

COMNAVSURFORINST 3541.1 CH-1
27 Jan 04

DEPARTMENT OF THE NAVY
COMMANDER NAVAL SURFACE FORCES
2841 RENDOVA ROAD
SAN DIEGO, CA 92155-5490



COMNAVSURFORINST 3541.1 CHANGE TRANSMITTAL 1

Subj: REPAIR PARTY MANUAL

Ref: (a) COMNAVSURFORINST 3541.1

Encl: (1) Revised pages vii, viii, 1, 2, 3, 4, 7,
8, 11, 12, 13, 14, 27, 28, 57, 58, 59, 60, 61,
62, 65, 66, 67, 68, 71, 72, 73, 74, 97, 98, 103, 104,
154, 155, 156, and 157.

1. Purpose. To promulgate change 1 to reference (a).

2. Action

a. Remove pages vii, viii, 1, 2, 3, 4, 7, 8, 11, 12, 13,
14, 27, 28, 57, 58, 59, 60, 61, 62, 65, 66, 67, 68, 71, 72, 73,
74, 97, 98, 103, 104, and replace with enclosure (1) of this
change transmittal.

3. Cancellation. When above changes are entered in reference
(a).

//SIGNED//
M. W. BALMERT
Deputy and
Chief of Staff

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CHAPTER 1 DAMAGE CONTROL ORGANIZATION AND RESPONSIBILITIES

SECTION 1 FUNDAMENTAL PRECEPTS

- Ref: (a) OPNAVINST 3120.32 Standard Organization and Regulations of the U.S. Navy (SORM)
(b) NWP 3-20.31 (Series), Surface Ship Survivability
(c) NSTM Chapter 555, V1, Shipboard Firefighting
(d) NSTM Chapter 079, V2, Practical Damage Control
(e) NSTM 470, Shipboard Biological Warfare/Chemical Warfare Defense and Countermeasures.
(f) COMNAVSURFORINST 3502.1, Surface Force Training Manual
(g) COMNAVSURFORINST 3540.3, Engineering Department Organization and Regulation Manual (EDORM)
(h) Ships Loading Characteristics Pamphlet
(i) OPNAV INSTRUCTION 3500.34

1100 DAMAGE CONTROL READINESS.

a. Effective leadership and a well-trained crew achieve Damage Control readiness. This includes all ranks, ratings, and departments. Central to success is heightened command attention on these matters. One of the most important aspects of damage control preparedness takes place before the damage occurs (with knowledge, training, and exercises). Effective damage control organizations routinely exercise and assess themselves.

b. Damage control is the responsibility of all hands aboard ship. The ship's ability to fulfill its mission depends upon its effectiveness. The survival of the ship depends upon prompt and correct damage control action.

c. Training should be based on a seminar, brief/execute, debrief, and follow-up methodology. By using this approach, personnel gain knowledge and develop the skills and teamwork needed to successfully combat any damage.

d. It is vitally important that a strong training program is in place to educate and train the entire ship's company for all possible damage situations. Education, training, organization and maintenance are the fundamentals of damage control and are applicable to all ships irrespective of type or size.

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e. The CO is responsible for adherence to, and the effective application of, the principles and standards established in this and all damage control publications. These standards are the minimum; they should not restrict the CO's decision to take additional action to control damage. Listed below are some basic tenets of damage control.

- (1) Keep your ship watertight.
- (2) Do not violate material conditions.
- (3) Have confidence in your ship's ability to withstand severe damage.
- (4) Know your way around your ship even in the dark.
- (5) Know how to use and maintain damage control equipment.
- (6) Report damage to the nearest damage control station.
- (7) Keep personal articles properly secured at all times.
- (8) Practice personal damage control; protect yourself so you can protect the ship.
- (9) Take every possible step to save the ship as long as a bit of hope remains.
- (10) Keep cool - don't give up the ship.

