Mobile Diving and Salvage Unit

TWO

"Experts in Salvage"

DEPARTMENT OF THE NAVY
MOBILE DIVING AND SALVAGE UNIT TWO
DETACHMENT 507/RUIC 85606
NAVAL & MARINE CORPS RESERVE READINESS CENTER
NORFOLK, VA 23520-5320

4720
Ser 030
29 May 01

From: Officer In Charge, Naval Reserve Mobile Diving & Salvage Unit Two Detachment 507
To: Commanding Officer, Mobile Diving & Salvage Unit Two
Commanding Officer, Naval & Marine Corps Reserve Readiness Center, Norfolk, VA

Subj: AFTER ACTION REPORT FOR IDTT TO PHILADELPHIA

Encl: (1) PHILADELPHIA IDTT OPERATIONS
(2) DIVER HULL INSPECTION DATA EX-OLYMPIA
(3) DIVER HULL INSPECTION DATA EX-BECUNA

1. The following, illustrated by Enclosure (1), summarizes the NR MDSU 2 Det 507 IDTT to Philadelphia 17-20 May 2001:

17 MAY 01 Members of Det 507 loaded equipment, transited to Philadelphia, unloaded, and staged the MK-3 Lightweight Dive System (LWDS) on a floating platform (which normally serves as a dock attached to a barge owned by the Independence Seaport Museum). The floating platform was positioned between the Ex-OLYMPIA and the Ex-BECUNA for security utilizing the Boston Whaler.

18 MAY 01 The unit met with officials of the Museum and commenced dive operations on Ex-OLYMPIA using MK-3 LWDS and MK-21 Surface Supplied Dive System (SSDS), positioned on the floating platform, in conjunction with the Diver Underwater Color Television System (DUCTS), which was located on Ex-OLYMPIA. The floating platform was initially moved to the port (outboard) side of the ship amidships, to inspect the port side, and subsequently to the forward then aft starboard side via the Boston Whaler, to complete the

inspection on the starboard side. The divers performed a standard underwater hull inspection as documented in Enclosure (2) and provided extensive underwater video documentation to the Museum via interactive use of the DUCTS. The Museum provided a large number of hanging tags to identify specific items of interest resulting in a very successful effort with respect to video documentation of those items. At low tide the ship rests on a conformal bottom of firm mud with no noticeable mound around the perimeter. High tide clearance at the keel was estimated at about 2-3 Ft amidships with substantially more clearance forward, aft, and laterally. No underwater obstructions were noted. The forward mooring pylon was also inspected below the waterline with the DUCTS. After completion of the inspection of Ex-OLYMPIA, dive operations were secured with the floating platform located between Ex-OLYMPIA and Ex-BECUNA aft for security.

19 MAY 01 The unit met with officials of the Museum and commenced dive operations on Ex-BECUNA using the MK-3 LWDS and MK-21 SSDS, located on the floating platform, in conjunction with the DUCTS, which was located on Ex-OLYMPIA. The floating platform was initially port side aft of the submarine, from which location the aft half was inspected, and subsequently moved to the forward port side via the Boston Whaler where the forward inspection was accomplished. The divers performed a standard underwater hull inspection as documented in Enclosure (3) and provided extensive underwater video documentation to the Museum via interactive use of the DUCTS system. No hanging tags were provided by the Museum for Ex-BECUNA. At low tide the ship rests on a conformal bottom of firm mud with a 1-2 Ft mound around the perimeter. High tide clearance at the keel was about 6 Ft amidships with similar clearance forward, aft, and laterally. No underwater obstructions were noted. Divers performed two SCUBA dives from the Boston Whaler to inspect the pylon aft of the two vessels, which was found to be in good condition except at the waterline where some wastage was apparent.

After completion of the inspection of Ex-BECUNA, dive operations were secured, equipment was loaded out for the return trip, and the floating platform was returned to its location alongside the barge and secured.

20 MAY 01 Members of Det 507 transited to Norfolk. Upon arrival at MDSU, the unit unloaded, inventoried, performed maintenance, and stowed the gear.

Total Dives 36
Total Bottom Time 11 hrs 20 min

2. We received outstanding support in all areas from the Independence Seaport Museum. The IDTT also included Reservists from NR NAVSEA Det 1006 which is the overall coordinator of dive operations in support of the Donated Ship Program. The excellent support provided directly resulted in the overall success of the IDTT.

3. The NR MDSU 2 Det 507 point of contact for this evolution is LCDR Walter Rickert (202)781-2197 or BMC(DV) Donald Thrush (757)523-1020.

