

ABRM2 R. THOMAS



**YOUR
SHIPBOARD
GUIDE**

1970

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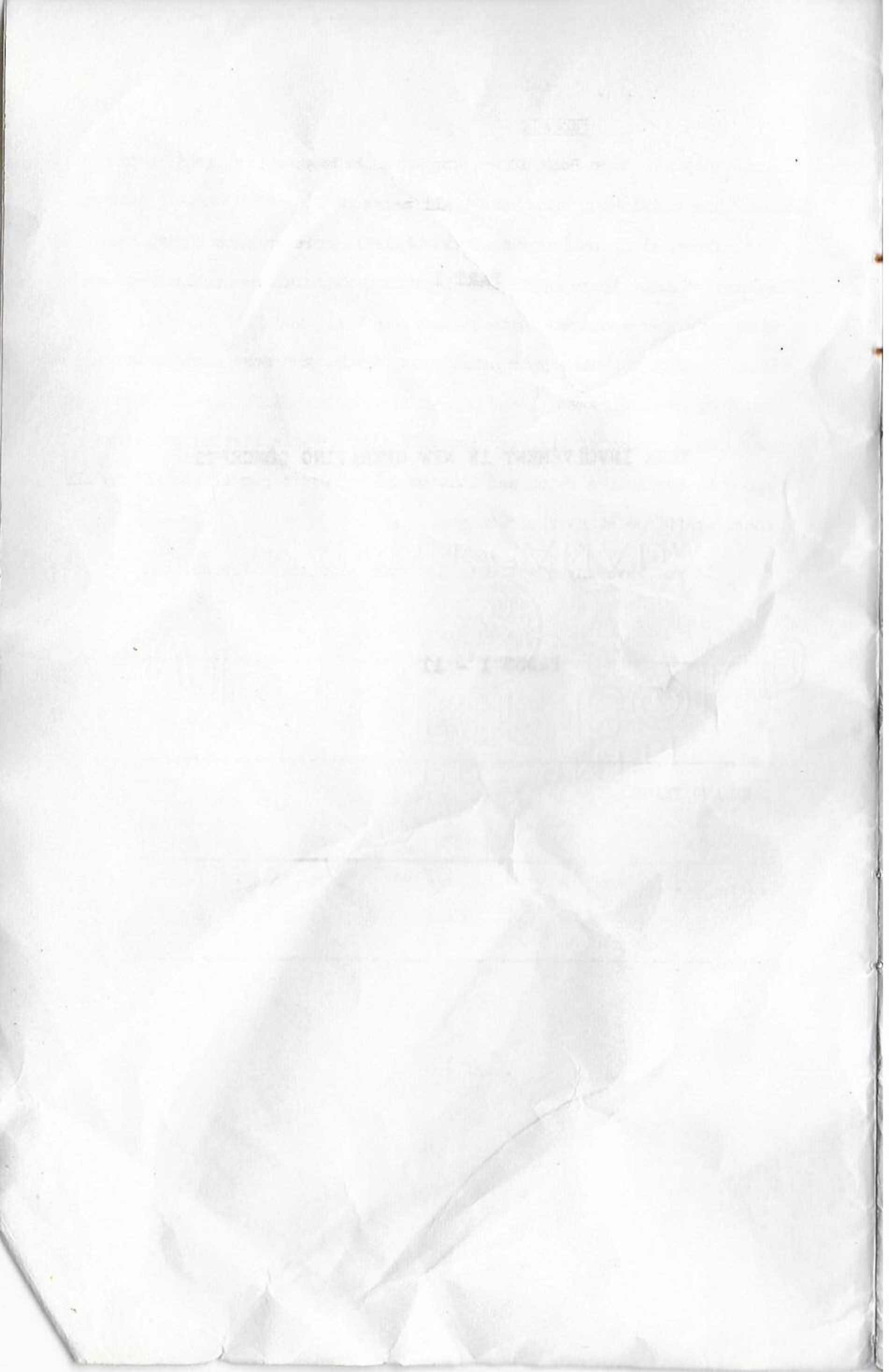
PRODUCED BY

#1 MANAGEMENT STUDY UNIT

AND

CANCOMFLOTLANT

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PREFACE

Refer to this Book often, until you know your positions in the ship's organization, and what it all means.