1101 DAMAGE CONTROL COMMAND POLICIES.

a. Commands shall promulgate in this document policies that impact damage control readiness and insert in Tab A. Such topics, policies, or practices include (but are not limited to):

- (1) When will modified Zebra be set? (Mod Zebra fittings will be listed in Chapter 5 Tab C).
- (2) Who responds inport and underway while the main engineering plant is in operation? Day? Night? (Inport Emergency Team [IET], General Quarters or Condition II DC?) What about the auxiliary plant?

(3) When is it permissible to discharge oily waste/AFFF overboard? What constitutes an emergency?

(4) Who authorizes the placing of Damage Control systems out of commission? How many systems at once?

(5) Is there a preferred method vertical access or main entry for re-entering a main space during fire fighting operations?

(6) What tripwires, if any, are there for personnel in command positions (Executive Officer, Command Duty Officer) for flooding a magazine? Using main eductors inport?

(7) How will the IET be augmented in homeport?

(8) Where do the members of the training team go during an actual casualty?

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SECTION 3 GENERAL REQUIREMENTS

1300 COMMAND AUTHORITY.

a. Authority to Sprinkle/Flood Magazines. The CO shall publish, as ship's policy, who has the authority to order the sprinkling of magazines. The policy should distinguish between fires in a magazine and fires in compartments adjacent to a magazine. The decision to flood a magazine can have serious consequences on damage control efforts. The person authorized to exercise command authority shall make this decision.

b. Damage Control Measures Requiring Command Approval. Damage control items requiring command approval are listed in reference (b).

1301 REQUIRED DAMAGE CONTROL CENTRAL EQUIPMENT, MATERIALS AND PUBLICATIONS.

a. Certain damage control items shall be maintained by the DCA. Many are listed in the references and are required to be part of the Damage Control Library. Items that are required and are not listed in any reference are listed below. The DCA shall maintain the following items:

(1) Updated liquid loading status to reflect the latest tank and void soundings provided by the Oil King and the Sounding and Security Watch.

(2) Clinometers to determine list and trim.

(3) AN/PDR-65 High Range Survey Meter (may only be available on Bridge)

(4) Tank sequencing chart and/or tables.

(5) The non-propulsion tag out log, if separate from the engineering tag out log, shall be used to tag out any major damage control systems (e.g., firemain or fittings or any procedures affecting stability or involving hot work reference (d).

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(6) Lists of preplanned routes to deep shelter, combat systems equipment casualty control supply support centers, battle dressing stations, battle messing, and other battle logistics supply centers or storerooms.

(7) Charts, nomograms and other required materials to calculate various radiological factors.

(8) Repair Party Manual with complete Chapter Tabs.

(9) COMNAVSURFOR publishes serialized Damage Control Readiness Advisories (DCRA) to provide prompt dissemination of information, policies, or procedures not available in other references. DCRA's will be recorded on the Index of Damage Control Readiness Advisory page and filed for reference and continuity behind the Index of Readiness Advisories page of this instruction. All DCRA's when received, shall be distributed to all applicable personnel for information purposes. DCRA's are available for download on the COMNAVSURFPAC or COMNAVSURFLANT web site.

(10) Ship's Loading Characteristic Pamphlet (SLCP) for Amphibious Ships.

1302 DAMAGE CONTROL CENTRAL SUCCESSION.

a. Provisions must be made for the functions of Damage Control Central (DCC) to be carried out by other stations if DCC needs to be evacuated. Most ships are built with the Damage Control Repair Station (DCRS) furthest from DCC having most of the interior communications circuits necessary to be a secondary DCC. A major conflagration will disrupt the repair organization and may require reorganization topside. The Damage Control Assistant (DCA) shall make provisions to provide the topside location with a copy of the completed Repair Party Manual (RPM) and damage control plates for plotting and evaluating damage. The succession of DCC on each ship and the designated topside space shall be annotated in the RPM Chapter 1 Tab B (complete as many as necessary).

