UNCLASSIFIED

AD NUMBER
AD367517

CLASSIFICATION CHANGES

TO: unclassified

FROM: confidential

LIMITATION CHANGES

TO:
Approved for public release, distribution unlimited

FROM:

AUTHORITY
DSWA ltr., 18 Apr 1997; DSWA ltr., 18 Apr 1997

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SHIP CHARACTERISTICS

Commissioned: 28 April 1944.

HULL

Length Overall: 328 feet 0 inches.
Length on Waterline: 316 feet 0 inches
Beam (extreme): 50 feet 0 inches.
Drafts at time of test: Fwd. 5 feet 9 inches.
Aft. 11 feet 8 inches.
Limiting displacement: 4,080 tons.
Displacement at time of test: 3,278 tons.

MAIN PROPULSION PLANT

Main Engines: Two General Motors Diesels, type: 12 - 567 A. One per main shaft.
Propellers: Two are installed in ship.
Main Shafts: Two are installed in ship.
Ships Service Generators: Three - 100 KW.- 230 volts, D.C. units are installed.
MIDSHIP SECTION
TEST B
SECRET

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LST 661

9195
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
       There was no structural damage.

   (c) Other damage.

       HULL
       Not observed.

       MACHINERY
       None.

       ELECTRICAL
       There was no damage to any electrical equipment.

SECRET

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II. Forces Evidenced and Effects Noted.

(a) Heat.

HULL
None

MACHINERY
No evidence.

ELECTRICAL
There was no evidence of heat in way of electrical equipment.

(b) Fires and Explosions.

HULL
None.

MACHINERY
No evidence.

ELECTRICAL
There were no fires or explosions in way of electrical equipment.

(c) Shock.

HULL
None.

MACHINERY
No evidence.
ELECTRICAL

There was no evidence of shock in way of electrical equipment.

(d) Pressure.

HULL

A temporary cargo hatch cover was installed to replace that burned in Test A. The canvas of the cover is disarranged and the wood is dislodged. This is apparently the result of blast or falling water.

MACHINERY

No evidence.

ELECTRICAL

There was no evidence of pressure in way of electrical equipment.

(e) Effects peculiar to the Atomic Bomb.

HULL

None.

MACHINERY

None, except radioactivity.

ELECTRICAL

Radioactivity in way of exposed equipment was the only effect noted peculiar to the Atom Bomb.

III. Results of Test on Target.

SEC...T

USS LST 661

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

HULL

Not observed.

MACHINERY

The test had no effect on machinery, as far as could be determined by visual inspection. No machinery on this vessel was operated after Test B because of radioactivity, which was fairly high when the ship was inspected 18 days after Test B.

ELECTRICAL

No damage was apparent to electrical machinery or ship control.

(b) Effect on gunnery and fire control.

HULL

Not observed.

MACHINERY

No comment.

ELECTRICAL

No electrical damage affected gunnery or fire control.

(c) Effect on watertight integrity and stability.

HULL

None.

MACHINERY

No comment.
ELECTRICAL

No electrical damage affected watertight integrity or stability.

(d) Effect on personnel and habitability.

HULL

None.

MACHINERY

None, except radioactivity.

ELECTRICAL

No electrical damage affected personnel or habitability.

(e) Effect on fighting efficiency.

HULL

The only effect on fighting efficiency would be that resulting from radiological contamination.

MACHINERY

None, except for possible effects of radioactivity. As the machinery was fully operable, the ship could probably have left the contaminated area without being seriously affected.

ELECTRICAL

No electrical damage affected the fighting efficiency of the vessel.

IV. Summary of Observer's Impressions and Conclusions.

HULL

No comment.
MACHINERY

LST 661 was outside the range of physical damage from the explosion in Test B.

ELECTRICAL

No damage was evident on any electrical equipment due to Test B. It appears that present electrical designs have sufficient shock resistance to withstand the effects of the Atom Bomb under conditions existing on this vessel during Test B.

V. Preliminary Recommendations.

HULL

None.

MACHINERY

None.

ELECTRICAL

None.
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.

None.

(d) Pressure.