H. C. Chase, Jr.

Copy to:

NAVSEA (09NR, 91AR-B, 05D5, 00C)
NR NAVSEA DET 304
NR NAVSEA DET 1006
NR NAVSEA DET 1404
Independence Seaport Museum

PHILADELPHIA IDTT OPERATIONS

NR MDSU 2 DET 507 Dive Team

Pre-Dive Conference

Platform Alongside Ex-OLYMPIA

DUCTS System On Ex-OLYMPIA

Dive Station On The Platform

Diving on Ex-OLYMPIA

Moving The Dive Station

CAPT Ball Preparing To Dive

Enclosure (1)

DIVER HULL INSPECTION DATA

~~XXX~~ Ex-BECUNA	HULL TYPE NUMBER S-319	LOCATION (CITY) Philadelphia	DATE (mm/dd/yy) 05/19/01
TYCOM N/A	INSPECTING ACTIVITY NR MDSU 2 Det 507		VISIBILITY (FT) 2
LOCATION OF LAST DRYDOCKING Philadelphia Naval Shipyard			UNDOCKING DATE 1967?
LOCATION OF LAST PAINTING Philadelphia Naval Shipyard			DATE 1967?

PAINT TYPE: ANTIFOULING Unknown ANTICORROSION Unknown

DATE OF THE LAST WATERBORNE FULL HULL CLEANING: Unknown

DATE OF THE LAST WATERBORNE INTERIM CLEANING: Unknown

UNDERWATER PHOTOGRAPHS TAKEN ☐ YES ☒ NO UNDERWATER COLOR VIDEO TAKEN ☒ YES ☐ NO

UNDERWATER WORK ACCOMPLISHED THIS DATE

☐ FULL CLEAN ☐ POLISH ☐ MULTI-BRUSH ☒ INSPECT ☐ PAINT
☐ INTERIM ☐ HYDRO ☐ HAND-HELD ☐ REPAIR ☐ OTHER _____

1. HULL COATING SYSTEM (PDR _____)

a. ANTIFOULING PAINT

PERCENTAGE REMAINING _____ PERCENT REJUVENATION _____

IS THE A/F ☐ HARD ☐ SOFT

PERCENTAGE _____	PEELING	_____ LOCALIZED or	_____ GENERAL
_____	BLISTERING	_____ LOCALIZED or	_____ GENERAL
_____	ABRASION	_____ LOCALIZED or	_____ GENERAL

CONDITION SUMMARY [IF PAINT DAMAGE IS LOCALIZED, GIVE LOCATION(s)]:

Hull coating not visible.

b) ANTICORROSION PAINT N/A

PERCENT REMAINING _____

PERCENTAGE _____	PEELING	_____ LOCALIZED or	_____ GENERAL
_____	BLISTERING	_____ LOCALIZED or	_____ GENERAL
_____	ABRASION	_____ LOCALIZED or	_____ GENERAL

CONDITIONING SUMMARY [IF PAINT DAMAGE IS LOCALIZED, GIVE LOCATION(s)]:

c) DOCKING BLOCK AREAS (PDR _____) N/A

AVERAGE PERCENTAGE OF BLOCK AREAS PAINTED _____ %

BARE METAL PITTING _____ % _____ IN. DIAMETER _____ IN. DEEP

CONDITION SUMMARY:

Enclosure (3)

2. CATHODIC PROTECTION SYSTEM

a. SACRIFICIAL ANODES (ZINCS)

AVERAGE PERCENTAGES OF ANODES REMAINING 70 %

ANODES ARE: ☐ UNIFORMLY WASTED ☒ WASTAGE GREATEST IN FOLLOWING AREAS:

Zincs on the hull at the Stern Tube and Strut were slightly more wasted on the port side.

ANODES ARE: ☐ WELDED ☒ BOLTED ☐ BOTH

NUMBER AND LOCATION OF ANY ANODES MISSING OR INACTIVE:

MISSING None

INACTIVE None

b. IMPRESSED CURRENT N/A

☐ DAMAGE NOTED ON ATTACHED DRAWING (Port/Stbd) (FRAME _____)

☐ WIRES LOOSE, BROKEN, OR MISSING (Port/Stbd) (FRAME _____)

☐ CAPASTIC SHIELD DAMAGE (Port/Stbd) (FRAME _____)

☐ INSULATORS LOOSE OR DAMAGED (Port/Stbd) (FRAME _____)

☐ OTHER (Port/Stbd) (FRAME _____)

3. GENERAL HULL DAMAGE (HULL PLATING, BILGE KEELS, etc.):

Bilge Keel intact port and starboard.
No significant hull damage noted.
Bottom was cleaner than sides due to grounding.

4. MASKER AIR SYSTEM N/A

MASKER BELTS:

_____ PERCENT BLOCKED HOLES (POST CLEAN) BELTS WELDED TO HULL ☐ YES ☐ NO

CUMULATIVE LENGTH OF EPOXY MISSING (BELTS NUMBERED BOW TO STERN)

PORT: #1 _____ ft. #2 _____ ft. #3 _____ ft. #4 _____ ft.