1303 DUPLICATE DC MATERIALS FOR COMMAND AND CONTROL.

a. To ensure the CO/CDO is aware of and can better visualize the damage control situation, a duplicate set of up-to-date damage control plates showing the hull, all decks, and

SECTION 4 DAMAGE CONTROL ORGANIZATION

1400 DC ORGANIZATION.

a. Damage Control Organization. The concept behind the changes to the damage control organization is to allow the ship to continue its tactical mission while responding to a casualty in a tiered approach. The tiered response allows the CO the ability to utilize resources more efficiently. Tiered response consists of three layers: Flying Squad, Condition II Damage Control, and General Quarters.

b. Flying Squad shall consist of, at a minimum (see references b, c and d for duties and responsibilities):

1. Fire Marshall¹
2. Electrician¹
3. Rapid Responders^{1,2} (2)
4. Scene Leader³
5. Team Leader³
6. Team Members^{2,3} (3)
7. Investigators³ (2)

NOTE:

¹ Rapid Response Team - Shall report directly to the scene.

² Shall be PQS qualified up to DC 308.

³ Back up Team - Shall report to the designated DCRS.

() Denotes the number of personnel required.

Plotter and talker/messenger functions listed in reference (b) may be performed by non-Flying Squad personnel on watch in control stations.

c. Condition II Damage Control allows a significant increase in Damage Control response without disrupting tactical watchstations. This provides the Commanding Officer a multi-tiered response to combat damage. Designated Damage Control Repair Stations (DCRS) and DC Central shall be manned up when Condition II DC is set. At a minimum, one DCRS and one Battle Dressing Stations (BDS) shall be manned. For example, when Condition II DC is called, Repair 5 is manned with Repair 5 personnel. As the damage becomes bigger, an additional DCRS is manned. This allows flexibility for additional DCRS to man up if required (see Figure 1). Primary boundaries, such as fire, smoke and/or flooding, shall be set as required.