A temporary cargo hatch cover was installed to replace that burned in Test A. The canvas of the cover is disarranged.
and the wood is dislodged. This is apparently the result of blast or falling water.

(e) Effects peculiar to the Atom Bomb.

None.

III. Effects of Damage.

(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.

None.

(e) Effect on fighting efficiency.

The only effect on fighting efficiency would be that resulting from radiological contamination.

IV. General Summary of Observers' Impressions and Conclusions.

No comment.

V. Preliminary General or Specific Recommendations of Inspection Group.

None.
VI. Instructions for loading the vessel specified the following:

<table>
<thead>
<tr>
<th>ITEM</th>
<th>LOADING</th>
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<tr>
<td>Fuel oil</td>
<td></td>
</tr>
<tr>
<td>Diesel oil</td>
<td>50 tons</td>
</tr>
<tr>
<td>Ammunition</td>
<td></td>
</tr>
<tr>
<td>Potable and reserve feed water</td>
<td>96%</td>
</tr>
<tr>
<td>Salt water ballast</td>
<td>96%</td>
</tr>
</tbody>
</table>

Details of the actual quantities of the various items aboard are 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.
DETAILED DESCRIPTION OF HULL DAMAGE

A. General Description of Hull Damage.

The temporary closure over the cargo hatch is dislodged. There is no other damage. General views of the ship are on pages 28 and 29.

B. Superstructure.

No damage.

C. Turrets, Guns, and Directors.

No damage.

D. Torpedo Mounts, Depth Charge Gear.

Not applicable.

E. Weather Deck.

The temporary closure over the cargo hatch is dislodged. There is no other damage.

F. Exterior Hull.

No damage.

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.

Q. Ammunition Handling.
   No damage.

R. Strength.
   No damage.

S. Miscellaneous.
   No comment.
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.

No evidence.

(b) Fires and explosions.

No evidence.

(c) Shock.

No evidence.

(d) Pressure.

No evidence.

(e) Effects apparently peculiar to the atom bomb.

None, except radioactivity.
III. Effects of Damage.

(a) Effect on machinery and ship control.

The test had no effect on machinery, as far as could be determined by visual inspection. No machinery on this vessel was operated after Test B, because of radioactivity, which was fairly high when the ship was inspected 18 days after Test B.

(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, except radioactivity.

(e) Total effect on fighting efficiency.

None except for possible effects of radioactivity. As the machinery was fully operable, the ship could probably have left the contaminated area without being seriously affected.

IV. General Summary.

LST 661 was outside the range of physical damage from the explosion in Test B.

V. Preliminary Recommendations.

None.
DETAILED DESCRIPTION OF MACHINERY DAMAGE

A. General Description of Machinery Damage.

(a) Overall condition.

The overall condition of the machinery was not changed by Test B.

(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.

Test B had no effect on operation of the machinery as far as can be determined by visual inspection. No machinery on this vessel was operated after Test B.

B. Boilers.

No apparent damage.

C. Blowers.

No apparent damage.

D. Fuel Oil Equipment.

No apparent damage.

E. Boiler Feedwater Equipment.

No apparent damage.
No apparent damage.

G. Reduction Gears.
   No apparent damage.

H. Shafting and Bearings.
   No apparent damage.

I. Lubrication System.
   No apparent damage.

J. Condensers and Air Ejectors.
   Not Applicable.

K. Pumps.
   No apparent damage.

L. Auxiliary Generators (Turbines and Gears).
   Not Applicable.

M. Propellers.
   Not inspected. The propellers could not be examined from the surface of the water. There is no reason to believe that they were damaged.

N. Distilling Plant.
   No apparent damage.

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USS LST 661

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O. Refrigeration Plant.
   No apparent damage.

P. Winches, Windlasses, and Capstans.
   No apparent damage.

Q. Steering Engine.
   No apparent damage.

R. Elevators, Ammunition Hoists, Etc.
   No apparent damage.

S. Ventilation (Machinery).
   No apparent damage.

T. Compressed Air Plant.
   No apparent damage.

U. Diesels (Generators and Boats).
   No apparent damage.

V. Piping Systems.
   No apparent damage.

W. Miscellaneous.
   No apparent damage.
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.

1. Drafts and list were the same as before the test.
2. There was no flooding.

(b) Structural damage.

