ENCLOSURE (1)

PROCEDURES FOR SHIPBOARD NBC DEFENSE TRAINING

Nuclear, Biological and Chemical Defense procedures are normally carried out in three phases:

A - Preparation - setting up protective measures

B - Detection - monitoring

C - Decontamination - clean up

The following procedures are intended to provide full and realistic training.

A. PREPARATION

1. Sound general alarm.

   a. Make announcement on P.A. system, where installed.

   b. Secure ventilation motors.

   c. Make closures. (When attack is imminent, or when proceeding in an area where risk of attack is high this step may be taken in advance).

   d. Rig washdown countermeasure. (When attack is imminent, or when proceeding in an area where risk of attack is high this step may be taken in advance).

   e. Activate washdown system, as directed by D. C. Central.

   f. Make frequent readings of radiac in wheelhouse.

   g. Maneuver ship to evade fallout.

   h. Man D. C. Central and establish communications with all stations.

2. Man NBC Center.

   a. Set up plotting sheets.

   b. Establish communications with D. C. Central.

3. Set up and equip personnel decontamination station(s).

4. Deliver radiacs as ordered by NBC Officer, to:

a. Bridge (normally maintained in this location).

b. Engine Room.

c. NBC Center or NBC locker.

d. Personnel decontamination station.

5. Engine Room - secure fresh-water, sanitary system and evaporators.

6. Don protective clothing and masks.

a. All personnel who will be exposed to weather decks will don protective clothing and masks (monitors and decontamination personnel).

b. If necessary engine room personnel will don masks to guard against inhalation of radioactive material.

7. Issue personnel dosimeters.

a. DT-60/PD dosimeters will be issued to personnel likely to be exposed. (During actual attack, personnel dosimeters must be issued to all persons on board). Self-reading pocket dosimeters will be issued to monitoring and decontamination teams (one per team).

8. Provide radiation shielding.

a. Direct all non-essential personnel to shielded locations within the ship.

b. Pass the word "no eating, drinking or smoking until further notice."

c. When high level radiation intensities dictate, evacuate all topside personnel, including bridge personnel, to a <u>well</u> shielded area.

B. DETECTION

1. Initial internal survey. (The internal survey procedures prescribed for combat vessels require numerous personnel and considerable equipment and are therefore modified as follows for MSTS civilian-manned ships).

a. A constant or periodic check on the bridge radiac will indicate when fallout starts and also indicate the build-up of radiation intensity. When the intensity ceases to rise, and remains constant or decreases over a period of time, usually about one half hour, the washdown system can then be secured.

b. If the bridge has been evacuated due to high radiation intensity, send a monitor to the wheelhouse periodically to obtain radiac readings to determine when fallout ceases.

2. Initial external survey. The purpose of the initial external survey is to determine average radiation intensity of topside areas and provide data on which to base calculations of stay time and dose rates as a guide to further necessary actions.

a. The initial external survey will be accomplished by one man after washdown is stopped. He will proceed at a brisk walk around the top decks over the habitable areas of the ship and record average levels of radiation intensity.

3. Detailed survey. The purpose of the detailed survey is to pinpoint and mark high intensity areas for decontamination.

a. A monitor team, consisting of a monitor and a recorder will make a detailed survey, exiting from the wheelhouse and starting with the midship house from topside down and from amidship towards the bow and stern. The information obtained will be passed to NBC Center and plotted on deck plans for the purpose of planning decontamination steps.

4. Supplemental surveys

a. Continuous surveys of ventilation ducts, boiler casings and sea suctions in the engineering spaces will be made.

b. At a convenient time after the external surveys, supplemental surveys will be conducted in the following locations:

(1) Galleys and messing areas.

(2) Berthing areas and scupper piping passing through them.

(3) Any areas within the ship where contamination is suspected of entering the ship through cracks around doors or ports, through ventilation systems, tracking by contaminated persons or entrance of contaminated water.

5. Remonitoring

a. Remonitoring will be accomplished after decontamination to determine the extent to which contamination is reduced.

6. Personnel monitoring

a. Personnel monitoring will be accomplished by trained monitors at the personnel decontamination station, and will be done by passing the probe of the low range radiac over the persons body after they have showered.

C. DECONTAMINATION

1. Decontamination will be accomplished after fallout has ceased. The priority for decontamination of specific areas depends on how quickly the contaminated objects or areas are needed. The two types of decontamination are:

a. Rough decontamination.

b. Detailed decontamination.