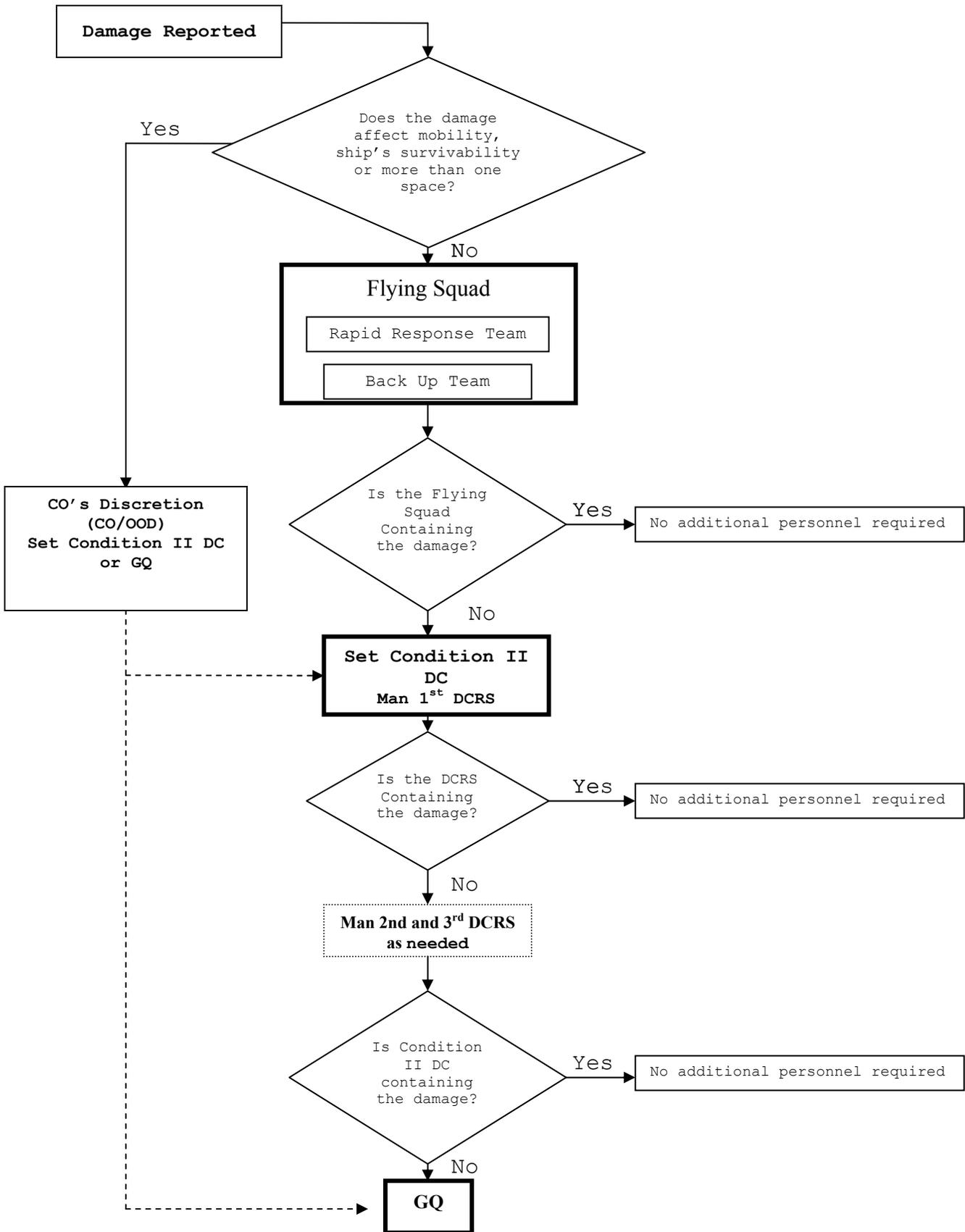
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d. General Quarters (GQ) will be set for tactical reasons or as deemed necessary by the CO. Material condition Zebra shall be set during GQ.

e. Functional requirements for individual DCRS shall be IAW reference (b).

FIGURE 1 - DC ORGANIZATION FLOW CHART



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1401 CONCEPT.

a. The Flying Squad's purpose is to quickly respond to casualties and determine the extent of damage. Designated initial responders will proceed directly to the scene of damage while the rest of the Flying Squad provides from designated DCRS. The actions required for a larger casualty or a change in threat level would drive the ship to Condition II DC. Condition II DC allows the CO flexibility to fight the ship with a tiered DC response without disrupting tactical watchstations. The CO retains the option of setting GQ.

1402 IET ORGANIZATION.

a. The CO will develop an IET that is an effective fire fighting force considering current circumstances (including machinery space fires). This team must also be capable of effectively controlling flooding and its possible effects, as well as any other condition described in the General Emergency Bill (insert into Tab I). See reference (b), chapters 2 and 9.

NOTE: The term "circumstances" will include considerations for cold iron, cold iron with flammable liquid systems running, auxiliary steaming and operation of main engines.

b. For units with fewer than three DCRS's (MHC/MCM/PC): While at home port the IET may be comprised of ship's force backed up by members of the Base Fire Department or Rescue and Assistance Teams from surrounding ships inport.

c. For units with three or more DCRS's: The requirement for the inport fire party is listed in reference (b).

d. During working hours inport, the Flying Squad shall respond to any shipboard casualty. The duty section IET will serve as a back up. Upon liberty call, emergency response will be turned over to the IET until the start of the following workday.