Stbd: #1 _____ ft. #2 _____ ft. #3 _____ ft. #4 _____ ft.

CONDITION SUMMARY: _____

5. HULL PENETRATIONS (PDR _____)

_____ % CLOGGED WITH MARINE GROWTH (POST CLEAN)

_____ % BARE METAL (AREA SURROUNDING PENETRATION)

_____ % BARE METAL PITTING

AVERAGE PIT SIZE: _____ in. DIAMETER, _____ in. DEPTH

CONDITION SUMMARY: All penetrations blanked with welded plate. One 12" circular flange on aft port side has a threaded plug (1/2").

6. SONAR DOME

[X] NO VISIBLE DAMAGE [ ] DAMAGE NOTED ON ATTACHED DRAWING [ ] CUTS [ ] LAYER SEPARATION [ ] WIRE PILES EXPOSED

7. PROPULSION SHAFTING

VISIBLE BARE METAL [ ] YES [X] NO RUST BLEEDING [ ] YES [ ] NO PITTING [ ] YES [ ] NO

CONDITION SUMMARY (TYPE OF DAMAGE, LOCATION AND SIZE):

Port and starboard Shafts as well as Stern Tube and Strut Bearing penetrations were in good condition.

8. STRUTS AND BEARING HOUSING

PERCENT BARE METAL:	STARBOARD	PORT
MAIN	_____ %	_____ %
INTERMEDIATE	_____ %	_____ %
PDR	_____	_____

CONDITION OF STRUT LEADING AND TRAILING EDGES: Marine fouling covers 100% of all surfaces.

CONDITION OF ROPE GUARDS: _____

CONDITION OF FAIRWATERS: _____

9. RUDDER and Stern Planes

[X] NO DAMAGE [ ] DAMAGE SHOWN ON ATTACHED DRAWINGS

	STARBOARD	PORT
PERCENT BARE METAL	%	%
PDR		
ACCESS PLATES INTACT?	[ ] YES [ ] NO	[ ] YES [ ] NO
WAS RUDDER SOUNDED?	[ ] YES [X] NO	[ ] YES [ ] NO
ANY SIGNS OF FLOODING?	[ ] YES [X] NO	[ ] YES [ ] NO
ANY SIGNS OF DROPPING?	[ ] YES [X] NO	[ ] YES [ ] NO

CONDITION SUMMARY:

Marine fouling over all surfaces. Penetrations appeared to be in good condition.

10. PROPELLERS N/A

[ ] NO DAMAGE [ ] DAMAGE SHOWN ON ATTACHED DRAWINGS

PROP #1:	NICKS _____	CURLS _____	CRACKS - LARGEST CRACK LENGTH ____ In.
PROP #2:	NICKS _____	CURLS _____	CRACKS - LARGEST CRACK LENGTH ____ In.
PROP #3:	NICKS _____	CURLS _____	CRACKS - LARGEST CRACK LENGTH ____ In.
PROP #4:	NICKS _____	CURLS _____	CRACKS - LARGEST CRACK LENGTH ____ In.

PROPELLERS NUMBERED STARBOARD TO PORT.

SIGNATURE (DIVING SUPERVISOR)	SIGNATURE (SHIP'S ENGINEER)
BMC(DV) Thrush	Robert Jamieson

PRECLEAN BIOFOULING INSPECTION DATA

~~XXX~~ Ex- BECUNA	HULL TYPE / NUMBER S-319	LOCATION (CITY) Philadelphia	DATE (mm/dd/yy) 05/19/01
TYCOM N/A	INSPECTING ACTIVITY NR MDSU 2 Det 507		VISIBILITY (FT) 2
LOCATION OF LAST DRYDOCKING Philadelphia Naval Shipyard			UNDOCKING DATE 1967?
LOCATION OF LAST PAINTING Philadelphia Naval Shipyard			DATE 1967?
PAINT TYPE: ANTIFOULING: Unknown		ANTICORROSION: Unknown	
DATE OF THE LAST WATERBORNE FULL HULL CLEANING Unknown		DATE OF THE LAST WATERBORNE INTERIM CLEANING Unknown	
UNDERWATER PHOTOGRAPHS TAKEN ☐ YES ☒ NO		VIDEO TAKEN: ☒ YES ☐ NO	