Carry the book in your pocket while you are onboard during the Workup period. Be ready to show it to the Captain, or others in authority when required to do so.

Use ink to print your name, rank, trade, and mess number, at the foot of this page.

In the back of the book you will find a table listing positions shown on the Ship's Watch and Station Bill. Use a pencil to fill in all those positions which apply to you.

If you have any questions, ask your supervisor for advice.

THOMAS

ROBERT EARL

SURNAME/INITIALS

RANK AND TRADE

ABRM2

MESS NUMBER

11 MESS

INTRODUCTION

This booklet has been written for your information. It only covers the main outlines of Study No. 1951-10-67-04, Personnel Requirements on a DDH. By now, all of you have probably heard rumors in regard to the study and of what it may or may not do to you and your ship's company. This is an attempt to set the record straight and at the same time give you a working knowledge of its effects on you.

Your ship, and two others in the same squadron, have been selected to trial the study for one cycle and to evaluate the results.

First of all, you should know the Aim and the Objective of the study to fully appreciate the changes that will be taking place.

AIM

To determine the personnel requirements of the DDH and recommend changes in the management system as required in support of the proposed personnel.

OBJECTIVE

To determine the workload involved in the operation of a destroyer in the performance of its mission and specify the number of men needed to fulfill the mission in the most efficient manner.

Now that you know the aim and objective of the study, you will be probably wondering just what the capability of your ship is, as we are talking about a peacetime establishment.

With the proposed establishment the ship shall be capable of meeting any of the following roles:

- a. full-scale wartime activity in the Action State;
- b. full-scale wartime activity for a two-week period in two watches, with the armament manned to the extent of R.U. ammunition;
- c. full detection for an indefinite period of time in three watches (a Cold War state);
- d. carrying out large-scale detection exercises for indefinite periods of time in three watches (Maplespring, etc.); and,
- e. peacetime cruising and training in 3 or 4 watches including minor exercises at squadron or ship level.

(To bring the ship up to a wartime capability, one complete watch would be added to the establishment and it would enable the ship to operate for an indefinite period of time in three watches as in (b.) above.)

The next question that arises is: "Do I work more and put in longer hours than in the previous system?" Well, for some personnel the answer will be "Yes", but the main reason for this study as far as you are concerned is to have a balanced work week. Right now, certain trades put in many long hours at sea while others have things easier. Under the proposed establishment a balanced workload has been devised so that no matter which watch system the ship is in, all members of the ship's company will put in approximately the same hourly work week.

You have probably heard about a forty-hour week, and so on - forget it! These are only rumors, as the study only shows management some guidelines in manhours by trades, of what the work week of the ship's company will be to meet any of the stated missions. So, under different circumstances, your work week will vary from week to week, depending on the ship's employment. The only difference is that management will know the amount of hours expended by the ship's company. So, you can see that if you are now putting in longer hours at sea than men in certain trades, this should change in the new concept.

Expressed in broad terms, the study will provide sufficient men to meet the operational mission of the ship in the most economical manner feasible and balance this with cognizance of the need to keep the peacetime work week within reasonable limits. Further on in this book, you will learn about Watchkeeping Stations, Maintenance, Evolutions and Training, and the ATR Workforce.

Watchkeeping Stations

Watchkeeping stations were determined by manning the equipment necessary to meet any mission, and the Watchkeeping Systems are therefore tailored to match manpower with workload throughout the entire range of the ship's activities at sea. It will be seen that as the mission intensifies, the number of Watchkeepers increases and therefore manhours per week for all personnel will increase.

The Four-Watch Cruising System

This system was designed to provide a reasonable average work week for all personnel in the vicinity of forty hours per man per week; however, with current operational requirements it is doubtful if this system will be often used. (You must remember the need to match the ship's mission with its equivalent watch system.) If the ship were steaming from Halifax to Bermuda making preparations for painting ship prior to a "show the flag" cruise, then the ship's mission at that time could be matched with the 4-W system which allows sufficient Watchkeepers for ship safety only, leaving additional personnel available for cleaning and painting, etc.