TAB I - IET MANNING CHART

<u>FUNCTION</u>	<u>PERSONNEL REQUIRED</u>	<u>NOTES</u>
Fire Marshall/Scene Leader	1	1, 2, 3
Nozzleman	1	3, 4
Hoseman	2	3, 5
Plugman	1	3, 6
Investigators	2	2, 3, 4, 7
Phone Talker/Plotter	1	3, 8
Electrician	1	2, 3, 7, 9, 10
Utility Person/Messenger	1	3

NOTES:

1. If the Fire Marshal is also the Engineering Duty Officer (EDO), a separate Scene Leader is required.
2. Member of the Rapid Response Team. Rapid Response Team members shall not be assigned to the ship's security force.
3. All IET personnel shall be qualified as First Aid Provider. The First Aid Provider shall be trained in performing first aid, CPR, and burn treatment.
4. Also serves as the NFTI operator, if required.
5. Also serves as the Reflash Watch and Overhaulman.
6. Also serves as the Accessman and an extra Hoseman if required. The Plugman need not man the plug continuously if his/her services are needed elsewhere.
7. Also sets and monitors fire boundaries. Primary fire boundaries need not be continuously manned unless determined necessary by the scene leader.
8. Stationed in CCS/DCC.
9. Any electrical rating (EM, ET, IC, GSE, DS, ST, FC, CTM, GM, EW, FN) can PQS qualify and serve as the duty electrician.
10. Also serves as Smoke Control and Dewaterman.

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TAB J - RESCUE AND ASSISTANCE DETAIL MANNING (INPORT/UNDERWAY)

See reference (b).

SECTION 3 - MACHINERY SPACE FIREFIGHTING DOCTRINE

4300 MAIN MACHINERY SPACE FIREFIGHTING DOCTRINE

a. This section of the Repair Party Manual is the Force Policy for Combating Main Machinery Space Fires; no additional letters of promulgation are required. CO shall ensure completion of the following actions:

b. Complete Section 3 TABS A through T. Reference (d) applies when completing the Isolation List TABS G and H. Ensure isolation lists are completed for the required systems in the prescribed order. Ensure power sources for HALON system alarms and indicators and AFFF bilge sprinklers are clearly identified in the Isolation List. When completing TAB J, De-Watering From Outside Space, list valves in the order in which they are to be aligned.

c. Some line items may not be applicable to all ship classes. In these cases, line out any item that does not apply.

d. Insert copies of the Main Machinery Space Fire Doctrine with completed Tab pages into each shipboard copy of the Repair Party Manual. The ship's DCA shall maintain the Repair Party Manual master copy.

e. Prepare laminated copies of Section 3 Tabs A through T. They contain required actions by repair/fire party personnel and should be kept in the DCRSs.

f. Fill in the appropriate blanks in the Main Machinery Space F/F Doctrine. If AFFF needs to be conserved, sprinklers may be operated for as little as one minute.

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TAB A - ACTIONS FOR A MAJOR FLAMMABLE LIQUID LEAK UNDERWAY

a. Watchstander/Space Supervisor Actions:

_____ Direct actions according to applicable EOCC.

b. EOOW/CCS WATCH Actions:

_____ Direct actions according to applicable EOCC.

c. OOD Actions:

_____ Set Condition II DC (man Repair 5 and other Lockers as needed).

_____ Establish communications with DC Central or location from which command and control for damage control is exercised.

_____ Prepare for loss or reduction of ship's maneuverability.

_____ Notify other ships or authorities as appropriate.

_____ Look for smoke or other signs of fire to determine maneuverability requirements.

TAB B - ACTIONS FOR A MAJOR FLAMMABLE LIQUID LEAK INPORT.

a. Watchstander/Space Supervisor Actions:

_____ Direct actions according to applicable EOCC.

b. EOOW/CCS WATCH Actions:

_____ Direct actions according to applicable EOCC.

c. OOD Actions:

_____ Set Condition II DC (man Repair 5 and other Lockers as needed).

_____ Establish communications with DC Central or location from which command and control for damage control is exercised.