There was no structural damage.

(c) Other damage.

There was no damage to any electrical equipment.

II. Forces Evident and Effects Noted.

(a) Heat.

There was no evidence of heat in way of electrical equipment.

(b) Fires and explosions.

There were no fires or explosions in way of electrical equipment.

(c) Shock.

There was no evidence of shock in way of electrical equipment.

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There was no evidence of pressure in way of electrical equipment.

(e) Effects peculiar to the Atom Bomb.

Radioactivity in way of exposed equipment was the only effect noted peculiar to the Atom Bomb.

III. Effects of Damage.

(a) Effect on electrical machinery and ship control.

No damage was apparent to electrical machinery or ship control.

(b) Effect on gunnery and fire control.

No electrical damage affected gunnery or fire control.

(c) Effect on watertight integrity and stability.

No electrical damage affected watertight integrity or stability.

(d) Effect on personnel and habitability.

No electrical damage affected personnel or habitability.

(e) Effect on fighting efficiency.

No electrical damage affected the fighting efficiency of the vessel.

IV. General Summary of Observers Impressions.

No damage was evident on any electrical equipment due to test Baker. It appears that present electrical designs have
sufficient shock resistance to withstand the effects of the Atom Bomb under conditions existing on this vessel during Test.

V. Recommendations.

None.
A. General Description of Electrical Damage.
   (a) Overall condition.

   The overall condition of the electric plant is the same as before the test.

   (b) Areas of major damage.

   None.

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

   None.

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

   1. Ship's service generator plant: No effect.
   2. Engine and boiler auxiliaries: No effect.
   3. Electric propulsion: Not applicable.
   4. Communications: No effect.
   5. Fire control circuits: No effect.
   6. Ventilation: No effect.
   7. Lighting: No effect.

   (e) Types of equipment most affected.

   None.

B. Electric Propulsion Rotating Equipment.

   Not applicable.
C. Electric Propulsion Control Equipment.
   Not applicable.

D. Ship's Service Generators.
   No damage.

E. Emergency Generators.
   Not applicable.

F. Switchboards, Distribution and Transfer Panels.
   No damage.

G. Wiring, Wiring Equipment and Wireways.
   No damage.

H. Transformers.
   No damage.

I. Submarine Propelling Batteries.
   Not applicable.

J. Portable Batteries.
   No damage.

K. Motors, Motor Generator Sets and Motor Controllers.
   No damage.

L. Lighting Equipment.
   No damage.

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N. Degaussing Equipment.
   No damage.

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.

   Not applicable.

V. F. C. Switchboards.
   Not applicable.
AB-CR-227-289-141. View from off starboard bow after Test B.
AB-CR-227-289-145. View from off port quarter after Test B.
Initial inspection of the LST 661 was accomplished on 13 August 1946.

No material damage was found or evident thereof which was caused by Test B.

No equipment was operated or energized.
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
- AD-366589
- AD-366590
- AD-366591
- AD-366586
- AD-367487
- AD-367516
- AD-367493
- AD-801410
- AD-376831
- AD-366759
- AD-376830
- AD-376828
- AD-367464
- AD-801404
- AD-367459

XRD-203-Section 12
XRD-200-Section 9
XRD-204-Section 13
XRD-183
XRD-201-Section 10
XRD-131-Volume 2
XRD-143
XRD-142
XRD-138
XRD-83
XRD-80
XRD-79
XRD-76
XRD-106
XRD-105-Volume 1
XRD-100
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
AD-367482  XRD-126
AD-367488  XRD-132
AD-367480  XRD-124
AD-801409L XRD-135
AD-367490  XRD-136
AD-367492  XRD-137
AD-801411L XRD-139
AD-367518  XRD-140
AD-367515  XRD-144
AD-367514  XRD-145
AD-367468  XRD-110-Volume 2
AD-367513  XRD-146
AD-367497  XRD-162
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.

ARDITH JARRETT
Chief, Technical Resource Center