Such circumstances will occur rarely, but this watch system is built in to the Watch and Station Bill and is available for management to use as required.

The Three-Watch Cruising System

This system will be the one generally used at sea. Your ship is part of a squadron and therefore will be required to operate with other ships in the squadron carrying out various exercises of a minor nature. The 3-W cruise system allows the progression of general ship work - all supply functions, cleaning, painting, maintenance, etc. - with the simultaneous conduction of minor exercises, and provides additional Watchkeepers to ensure ship safety while in company. The average work week in this system will be in the vicinity of 60 man-hours per week.

The Three-Watch Detection System

This system is designed to meet the operational demands of a major exercise. All detection equipment is manned and many more Watchkeepers are required than in previous systems. These Watchkeepers will be drawn from the ship's workforce and consequently the cleaning and painting workload cannot be fully met. Therefore, while engaged in a major exercise the ship's normally high standard of cleanliness will suffer, with only hygiene, sanitation and habitability cleaning being carried out by a reduced workforce; however, time spent on major exercises is brief and recovery to the expected standards should not take long. The average work week in this system should approximate that of the 3-W Cruising.

The Two-Watch System

It must be understood that this system is for use in wartime only and will then only be maintained until the ship receives her wartime complement - (an expected two-week period). In this system the armament is manned, and can engage to the extent of Ready Use ammunition.

There will be occasions when this system is used for exercise purposes - workups, and possibly for short periods during intense phases of a major exercise, but associating watch system with mission - remember it is intended for wartime use only.

The average work week in this system will be well in excess of 84 manhours per week.

Action State

It should be noted that there are three different Action States on the Watch & Station Bill.

Pre-Planned Action is basically the same as in the past with senior personnel filling the key positions. This action state will be used for general training purposes - conduction of gun shoots, mortar firings, damage control exercises, etc.

Three-Watch Action is designed to permit rapid closing up of weapons teams without interruption of tasks for Detection and Operations teams. For example, during a closing run on a submarine with the alarm sounded, weapons crews, supply parties, and damage control parties consisting of off-watch personnel would close up, while the on-watch personnel conducting the attack would remain at their positions with no loss of continuity.

Two-Watch Action. The same general principles apply as in Three-Watch with the exception that the Two-Watch system is intended only for war-time use, and, therefore, Two-Watch Action would only be utilized in situations requiring prolonged attack or defense.

MAINTENANCE

The study team spent a great deal of time looking into this situation as most members of the ship's company are Operators/Maintainers. It was found that there was an insufficient scheduled and unscheduled maintenance workload to fully occupy all men of all trades working full-time on maintenance.

The result of this situation is that many of our Operators/Maintainers do not have the opportunity to become highly skilled in

trade work. This, in turn, causes longer hours to get the job done and in some cases the finished work is not of a high standard. To remedy the situation to a certain degree, changes were made in the structure of your ship's company.

Basically, these changes mean that there will be an allowance of maintainers in each trade who will be responsible for carrying out all Scheduled and Non-scheduled Maintenance. The number of these maintainers resulted from a lengthy study to determine the actual maintenance workload by work measurement - so far, and during the first actual trial in HMCS FRASER, the figures have not been proven wrong. The structure for each trade in your ship is designed to permit rotation of personnel through the main functions of Operator, Maintainer, and general ship duties.

Ship's ATR Workforce

The idea of a single integrated workforce under the control of the ship's Manpower Manager has proved to be a considerable improvement over any previous practice. Under this concept men from certain trades are allocated to the Work Force. Numbers available range from forty-five in the 4-Watch Cruise system to thirty-two in the 3-Watch Cruise system. In either of the Cruising systems these personnel are under the sole charge of the Manpower Manager. All compartments in the ship have been allocated Routine cards similar to the Planned Maintenance system and these cards, combined with the use of a Control Board, enable the Manpower Manager to schedule work in a more effective manner. Men employed in the work force will be available to spend approximately

40 per cent of their time in Trade Training and in general ship Training, i.e. Evolutions, etc.

The work force concept also requires department heads to produce weekly training programmes so that the Manpower Manager can schedule his work ahead of time. In other words, departments are required to inform the Manpower Manager in advance of their training needs.