_____ Ensure all off-watch personnel are assembled at designated location.

_____ Notify other ships or authorities as appropriate.

_____ Be observant for smoke or other signs of fire.

d. CDO Actions:

_____ Position self to best exercise command and control IAW ship's specific policy.

_____ Ensure appropriate authorities are notified.

_____ Request assistance as required (other ships, base fire department).

TAB C - UNDERWAY ACTIONS IN CASE OF CLASS BRAVO FIRE

a. Watchstander/Space Supervisor Actions:

Initial actions:

- ___ Direct actions according to applicable EOCC.
- ___ Deploy portable PKP extinguishers and operate as needed.
- ___ Activate AFFF bilge sprinkling, if installed, (one minute minimum)

NOTE: If AFFF bilge sprinkling and hoses have a common supply from a 50-gallon tank through a FP-180 proportioner, simultaneous use of hose and bilge sprinkling shall be avoided to prevent losing required discharge pressure.

- ___ Leave space ventilation in operation; set negative ventilation. Exhaust on high / supply on low.

NOTE: If ventilation supply and exhaust fans are interlocked and the controls are in EOS/CCS or at the access of the space, set emergency exhaust. Set exhaust on high and supply off.

- ___ If evacuation is ordered or necessary, don OCENCO EEBD (for ships with SCOTT EEBD in the engineering spaces, don SEEDS and shoulder a SCOTT EEBD to egress).

- ___ Upon evacuation activate Halon and AFFF Bilge Sprinkling (if installed) if not already activated.

- ___ Once space is evacuated, report to affected DCRS or Scene Leader the following:

- Status of personnel evacuated from or remaining in the space.
- Status of the leak and the location and intensity of fire.
- Times Halon and/or AFFF Bilge Sprinkling (if installed) were activated (if activated in space) and secured.
- Status of lighting, ventilation, firefighting equipment and any operating machinery.
- Recommend reentry route.
- Evacuees should muster in areas designated in the applicable section of this chapter.

b. EOW Actions:

Initial actions:

- ___ Report Class "B" fire to the OOD.
- ___ Request OOD set Condition II DC (man Repair 5 and other Lockers as needed).
- ___ Direct actions according to applicable EOCC.

Concurrent actions:

- ___ Ensure AFFF bilge sprinkling is activated, if installed, for 1 minute (at a minimum)
- ___ Ensure watchstanders in adjacent spaces has an EEBD (belt worn for OCENCO EEBD or shoulder an SCOTT EEBD).
- ___ Order space evacuated if the fire is reported out of control or if other circumstances arise that make evacuation necessary.
- ___ If evacuation is ordered or if reasonably sure the watch team is trapped or killed, ensure Halon and AFFF bilge sprinkling are activated.
- ___ Order positive ventilation set in unaffected spaces
- ___ The DCA will assume control of fire fighting efforts if/when the space is evacuated. To assist the DCA in assuming control of firefighting efforts, report status of:
 - Affected machinery space
 - Mechanical/electrical isolation
 - Fire fighting efforts

NOTE: Although the DCA assumes control of fire fighting efforts, the EOW retains engineering plant control.

Restoration:

Direct affected machinery space restoration according to applicable EOCC/EOP.

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c. DCA Actions:

Initial actions:

___ Request status report from the EOOW.

___ Verify Primary Halon activation and release.
(Activation Time _____)
(Release Time _____)

NOTE: If primary Halon does not extinguish the fire (Halon bad), determine and correct the cause of Halon failure, then order reserve Halon activated, if installed. Order use of the time delay bypass.

___ Ensure AFFF stations are manned.

___ Verify AFFF bilge sprinkling activation.
(Activation Time _____)
(Secured Time _____)

___ Report to the OOD the status of evacuees.

___ Order re-entry route (coordinate with OSL/DCRS Leader).

Concurrent actions:

___ Ensure investigators are deployed.

___ Ensure fire and smoke boundaries are set.

___ Ensure that adequate firemain pressure is maintained.

___ Order mechanical isolation of the affected space.

___ Order electrical isolation of the affected space.

NOTE: Electrical power may be required to mechanically isolate various equipment (e.g. motor operated valves).