2. Rough decontamination will reduce the radiation intensities of essential objects and areas to levels less hazardous to personnel. Rough decontamination will be accomplished in the following manner:

a. Decontamination teams will be attired in foul-weather gear or protective clothing with gloves and boots or overshoes, protective masks will be worn to prevent the inhalation of radioactive particles.

b. Personal dosimeters (DT-60/PD) will be worn by each man in addition to the control self-reading pocket dosimeter furnished to each team.

c. Teams will be provided with pails, stiff brushes and salt water detergent.

d. Decontamination will be accomplished starting from topside levels, on the windward side, working downward from amidships toward the bow and stern. Particular and initial attention will be given to living and working areas. However, all locations vital to the normal operation of the ship will be decontaminated as soon as practicable.

e. Scrub and wash down will be accomplished by brooming in one direction, toward a scupper, or overboard and will be so accomplished that areas already cleaned up are not re-contaminated.

f. Areas where the intensity is not reduced to an acceptable level after two scrubbings, will be roped off and marked with hazard markers. All stacks, stays, masts and rigging will be left for detailed decontamination by the shipyard.

3. Detailed decontamination entails the complete removal of all contaminate by sandblasting, chipping and scraping, and will seldom be accomplished by shipboard personnel, but will normally be done later by the shipyard.

D. SUMMARY. The following six basic steps will effectively reduce the radiation hazard to shipboard personnel:

1. BUTTON UP THE SHIP. This means that all openings into the ship will be closed except those which are absolutely necessary to operate the ship.

2. START WASHDOWN. Operation of the washdown system will wet external surfaces and prevent most of the contaminated particles from adhering to the topside areas.

3. MANEUVER THE SHIP. The ship will be maneuvered to avoid fallout, and to increase the effectiveness of the washdown.

4. PROVIDE SHIELDING. Designate shielding areas within the ship for all personnel, preferably on the lower decks and near the centerline.

5. MONITOR THE SHIP. Monitor the ship to determine areas of contamination, and the radiation intensities of those areas, for the purpose of planning further necessary actions.

6. DECONTAMINATE THE SHIP

a. Clean up the ship, starting with the areas that are most necessary to the operation of the ship.

b. Decontaminate all exposed personnel.

c. Re-monitor after decontamination.

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LIFEBOAT LAUNCHING PROCEDURES

This pamphlet is an excerpt from COMSTSINST 12410.1A (Lifeboat Training Guide). It has been prepared as a handout for all shipboard personnel, to stress the importance of following boat commands and knowing the step-by-step procedure for launching lifeboats.

Only by following the proper procedure may lifeboats be launched quickly and safely.

INSTRUCTION SHEET FOR LAUNCHING LIFEBOATS UNDER GRAVITY DAVITS

Signal - More than six short blasts followed by one long blast on the ship's whistle and the same signal on the general alarm bells, followed by PA announcement in ships so equipped.

LIFEBOAT LAUNCHING PROCEDURES

COMMAND	ACTION	KEY POINTS
PA announcement: "All hands report to boat stations. All passengers don life jackets and report to their abandon ship stations."	Crew and passengers muster at abandon ship stations; boat commander inspects life jackets and attire; a supply of six to eight blankets is delivered to each boat by steward department personnel.	Crew members muster at the location of their duties at assigned boat station, as at forward davit, frapping line tenders on embarkation deck, etc.
"Prepare for launching"	a. Bow and stern tenders board boats, remove boat covers and strongbacks, hand test release hooks by pulling on fall links, check release hooks and lever, check and clear suspension and tricing pendants and trip hooks, let go top gripes, assist in clearing main gripes, close boat drains, and free manropes. b. Davit men aid in re moving boat covers, let go and clear the main gripes and stopper bars. c. Rail and ladder tenders lower embarkation ladder.	The release hooks and lever must be in their closed and locked position and the suspension pendants and their trip hooks properly secured in the top boat. Boat Commander must assure himself that release hooks and lever are properly secured before letting go main gripes. Gripes are generally lowered to the deck to keep boats clear for passengers. In some ships, davit men also handle this duty.
"Lead out the sea painter"	Bow tender passes it to the sea painter tender, who leads it well forward and secures it.	It is led outboard of everything but the boat falls.