Evolutions and Training

Evolution stations are shown on the new Watch and Station Bill so every member of the ship's company will know his position when different evolutions are carried out.

One other important fact in the new concept is that almost all members of the ship's company take part in evolutions, and this, in turn, assists in balancing the work week for everyone.

Training will be carried out in all watch systems. The times spent on training will depend on the deployment of your ship and the amount of days spent at sea.

O.J.T. are expected to spend 50 per cent of their time on trade training, with the remaining 50 per cent applied to general ship's functions.

All departments will be required to produce training programmes as noted in the section of this book on ATR workforce.

SUMMARY

The preceding pages have given you some idea of the main concepts of the study, and it should be apparent that no major upheaval is intended. It is felt that the study has enabled your ship to be outfitted with suffic-

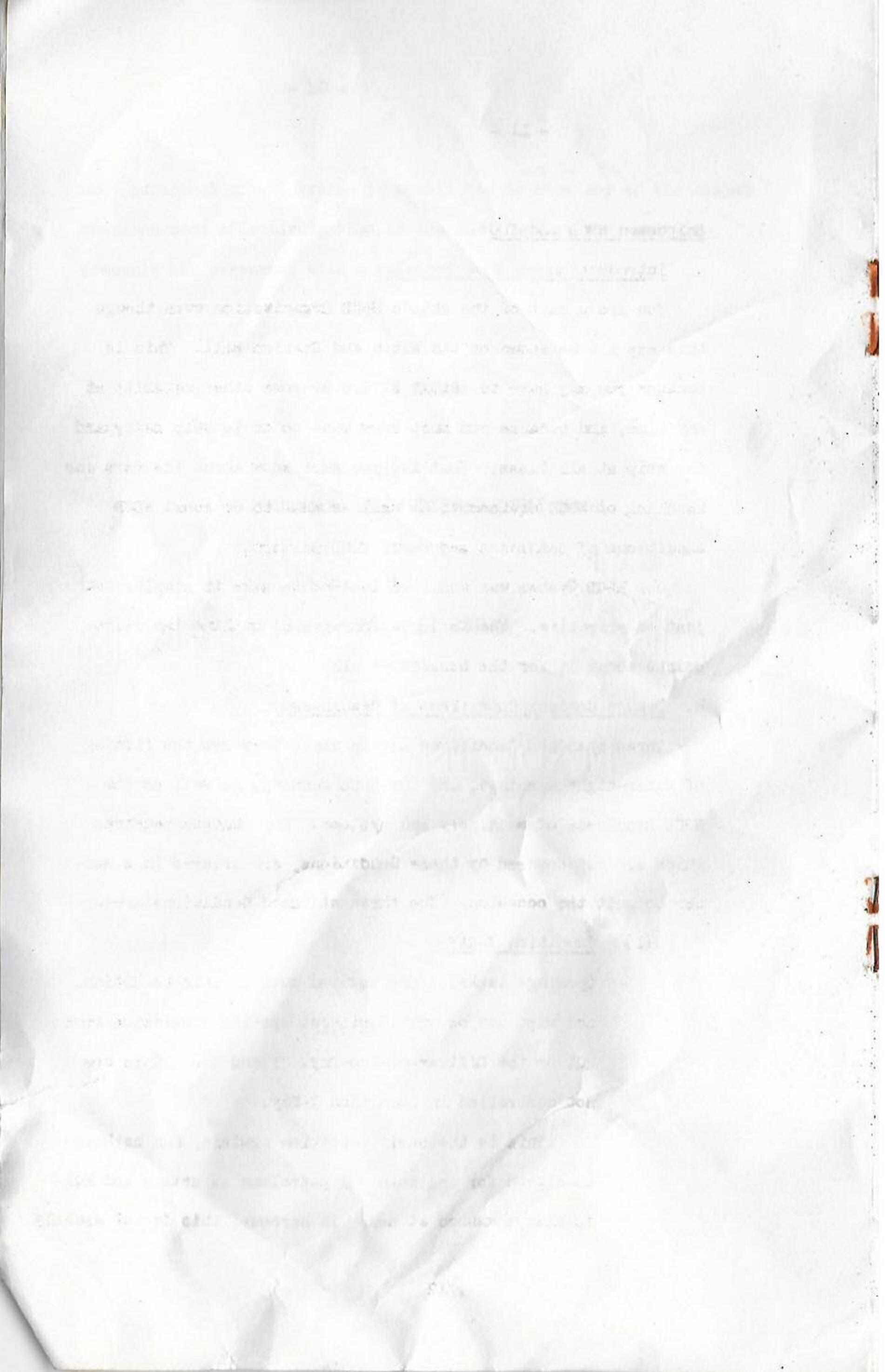
ient personnel of all trades to enable her to meet any of the stated missions more effectively than in the past, and at the same time, presents all personnel with a balanced work week.

