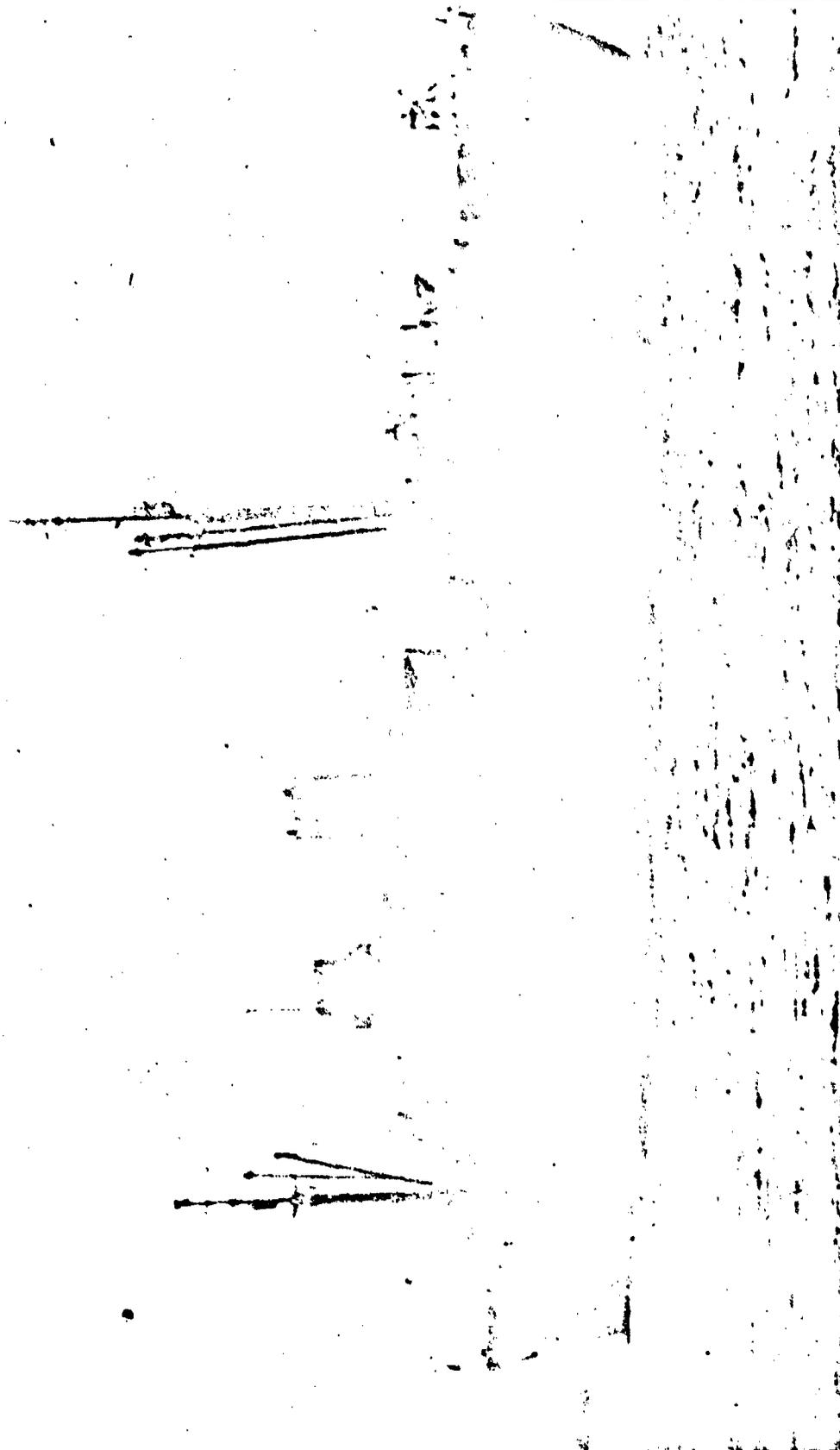
AB-CR-227-287-8. Starboard bow after Test B.