"Swing out boats"	Boat commander first orders the bow and stern tenders of the bottom boat of nested boats out before lowering. They remain in single boats. Winchman slowly raises brake lever to let the davits and boats roll down the trackways and ease up to the outboard stoppers in full outboard position. Bow and stern tenders of single of top boats drop manropes over inboard side.	Bow and stern tenders leave bottom boats of nested boats before lowering in order to avoid injury if the boats swing as they separate during lowering. The davits must not be permitted to hit the outboard stoppers but should be eased up to them and stopped momentarily.
"Lower to embarkation deck"	Winchman again raises brake lever to lower boat to embarkation deck. Bow and stern tenders of single boats clear and tend tricing pendants. Winchman follows boat commander's orders to stop the boat within a foot of the ship's side.	Slacking the falls too much would put the boat's full weight on the tricing pendants.
"Frapper in"	Bow and stern tenders of bottom boat of nested boats board and assure that the wire frapping lines are shackled or hooked onto the falls, with sister hooks moused where used, and frapping line tenders haul taut and secure.	If not taut, boat will swing excessively.
"Trip tricing pendants"	Bow and stern tenders sit down and trip tricing pendant hooks one at a time.	Tricing pendant trip hooks must be arranged so they can be tripped from within the boat.
"Close boat drains"	If not previously closed, boat drains are now closed. In any event, they are checked.	Boat drain tenders board the boat, check and close drains. Where not designated, this is done by bow and stern tenders.

"Boat crew, man your boat"	Boat is prepared for passengers. Steering oar is shipped, thwarts are adjusted, and propeller gear pulling handles inserted.	Thwarts must be properly adjusted so they will not collapse.
"Passengers embark"	Passengers are assisted aboard and directed to seats.	All must sit down promptly.

Signal - A short blast on the ship's whistle directs boat commanders to lower their boats when ready for launching.

"Lower away"	Boat is lowered to water. Winchman raises brake lever and follows boat commander's lowering instructions. Frapping lines are kept taut; a strain is kept on the sea painter, and crew members fend off.	Boats are lowered in order, according to a prearranged plan - generally with the after boats first then the boats next forward, etc. in order to avoid fouling. The stern tender guards the release lever to avoid accidental dropping of the boat.
"Release the falls"	Stern tender removes safety toggle pin, lifts releasing lever and rotates it to the opposite side, releasing the fall blocks. Frapping line tenders haul falls in to ship's side quickly to avoid the blocks hitting persons in the boat.	This command is given as soon as the boat is waterborne in calm water or before fully waterborne in a seaway.
"Cast off"	The sea painter is cast off, the bow is shoved off, boat commander gives necessary oar commands to get underway, and uses steering oar to clear ship's side.	The boat is gotten clear of the ship's side as soon as possible. With way on, the sea painter is used to sheer off.

LAUNCHING TOP BOAT OF NESTED BOATS

"Heave up the falls"	The winchman turns the emergency disconnect switch to "ON" and the operating switch to "HOIST" to bring the falls up with the winch to a position slightly below the release hooks in the upper boat.	Before turning power on, make sure the winch is clear. The quick return hand wheel may be used to recover the falls in event of a power failure. Don't raise the falls too high or they will have to be hauled down manually.
"Hook on the falls"	The bottom chain link of each fall block is hooked onto the boat's release hooks by the bow and stern tenders.	Carefully check the release hooks and lever for normal closed and locked position.
"Take up the slack"	The slack in the falls is taken up by means of the quick return hand wheel on the winch.	In event of a power failure the load can now be transferred to the falls by tripping the suspension-pendant trip hooks.
"Trip suspension-pendant trip hooks"	Bow and stern tenders pull the safety toggle pins and trip the suspension-pendant trip hooks to transfer the load to the falls.	Suspension pendants are tripped one at a time to lessen the boat's jerking.
"Let go suspension pendants"	Bow and stern tenders unshackle the bottom shackle on each suspension-pendant trip hook to cast off the suspension pendants and their trip hooks.	With power on the winch, the falls may be hove up until the suspension pendants are slack enough to unshackle, thus avoiding the necessity for tripping the suspension pendant trip hooks.
"Attach tricing pendants"	Bow and stern tenders attach the short tricing pendants to the tricing pendant trip hooks on the boat fall blocks.	Where a new single tricing pendant is used, attachment is made to a ring at its middle.

"Lower to boat deck"	Same as for the bottom boat except the frapping line tenders secure their frapping lines and board the boat before it is lowered and sea painter tender and winchman board via the embarkation ladder.	The top boat is triced in to the boat deck.

Signals - Two short blasts on the ship's whistle - stop lowering boats.

A short, a long, and a short blast of the ship's whistle (international code signal "R") - recall and recover boats.

Three short blasts of the ship's whistle and the same signal on the general alarm bells followed by PA announcement in ships so equipped - dismissal from any or all drills.