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PART II

YOUR INVOLVEMENT WITH WORK-UPS

PAGES 11 - 25



1. Shipboard NBCD and YOU

a. Introduction

You are a part of the ship's NBCD Organization even though this may not be shown on the Watch and Station Bill. This is because you may have to combat a fire or some other calamity at any time, and because you must know what to do to help safeguard the ship at all times. That is, you must know about the care and handling of NBCD equipment, as well as what to do about NBCD conditions of Readiness and other NBCD matters.

Our NBCD System was modified in 1968 to make it simpler but just as effective. The following paragraphs outline important points about it for the benefit of all.

b. Damage Control Conditions of Readiness

Three standard Conditions are in use. They set the closing of water-tight openings, and the NBCD manning, as well as the NBCD Readiness of machinery and systems. Any changes required which are not covered by these Conditions, are ordered in a manner to suit the occasion. The three standard Conditions are:-

(1) Condition X-RAY

Openings marked X are secured shut in this Condition, and must not be opened without special permission from HQ1 or the Officer-of-the-Day. Y and Z openings are not controlled in Condition X-Ray.

This is the basic peacetime cruising and harbour condition for the ship. A patrolman is active and HQ1 is always manned at sea. In harbour, this is not usually

the case, then, the Officer-of-the-Day has direct control of damage control condition, and keeps the ~~Water-tight~~ Integrity Log. NOTE: X openings, when opened, are not to be left unattended.

In Condition X-Ray, machinery and systems are operated as required by the Guide to DC Conditions posted in HQL.

(2) Condition YANKEE

X and Y openings are secured shut in this Condition.

You may open a Y opening for passage without special permission, but must close it properly immediately afterward. Permission must be obtained from HQL before leaving it open, and then it must not be left unattended unless a "MAY BE LEFT OPEN" tag has been issued for it. The rules governing X openings are the same for all three Conditions. Z openings are not controlled in Condition Yankee.

Condition Yankee Bravo is the basic wartime cruising condition. It is also used in peacetime when a hazard makes this advisable; e.g. entering and leaving harbour, replenishment at sea, or fog situations.

HQL is always manned by a Chief or PO in Condition Yankee, and one NBCD patrolman is active.

The firemain is isolated into two or more sections, with at least one pump supplying each section. Other systems, machinery, manning of equipment readiness requirements are outlined on a guide table issued when the NBCD System was revised in 1968 and posted in HQL. This table affects everyone in the ship. Have you read it to see how it affects you?

(3) Condition ZULU

X, Y, and Z openings are secured shut in this condition. The rules governing X openings are the same for all three Conditions (see Condition X-Ray). In Condition ZULU, Y and Z openings may be opened for passage without special permission, but must be closed properly immediately afterward. Permission must be obtained from HQL before leaving any of them open, and then they must not be left unattended unless a "MAY BE LEFT OPEN" tag has been issued for each opening.

Condition ZULU is set automatically when "Action Stations" are ordered; but the order, "Assume Condition ZULU", may be made at other times. It usually means that either the ship is being attacked in some way, or that an attack is likely.

HQL and Section Base Teams are fully manned in Condition ZULU. This includes at least a minimum manning of the Medical Organization.

The firemain is isolated so that three fire pumps supply separate sections of the fire main. Other machinery, systems, and equipment are set using the guide table mentioned previously. Note that Floor^d and Spray valves are unlocked and manned in Condition ZULU.

c. "MAY BE LEFT OPEN" TAGS

Are subject to strict control from HQ1, because they violate basic rules governing NBCD Conditions. Three kinds may be used as follows:-

(1) "MAY BE LEFT OPEN IN ACTION"

Openings bearing these tags should be listed in Ship's Orders, and the action circumstance under which they may be left open stated therein.

