

CHAPTER 2

DEPARTMENTAL RESPONSIBILITIES

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CHAPTER 2

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0201. Managing Risk, Making Decisions and Engineering Assurance

a. In normal circumstances the majority of activities involved in the operation, maintenance and repair of equipment are covered by SOPs and are routinely supervised by Suitably Qualified and Experienced Personnel (SQEP). However, Weapon Engineers will face situations for which there is no formal guidance or policy or ambiguity in reference documentation; they will be called upon to use engineering judgement to risk manage events when required to do so by the operational situation.

b. WEO/SNRWEs must assess the situation, understand the potential for failure and adopt a philosophy of conducting routine risk management, drawing on SMEs as necessary and if possible, with a view to making essential, genuine, robust, risk based and considered decisions in pursuit of delivery of the maximum Operational Capability.

c. Particular awareness and, if appropriate, caution must be exercised where it is recognised that a number of 'non-standard' factors are at play: a number of minor defects; inexperienced operators and/or maintainers; a lack of training; an insufficient capacity to supervise work. Any combination of these and other factors can come together to form a cumulative risk; it is essential that this risk and its likely impact is identified, minimised, mitigated and presented through the Chain of Command. It is not essential that a formal risk assessment is made for all decisions/actions. Often, this assessment can be done quickly and effectively using appropriate judgement. However, those making decisions need to possess the facts, an understanding of the situation and the experience necessary. They are also to ask themselves "can I justify my action"; if not individuals must gain guidance from superiors, in particular, the CODH. Flotilla engineering staff can also be an invaluable source of guidance and WEO's/NRWE's should not hesitate to consult on any situation where risk is being taken.

d. Whilst there are many techniques for conducting detailed risk assessments the WEO/SNRWE must always understand all factors and balance the likelihood against the consequence, taking into account operational requirements. The assessment is always to include the question: "Can I justify the decision I am making?" Evidence is to be retained where practicable, the risk documented if appropriate and the Commanding Officer is to be briefed since understanding the risk taken onboard forms part of their role as the CODH. An essential part of this is ensuring that the CODH has a sound understanding of the risk they are carrying on sailing (outstanding maintenance etc).

e. Risk is minimised in the MoD through the application of the engineering assurance processes outlined in BR9147. This process includes the maintenance and monitoring of engineering standards.

0202. Responsibilities for Systems and Equipment

This article lists the systems and equipment for which the WEO/SNRWE is responsible. The article is to be read in conjunction with [Para 0302](#) which defines the boundaries of engineering responsibility between the WEO/SNRWE and the MEO:

a. **Mission Systems.** The WEO/SNRWE is responsible for the availability, including maintenance of the ship's mission system as detailed on the Ship's Combat System Certificate (CSC) (see Para 0515) which includes:

- (1) Weapons.
- (2) Sensors.
- (3) Intelligence and Information Sources
- (4) Combat Management Systems
- (5) Communications and non real time Information Systems used to for planning, administration and maintenance (see note 2).
- (6) Degaussing Systems.
- (7) CBRN detection equipment (portable and fixed).
- (8) VCS equipment including frames, cabling, junction boxes, associated sensors and 'plug in' excepting those 'plug in' units and sensors which perform or indicate exclusively marine engineering functions and which are not associated with telephone, intercom or broadcast equipment. The functional checks of equipment performing marine engineering operations are the responsibility of the Marine Engineering Department.
- (9) The maintenance and repair, but not operation of, visual signalling equipment except where fed from the navigational panel or by battery alone.
- (10) The maintenance and repair, but not operation of, Recreational TV, CCTV, cinema and SRE.
- (11) The maintenance and repair, but not charge, of the following portable equipment that remains in the custody of the user:
 - (a) Small arms.
 - (b) Azimuth circles.
 - (c) Laser sights, night vision goggles, binoculars, lenses and cameras associated with weapons and other equipment.
 - (d) Portable microphones, loud hailer and headsets (including handsets that are readily detachable from parent equipment).

b. **Magazines and Weapon Handling Equipment** (see Para 0104c [sub para \(4\)](#) for exception). Including Weapon lifts, hoists, associated lifting gear and steel wire rope, Mobile weapon handling equipment except flight deck equipment in Capital Ships .

c. Aviation facilities (see [Para 0303](#)).