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USS GENEVA (APA86)

8392



AA-CR-227-289-4. Port quarter after Test B.

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APPENDIX

COMMANDING OFFICERS REPORT

TEST BAKER

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USS GENEVA (APA86)

REPORT #11

COMMANDING OFFICERS REPORT

SECTION I

(1) This target vessel is the U.S.S. GENEVA, Attack Transport No. 86 of the APA 57-87 class, built by the Consolidated Steel Corporation at Wilmington, California for the U.S. Maritime Commission in accordance with BuShips specifications. It was turned over to the U.S. Navy in March 1945.

(2) The material condition and the equipment of the vessel was not affected to any serious degree.

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U.S.S. GENEVA (APA 86)

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## SECTION II

(1) The general summary of damage suffered by this vessel as a result of the test is included in reference (b) (copy attached). The ability of the vessel to remain in action and its fighting efficiency was not impaired. No machinery, electrical, ship control, fire control, gunnery, electronics, watertight integrity, stability was affected. All remained in operable condition. However, a slight leak found in tie-rod packing of No. 1 main condenser may have been due to water hammer through the open sea injection valve to condenser (as prescribed for the test).

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U.S.S. GENEVA (APA86)

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SECTION III

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(1) The effects of Target Test Baker on this vessel were negligible. Special test materials on board; such as bombs, sulphuric acid, Navy TBM, instrumentation and the lack of a crew on board, did not adversely affect the outcome as no fire and no flooding occurred.

(2) In view of the slight damage to this vessel, no important changes in the design or arrangement features of this vessel can be visualized.

(3) The following general observations and recommendations are submitted:

(a) Hatch boards should be secured in a more efficient manner.

(b) Since the negligible amount of radioactivity found aboard the GENEVA may have been due to a thorough scrubbing of decks and bulkheads with fresh water just prior to the test, this procedure is recommended for all ships.

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

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18 April 1997

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

SUBJECT: Declassification of Reports

The Defense Special Weapons Agency has declassified the following reports:

✓✓AD-366588 <del>4</del>	XRD-203-Section 12✓
AD-366589 <del>L</del>	XRD-200-Section 9
AD-366590 <del>L</del>	XRD-204-Section 13
AD-366591 <del>L</del>	XRD-183
✓✓AD-366586 <del>X</del>	XRD-201-Section 10✓
✓✓AD-367487 <del>4</del>	XRD-131-Volume 2✓
✓✓AD-367516 <del>4</del>	XRD- <del>1</del> 143✓
✓✓AD-367493 <del>4</del>	XRD-142✓
AD-801410L✓	XRD-138✓
AD-376831L✓	XRD-83✓
AD-366759 <del>L</del>	XRD-80
✓✓AD-376830L <del>4</del>	XRD-79✓
✓✓AD-376828L <del>4</del>	XRD-76✓
✓✓AD-367464 <del>4</del>	XRD-106✓
AD-801404L✓	XRD-105-Volume 1✓
✓✓AD-367459 <del>4</del>	XRD-100✓

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18 April 1997

Subject: Declassification of Reports

✓✓ AD-367517 ✕	XRD-141 ✓
AD-366762 ✓	XRD-84
AD-366760 ✓	XRD-81
AD-366761 ✓	XRD-82
AD-367501 ✓	XRD-158-Volume 1
AD-367507L ✓	XRD-152-Volume 4
✓✓ AD-367495 ✕	XRD-184 ✓
✓✓ AD-367485 ✕	XRD-129 ✓
✓✓ AD-367484 ✕	XRD-128 ✓
✓ AD-367483 ✕	XRD-127 ✓
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Subject: Declassification of Reports

AD-801406L ✓ XRD-114✓

In addition, all of the cited reports are now **approved for public release; distribution statement "A" now applies.**

*Arduith Jarrett*  
ARDITH JARRETT  
Chief, Technical Resource Center