(2) "MAY BE LEFT OPEN - MAN BELOW"

Hung on the upper hatch where more than one must be opened to get to a compartment, this tag may be issued to a Roundsman about to carry out a routine inspection.

(3) "MAY BE LEFT OPEN"

These tags, if issued, shall be withdrawn when a higher NBCD Condition is ordered than that which applied when the tags were issued.

Note that the rules governing Control letters imply that this tag is not to be used on X openings. (NBCD Manual refers).

d. The RED ZONE

In general, that part of the ship which is below and three feet or so above the waterline or compartments well forward or aft are known as the Red Zone. Openings in this zone are the ones most likely to allow flood waters to spread through the ship should damage occur. Hence, control letters on these openings are coloured RED, because they are a potential danger to the water-tight integrity of the ship.

All X openings, and some Y openings, but very few Z openings are RED. In addition, several E openings are RED.

E openings are water-tight valves fitted in recirculating air systems.

All openings with RED control letters must be closed quickly and securely on the order, "CLOSE RED OPENINGS". This is an emergency order which could mean that the ship is about to suffer a collision or grounding.

e. NBCD CONTROL LETTERS

The letters X, Y, Z, and E, are used to control water-tight openings. Those in the Red Zone are coloured RED. The remainder are BLACK.

The letters, A, B, C, and M, all are BLACK. They are used to control gas-tight valves, flaps, and motors, affecting ventilation systems.

The control letter C is not used in our DDEs/DDHs.

M openings are only operated by the departments they serve.

f. DEFENCE AGAINST "GAS" ATTACKS

NOTE: The word "GAS", as used here, applies to all Nuclear, Biological, and Chemical attack, unless otherwise stated.

(1) Protective Mask

This may be your immediate special protection if caught in a surprise "GAS" attack. Can you hold your breath, get the mask out, and don it properly, all in eight seconds? If not, keep trying until you can. Remember, draw one breath in a "GAS" attack without your mask on, and it may be your last!

(2) Clothing

When issued with protective clothing, learn how to use and care for it, since it too may save your life. Your bare skin will not protect you against any of a number of "GASES". So the rule must be, cover up and get under cover as soon as duty allows. Then carry out any other protective measures that may be in order, such as personal decontamination.

(3) The Citadel

When the ship's Citadel has been secured against "GAS" entering it, you may be allowed to remove your mask. Masks should always be worn, however, until the Monitoring Officer is satisfied that the Citadel is in fact "Gastight". Part of your job is to get to know the ship's Citadel. Start by finding the Citadel boundaries and taking a look at the openings in them. Do not forget the ventilation openings. Here are a few questions to help you on your way. Try for the answers yourself at first.

Is it possible to get outside the Citadel without letting "EAS" in?

Is the forward capstan machinery compartment in the citadel?

Are the boiler room, gun-bays, diesel-generator spaces, engine room and the aftermost mess-deck in the citadel?

How should you get into the citadel from the weather-decks?

Why is the citadel not called a Gas-Free compartment?

(4) Citadel IN and Citadel OUT Doors

In Condition ZULU ALPHA, all doors and hatches piercing the citadel boundary are shut and fully dogged down; except a few doors which are marked CITADEL OUT on the inside, and CITADEL IN on the other. Until a "GAS" attack commences, only these doors may be used to get into and out of the citadel. For this reason they are held shut by one "dog". When the attack starts, even these doors are fully dogged down by the sentries who man them. Entry into the citadel may then only be made via a Cleansing Station, unless the Commanding Officer otherwise orders.

Note that - Action damage, or carelessness, or ignorance, may breach the citadel and cause its contamination.

Make sure you know where the CITADEL IN/CITADEL OUT doors are located.

(5) QUESTION - If a man is unable to put on his own protective mask because he is injured, could you do it for him? Try it.

(6) NBC CONDITIONS OF READINESS

In DDEs/DDHs there are just two of these conditions, however, each is always used in combination with a Damage Control Condition.