COMPONENTS	(CHECK IF:) N/A	NOT INSPECTED	(PERCENTAGES MUST ADD UP TO 100) FOULING RATING	FOULING RATING	FOULING RATING
PROPELLER Centerline	X		FR- %	FR- %	FR- %
Port Outboard	X		FR- %	FR- %	FR- %
Port Inboard	X		FR- %	FR- %	FR- %
Starboard Inboard	X		FR- %	FR- %	FR- %
Starboard Outboard	X		FR- %	FR- %	FR- %
SHAFT Centerline	X		FR- %	FR- %	FR- %
Port Outboard			FR- 10-100%	FR- %	FR- %
Port Inboard	X		FR- %	FR- %	FR- %
Starboard Inboard	X		FR- %	FR- %	FR- %
Starboard Outboard			FR- 10-100%	FR- %	FR- %
RUDDER Centerline			FR- 20-100%	FR- %	FR- %
Port	X		FR- %	FR- %	FR- %
Starboard	X		FR- %	FR- %	FR- %
SONAR DOME (Port Side)			FR- 10-100%	FR- %	FR- %
(Starboard Side)			FR- 10-100%	FR- %	FR- %
MASKER BELTS Port #1	X		FR- %	FR- %	FR- %
Port #2	X		FR- %	FR- %	FR- %
Port #3	X		FR- %	FR- %	FR- %
Port #4	X		FR- %	FR- %	FR- %
Starboard #1	X		FR- %	FR- %	FR- %
Starboard #2	X		FR- %	FR- %	FR- %
Starboard #3	X		FR- %	FR- %	FR- %
Starboard #4	X		FR- %	FR- %	FR- %
SEA CHEST Typical			FR- 20-100%	FR- %	FR- %
BOW Port			FR- 20-100%	FR- %	FR- %
Starboard			FR- 20-100%	FR- %	FR- %
SIDES Port			FR- 20-100%	FR- %	FR- %
Starboard			FR- 20-100%	FR- %	FR- %
BOTTOM Port			FR- 10-100%	FR- %	FR- %
Starboard			FR- 10-100%	FR- %	FR- %
STERN Port			FR- 20-100%	FR- %	FR- %
Starboard			FR- 20-100%	FR- %	FR- %
TRANSOM Port	X		FR- %	FR- %	FR- %
Starboard	X		FR- %	FR- %	FR- %

Signature
Diving Supervisor BMC(DV) Thrush

Signature
Ship's Engineer Robert Jamieson

Table 081-1-1. FOULING RATINGS (FR) IN ORDER OF INCREASING SEVERITY.

Type	Fouling Rating (FR)	Description
Soft	0	A clean, foul-free surface;red and/or black AF paint or a bare metal surface.
Soft	10	Light shades of red and green (incipient slime). Bare metal and painted surfaces are visible beneath the fouling.
Soft	20	Slime as dark green patches with yellow or brown colored areas (advanced slime). Bare metal and painted surfaces may by obscured by the fouling.
Soft	30	Grass as filaments up to 3 inches (76 mm) in length, projections up to 1/4 inch (6.4 mm) in height; or a flat network of filaments, green, yellow, or brown in color; or soft non calcareous fouling such as sea cucumbers, sea grapes, or sea squirts projecting up to 1/4 inch (6.4 mm) in height. The fouling can not be easily wiped off by hand.
Hard	40	Calcareous fouling in the form of tubeworms less than ¼ inch in diameter or height
Hard	50	Calcareous fouling in the form of barnacles less than ¼ inch in diameter or height.
Hard	60	Combination of tubeworms and barnacles, less than ¼ inch (6.4 mm) in diameter or height.
Hard	70	Combination of tubeworms and barnacles, greater than ¼ inch in diameter or height
Hard	80	Tubeworms closely packed together and growing upright away from surface. Barnacles growing one on top of another, ¼ inch or less in height. Calcareous shells appear clean or white in color.
Hard	90	Dense growth of tubeworms with barnacles, ¼ inch or greater in height; Calcareous shells brown in color (oysters and mussels); or with slime or grass overlay.
Composite	100	All forms of fouling present, Soft and Hard, particularly soft sedentary animals without calcareous covering (tunicates) growing over various forms of hard growth

Table 081-1-2. PAINT DETERIORATION RATINGS (PDR) FOR

Paint Deterioration Rating (PDR)	Description
10	AF paint intact, red in color or with mottled pattern of light green and red.
20	AF Paint missing from edges, comers, seams, welds, rivet or bolt heads to expose AC paint
30	AF paint missing from slightly curved or flat areas to expose AC paint
40	AF paint missing from intact blisters to expose AC paint
50	AF blisters ruptured to expose intact AC paint
60	AF/AC paint missing or peeling to expose steel substrate, no corrosion present
70	AF/AC paint removed from edges, comers, seams, welds, rivet or bolt heads to expose steel substrate with corrosion present.
80	Ruptured AF/AC blisters on slightly curved or flat surfaces with corrosion or corrosion stains present
90	Area corrosion of steel substrate with no AF/AC paint cover due to peeling or abrasion damage.
100	Area corrosion showing visible surface evidence of pitting, scaling, and roughening of steel substrate.