Notes:

1. *The word 'system' as used in this article and elsewhere in this volume describes all the equipment, components and interconnections that come together to fulfil a specified function excepting common services and common sources of data. Particular equipment may form part of more than one system, each system with a different function.*

2. *In addition to all internal communications and broadcasts, the WEO/SNRWE is also responsible for all bells, buzzers and alarms except where these are used exclusively with ME functions that are not associated with telephones, intercom or broadcast equipment. The functional checks of equipment performing ME operations are the responsibility of the ME Department.*

d. **Platform Systems, Ancillary and Support Equipment.** The WEO/SNRWE is responsible for the following:

(1) *Supplies:*

(a) Converted power supply equipment in surface ships dedicated to Weapon Engineering equipment and not feeding through a control and communication switchboard.

(b) Components of the emergency supply system which form an integral part of WE equipment.

(c) Chilled water equipment and pipework dedicated to Weapon Engineering equipment.

(d) Compressed air equipment and pipework, which is only used by Weapon Engineering equipment.

(e) Compressed air equipment and pipework which serves both Marine Engineering and Weapon Engineering equipment from:

i. The output side of the isolating valve nearest to, but not on the distribution panel that forms part of the Weapon Engineering equipment.

or

ii. Where there is no equipment distribution panel, the output side of the isolating valve nearest to the Weapon Engineering equipment.

(f) Bottled gasses including drench systems when dedicated to Weapon Engineering equipment.

(g) Tepid water equipment and pipework dedicated to Weapon Engineering equipment.

(2) *Equipment:*

(a) Lifting Equipment Record Keeping.

(b) Environmental equipment when all the outputs are dedicated to Weapon Engineering equipment.

- (c) Workshop machinery, tools and test equipment when dedicated to Weapon Engineering equipment.

e. **Defence Information Infrastructure (Maritime Deployed Restricted or Secret (DII MD R, DII MD S)).** DII is well into implementation onboard maritime units and is changing the relationship that the RN has with industry to one of service provision/ service use. This has an impact upon the role of IS maintainers and administrators because availability of the DII elements of the onboard information infrastructure will form part of the calculations used to determine payment to the contractor. The role of both WE and CIS personnel will largely remain the same, but they are now known as Military Service Providers (MSPs). Specifically, the CPO ET WE (CIS)/PO ET WE (CIS) is the Site Services Manager (SSM)¹, the LET WE (CIS) the Administration Services Manager (ASM)², with ET WE (CIS)s taking the role of System Service Maintainer (SysSM)³. For MM/PP, the DWEO will be the SSM and the LET WE (CIS) the ASM. The successful delivery of DII related OC requires the WEO/SNRWE to initiate a 'one team' ethos with DSMT and to ensure their CIS team are regarded as trusted agents of the DII DSMT.

0203. Responsibilities for Hazardous Stores (other than explosives)

- a. **Acceptance of Stores.** The formal acceptance of stores implies acceptance of responsibility for their safe custody. In the case of hazardous stores, the responsibility for seeing that all relevant regulations governing storage and handling are observed rests with the officer or rating who is formally designated to be in charge of the section to which they are issued.
- b. **Departmental Orders.** Departmental Orders is to make it quite clear who, down to section level, is formally to accept custody of such stores and so take responsibility.
- c. **Hazardous Stores Information System (HSIS).** A list of items of naval stores which are normally carried onboard and which, unless properly handled, can become a hazard is given in the MoD HSIS. This includes details of the hazards, precautions to be taken, first aid and disposal instructions. Further details are given in BRd 167 Chapter 5.
- d. JSP 319 – Joint Service Safety Regulations for the Storage, Handling and Use of Gases, and BR 1754 - Regulations for the Safe Storage and Handling of Petroleum Products in HM Ships and Submarines is also to be consulted.

0204. Responsibilities towards Stores and Spares

Reference: JSP 886 – The Defence Logistics Support Chain Manual

- a. The WEO/SNRWE is to:
- (1) Inform the Logistics Officer of the Naval and Armament stores and spares required by the WE Department and their priority. This includes the timely ordering of spares and stores for support periods.

1. http://www.dsmt.dii.r.mil.uk/downloads/Site_Services_Manager.doc
 2. http://www.dsmt.dii.r.mil.uk/downloads/Admin_Services_Manager.doc
 3. http://www.dsmt.dii.r.mil.uk/downloads/Systems_Services_Manager.doc