CONDITION ALPHA

Is the highest Condition of "Gas-tight" readiness when superimposed on Condition ZULU. It is used when a "GAS" attack is likely, and is set by the order, "Assume Condition ZULU ALPHA". All X, Y, Z, A, B, and M openings are then secured shut. The Monitoring Organization is manned. The Pre-Wetting system is prepared ready to activate.

Where feasible, men should remain within the citadel in this condition. Watchkeepers outside the citadel should be reduced to the minimum and wear full protective clothing.

CONDITION BRAVO

Is set when a "GAS" attack is considered possible. Only B openings need be secured shut in addition to those closed by any damage control condition in force. The ship may remain in this condition quite comfortably for as long as is necessary. You can expect Condition Yankee Bravo to be the basic wartime cruising condition.

The Monitoring Organization will not be closed up, but all its equipment will be ready for use, including the rigging of cleansing stations. A watch must be maintained on NBC warning detectors. The pre-wetting system is rigged on those ships which do not have a permanent system.

(7) "GAS ATTACKS"

If a ship is in the Bravo Condition it needs no more than five

minutes to close down against a "GAS" attack, providing it has a trained crew, and enough of them are onboard.

Where there is time before an attack reaches the ship, Condition ZULU ALPHA would be ordered and attained as outlined above.

Whether or not sufficient warning is given, whenever a "GAS" attack is thought to be imminent, Action Orders should include, "GAS, GAS, GAS, ON MASKS". They must not be removed until the Command, advised by the Monitoring Officer, considers it safe to do so. It is important that provision is made to "crash-stop" ventilation fans whenever the above order is given and Condition ZULU ALPHA has not already been attained. The pre-wetting system should also be activated, preferably before an attack reaches the ship.

(8) RADIO-ACTIVE FALLOUT

Generally, ships may expect prior warning of the approach of radio active fallout. Hence, Condition ZULU ALPHA can be attained in an orderly manner. As the approach of contamination is detected, the orders "FALLOUT COMMENCED - HANDS TO SHELTER STATIONS - TURN ON PRE-WET" can be given. Here again, protective masks should be donned, unless the Monitoring Officer is satisfied that the citadel is intact.

(9) SHELTER STATIONS

Free movement may be permitted inside the citadel boundaries during a gas or biological attack, though you will likely be ordered to #4 deck to permit monitoring teams and others to carry out necessary work without hindrance. When the ship is in radio-active fallout, however, you will be ordered to shelter stations on #4 deck. Shelter stations are listed in Ship's Standing Orders. If radiation is heavy, you will be ordered to

Deep Shelter Stations. These are located under your shelter station.

Know where to go.

(10) CLEANSING STATION

Located in the after crew's washplace. Access is gained through a manhole on the port side. It is manned by a team trained to help a man decontaminate himself. A standby cleansing station is located in the forward crew's washplace. Access to it is through a manhole in the focs'le deck. This station would only be used if the other station became overloaded. Find both of these manholes from inside and outside. You may need them unexpectedly and urgently.

(11) Cleansing Posts - are compartments, not in the citadel, where contaminated men may gain some immediate protection, and use rough decontaminating procedures on themselves using gear provided therein. They would pass through a cleansing station at the first opportunity. These posts are located as listed in Ship's Standing Orders.

2. EMERGENCY STATIONS

A. The alarm "Emergency Stations" is given when an emergency such as fire, collision, or explosion, threatens the ship.

When this order is given:-

Men who are on watch ~~xx~~ stay on watch.

Detailed personnel prepare publications for emergency destruction.

Damage Control and Fire-fighting parties close-up. Remaining personnel muster in accordance with the ship's orders, normally remote from the scene.

B. The alarm, "Emergency Flying Stations" means that an aircraft crash on deck or similar emergency threatens the ship. This makes it

undesirable for men to muster on the weather-decks. So, in this case, the same procedure is followed for "Emergency Stations", except that men having no specific duty will muster below decks as ordered. A rescue watch also musters below decks in case men need to be rescued from the sea.

C. Life Jackets are required at Emergency Stations.

3. LIFE-RAFT STATIONS

Everyone on board is given a life-raft station. At the order, "Life-raft Stations", muster at this station with your lifejacket, unless you have been specially detailed for another job which takes effect on such an order.