___ Order non-affected DCRS(s) to provide assistance as required.

___ Determine effectiveness of primary/reserve Halon
(The following are indication of Halon effectiveness (HALON GOOD))

d. Affected DC Repair Station Officer/Leader Actions:

Initial actions:

___ Man and establish communications with Main Control/CCS/DCC and the On-Scene Leader.

___ Report when manned and ready.

___ Order setting of fire and smoke boundaries.

Concurrent actions:

___ Ensure investigators are deployed.

___ When ordered, mechanically isolate the space.

NOTE: Ensure space has been evacuated prior to isolating fire fighting equipment in the space. Activation of Halon should not be delayed because of fire fighting efforts.

___ When ordered, electrically isolate the space (The Decision to secure space lighting or not rests with the OSL).

___ Report fire and smoke boundaries set.

NOTE: Primary fire boundaries shall have hoses laid out and made ready as appropriate.

___ Muster evacuees and receive the following reports:

- Status of personnel evacuated from or remaining in the space.
- Status of the leak and the location and intensity of fire.
- Times Halon and/or AFFF Bilge Sprinkling (if installed) were activated (if activated in space) and secured.
- Status of lighting, ventilation, firefighting equipment and any operating machinery.
- Recommended reentry route.
- Evacuees should muster in areas designated in the applicable section of this chapter.

___ Report information to DCA and send evacuees to designated area IAW TAB K.

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____ Upon verification of evacuation of personnel from the affected space, order On-scene Leader (OSL) to mechanically isolate fire-fighting equipment (AFFF to the space hose reel).

____ Verify Halon activation and release. (Time:) Report to DCA.

____ Ensure AFFF bilge sprinkling is secured after one minute.

____ Ensure the NFTI is warmed up and tested.

____ Report effectiveness of primary/secondary Halon:

(The following are indicators of Halon effectiveness)

- White smoke topside.
- No blistering paint in surrounding spaces.
- Visual inspection Ellison doors (no indication of black smoke or flame).

NOTE: If Halon did not extinguish the fire, attempt to determine why, or if the fire has reflash, order On Scene Leader to activate secondary Halon (if installed). If ventilation has been secured, by-pass the time delay when activating secondary Halon. Report indications of effectiveness of secondary Halon, if activated, and report to DCA.

____ Pass to on-scene leader status of:

- Personnel evacuated from or remaining in the space.
- Status of the leak and the location and intensity of fire.
- Times Halon and/or AFFF Bilge Sprinkling (if installed) were activated (if activated in space) and secured.
- Halon effectiveness from investigators.
- Status of lighting, ventilation, firefighting equipment location of obstructions and any operating machinery.
- Recommended reentry route.
- Evacuees should muster in areas designated in the applicable section of this chapter.

Reentry actions:

____ Report when manned and ready to enter affected space.

____ When ordered, activate AFFF bilge sprinkling for 2 minutes. Report start/stop times.

- ___ When ordered, direct space reentry.
- ___ Record/monitor OBA/SCBA activation times.
- ___ Report when the space is entered (re-entered).
- ___ Send OBA/SCBA reliefs to the scene as necessary. Relieve all fire team members with OBA's/SCBA's no more than 30 minutes after OBA/SCBA activation.

NOTE: Fire team members may need relief before the 30 minutes due to heat stress or the size of SCBA bottles. ___ Record OBA/SCBA start times for reliefs.

- ___ Report when the fire is contained.
- ___ Report when the fire is out and reflash watch is set.
- ___ Report status of hang fires/hot spots.
- ___ When ordered, commence de-smoking.
- ___ Report when the fire is overhauled.
- ___ Request permission to commence de-watering.

CAUTION: Do not disturb AFFF foam blanket before overhaul is complete.

- ___ Report when de-watering begins. (CO's permission is required)
- ___ Report when de-watering is complete.
- ___ Report when the space is de-smoked.
- ___ Report results of atmospheric test(s).