- (2) Ensure that all personnel within the WE Department correctly account for the equipment and fitted spares that form part of the Weapon Engineering equipment fit.
 - (3) Ensure that all personnel within the WE Department correctly account for and maintain the spares for Weapon Engineering equipment where these have not been taken on to the charge of the Logistics Officer.
 - (4) Advise the Logistics Officer of any change to, or modification of, the Weapon Engineering equipment that could alter the stock of stores and spares which the ship should hold.
 - (5) Advise the Logistics Officer of the minimum holding of Non-accountable stores held in support of Weapon Engineering equipment when the holding is less than that recommended in the Consolidated Allowance List (CAL).
 - (6) Advise the Logistics Officer where changes to WE Equipment fits affect stores holdings; routine validation of A6-G – List of Spare Parts Catalogues.
 - (7) Maintain and account for the stock of ready use stores held by the WE Department.
 - (8) Ensure that items on permanent loan to the WE Department, such as special tools; or on personal loan to the members of his/her staff are properly maintained and mustered in accordance with the regulations.
 - (9) Ensure that all members of the WE Department maintain a record of all stores demanded from the Logistics Officer using S3015 - Section Demand Book.
 - (10) Advise the Logistics Officer on the condition and storage of stores and spares for WE equipment held by the Logistics Department.
 - (11) Advise the Logistics Officer on the state of any stores and spares received by the WE Department that are not fit for use.
 - (12) Ensure the correct action is taken in conjunction with the Logistics Officer on notification of any discrepancies in the accounting of stores.
- b. In MM/PP/Hs vessels, which are tenders to a main base, the responsibilities of the Logistics Officer are assumed by the Base Logistics Officer via the Ship's Naval Store Keeping Officer (NSKO).

0205. Responsibility for Precautions Against Fire

- a. The WEO/SNRWE is to ensure that the correct precautions against fire are taken by the WE Department and in the compartments for which they are responsible.
- b. The WEO/SNRWE is to pay particular attention to the following points:
 - (1) Spontaneous ignition of rags etc, particularly when they contain even small quantities of grease or oil.
 - (2) Stowage of combustible material in obscure places.
 - (3) Welding and burning operations.
 - (4) Clothing impregnated with oil or gasoline.
 - (5) Lagging impregnated with combustible liquid (diesel fuel, lubricating oil etc).
 - (6) Naked lights left unattended near combustible material.
 - (7) Accumulation of oil in bilges, savealls, etc.
 - (8) Use of blow lamps.
 - (9) Gauge glasses fitted to tanks and other vessels containing combustible liquids.
- c. When opening machinery fitted with forced lubrication arrangements, no naked lights are to be permitted in the vicinity until the oil chamber has been ventilated thoroughly.
- d. Care is to be taken to avoid accumulation of fuel, mineral lubricating oil, hydraulic fluid, and other combustible liquids near gas turbine uptakes, casings and exhaust pipes, superheated steam pipes and fittings or other parts of machinery installations where high temperatures are likely.
- e. All combustible stores, wipings, etc, are to be stowed in their proper containers or suitable steel bins. Plastic containers are not to be used in machinery spaces for any flammable or combustible fluids, due to the fire hazard resulting from the release of these fluids, should such containers come into contact with a hot surface and melt. Acids are to be stowed away from flammable and other materials.
- f. Gauge glass cocks or valves on tanks and vessels containing combustible liquids are invariably to be kept shut except when readings are being taken. This is to be done to reduce the possible fire hazard following breakage of the glass. Personnel responsible for checking tank quantities are to be instructed accordingly and warned that top and bottom cocks or valves are to be shut on completion. A notice to this effect is to be posted on tanks and vessels concerned.
- g. The thickness of paint on all surfaces is to be kept to a minimum and only the approved schemes for various types of painting are to be followed.
- h. The WEO/SNRWE is to ensure that an up to date 'KILL CARD' exists for all compartments, for which they are responsible, for use in the event of a fire; BRd 2170(1) refers.

0206. Musters

- a. All accountable material and publications held by the WE CIS Group are to be listed on muster lists, which should be signed by the Crypto Custodian. Separate muster lists are to be kept for each security container. The CPOET (WE)(CIS)/POET(WE)(CIS) are responsible for the preparation of the muster lists.
- b. All Cryptographic Material and CIS keys annotated on muster lists are to be mustered by Ratings in Charge of watches and by the OOD in accordance with JSP 440 and SGOs. Other musters of protected material are to be carried out in accordance with JSP 440. The appropriate section of the form S1325 is to be signed on completion of each muster, and the time of the daily muster by the OOD is to be shown.
- c. At Sea, the daily musters of crypto material are to be carried out at the Safes within the CER 6 FWD/MCO.
- d. Books and crypto material are to be mustered by Long and Short Title and Copy Numbers where appropriate. In the case of keying material, the segment/card in use and the remainder of the canister/book is to be checked to ensure that segment/card numbers are continuous.
- e. If at a muster, or on any occasion, any anomalies found are to be reported to the CPOET(WE)(CIS)/POET(WE)(CIS)/WE Section Officer immediately (or the OOD if the WE Section Officer is not available). An immediate and thorough search should be carried out at the same time.
- f. Page-by-page musters are to be carried out in accordance with JSP 440.