4. ESCAPE ROUTES

Many compartments in the ship have escape hatches, in case you are unable to leave by the normal route. You will be given an opportunity during workups to use an escape route in darkness. But the wise man will see to it that he knows much more about escape-hatches, ladders, and routes, than one trial-run can teach him.

5. DDHs - FLYING STATIONS

a. Unless otherwise ordered, DDH Flying Stations are manned automatically whenever any of the following orders are given:

- (1) Action Stations.
- (2) Emergency Stations.
- (3) Emergency Flying Stations .
- (4) Flying Stations.
- (5) Red (White, or Blue) Watch to Rescue Stations.

b. #3 Section Base also closes up as above, and when Condition ZULU is ordered.

c. If you are serving in an operational DDH you will be instructed in the safety precautions peculiar to this class of ship.

d. The book, "Guide to Ship/Helicopter Procedures" contains further information.

6. RESCUE STATIONS

Your ship will have an organization for carrying out rescue work. This means being prepared to rescue people from the sea, the shore, or fire, at anytime they are in distress.

Make sure you know when and where to muster for Rescue Stations.

7. OPERATION AWKWARD

a. This is the name given to the ship's organization for defence against certain kinds of underwater attack when she is in harbour. There are three states of Alert involved, given briefly as follows:-
Awkward State One - The ship is under attack "CLOSE RED OPENINGS", may be ordered. Condition ZULU is required. Counter-measures in effect.

Awkward State Two - Underwater attack imminent. Ship in Condition Yankee. All Damage Control and Fire-fighting Parties ordered to close up, including the Medical Organization. Up to 50% may then be allowed to relax. Countermeasures include use of ship's boats and scare charges. Ship brought to immediate notice for steam.

Awkward State Three - Underwater attack possible. Ship in Condition Yankee, Sentries armed and posted. Divers, and possibly the Ship's Company, recalled from leave. Ship darkened. Thirty

minutes notice for steam. Other preparations made.

b. This brief description only gives you an idea of Operation Awkward. It is explained in greater detail in MARCORDS and Workup Instructions. Remember that only one watch may be onboard when this operation becomes effective. Hence, just a few officers and Chief and PO's may well find themselves with plenty of organizing to do. For example, if the EO and Senior Marine Engineering Tech is ashore, the duty EOOW may find that he has to organize both the steaming watch and NBCD parties; and only one watch on hand!

8. PARTIES

You may be detailed as one of the Internal Security Party, Boarding Party, and/or Demolition Party. Each of these groups receives special training.

9. CONCLUSION

Get to know your job and your ship as quickly as possible. Continually ask yourself questions like:- What would I do if, a fire started right here: or water started pouring in from that pipe: or if I saw a man fall overboard: or a man smoking in a magazine? Your shipmates depend on you knowing your job, and you have to depend on them. So, if you are in doubt about anything to do with your job, or the ship, ask someone.

POSITIONS FROM WATCH AND STATION BILL

SITUATION OR DUTY

POSITION AND NUMBER

2 Watch Action RAD 2 TECH

2 Watch System RATT AREA / MET 5

3 Watch Action AIO RATT OR RAD 2 TECH

3 Watch Detection RATT AREA / MET B

3 Watch Cruising RATT AREA / MET B

Pre-Planned Action RATT AREA / MET

4 Watch Cruising RATT AREA / MET & INT SHIP 25

Flying Stations F D F F (R)

Rescue Stations REScue STATIONS # B

Jackstay Stations JACKSTAY #3

Fuelling Stations

Towing Stations # 2 LINE HANDLER

Emergency Stations CBO

Life Raft Stations 6

Special Sea Duty

Enter & Leave Harbour RAD 2

Harbour Employment CCR

POSITIONS FROM WATCH AND STATION BILL

SITUATION OR DUTY

POSITION AND NUMBER

Duty Watch

CCR w/K

NBCD Condition ZULU

X-RAY/YANKEE (at sea)

X-RAY (in Harbour)

Awkward State One

Awkward State Two

Awkward State Three

Internal Security Party

Demolition Party

Boarding Party