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e. Affected On-Scene Leader Actions:

Initial actions:

_____ Report to scene. Establish communications with Damage Control Repair Station.

Concurrent actions:

_____ Assist evacuating personnel, if necessary. (If possible determine status of leak, location of fire, status of evacuees and firefighting equipment).

_____ Verify Halon activation and release.

_____ Verify AFFF activation.

_____ Upon verification of evacuation, isolate AFFF to space hose reel.

NOTE: If Halon fails to discharge, make sure the primary or secondary Halon system is activated using the time delay bypass. Use of the time delay bypass is authorized when the space has been evacuated and ventilation to the space has been secured long enough to prevent the possibility of wind-milling ventilation fans drawing Halon out of the space.

_____ Report indications of Halon effectiveness at reentry access.

_____ Verify leak/space isolation and personnel evacuation.

Reentry actions:

_____ Ensure buffer zone/dead air zone has been established.

_____ Ensure activation of AFFF bilge sprinkling for 2 minutes before reentry (and report to DCRS).

_____ Order and report OBA/SCBA activation times.

_____ Direct space reentry when ordered.

NOTE: Request OBA/SCBA relief's as required.

h. OOD Actions:

- _____ Set Condition II DC (man Repair 5 and other Lockers as needed).
- _____ Establish communications with DC Central/CCS and EOOW.
- _____ If possible, maneuver the ship to avoid smoke ingestion by ventilation systems.
- _____ Be prepared for loss or reduction in ships maneuverability.
- _____ Notify other ships and Officer in Tactical Command as appropriate.
- _____ Be observant for changes in smoke color and quantity and report any changes to DCC/CCS.

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TAB D - INPORT ACTIONS IN CASE OF CLASS BRAVO FIRE

a. Watchstander/Space Supervisor Actions:

_____ Direct actions according to applicable EOCC.

_____ Deploy portable PKP extinguishers to the scene of the fire and operate as needed.

_____ Activate AFFF bilge sprinkling, if installed (one minute minimum).

NOTE: If AFFF bilge sprinkling and hoses have a common supply from a 50-gallon tank through a FP-180 proportioner, simultaneous use of hose and bilge sprinkling shall be avoided to prevent losing required discharge pressure.

_____ Leave space ventilation in operation; set negative ventilation, if possible. Exhaust on high / supply on low.

NOTE: If ventilation supply and exhaust fans are interlocked and the controls are in EOS/CCS or at the access of the space, set emergency exhaust. Set exhaust on high and supply off.

_____ Once evacuation is ordered or necessary, don OCENCO EEBD (for ships with SCOTT EEBD in the engineering spaces, don SEEDS and shoulder a SCOTT EEBD to egress).

_____ Once space is evacuated, report to affected DCRS or DCC.

- Status of personnel evacuated from or remaining in the space.
- Status of the leak and the location and intensity of fire.
- Times Halon and/or AFFF Bilge Sprinkling (if installed) were activated (if activated in space) and secured.
- Status of lighting, ventilation, firefighting equipment, location of obstructions and operating machinery.
- Recommend reentry route.
- Evacuees should muster in areas designated in the applicable section of this chapter.

CONSIDERATION: If the EOOW is not directly controlling the Propulsion plant (i.e. in the plant and monitoring it), then whoever is controlling the plant, fulfilling the EOOW's functions (e.g. space supervisor, topwatch, EDO) must perform the EOOW's duties in this doctrine.

If the topwatch is exercising control of the entire plant (EOOW not on station) they must perform both the topwatch (space supervisor) and the EOOW MSFD checklists (until relieved by the EOOW or EDO). If this is the case, then procedures for this section may be different than for the U/W case. Incorporate the different sections to facilitate their use.

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b. EOOW/EDO Actions:

_____ Order the affected plant secured IAW EOCC. Report the class, location, and source of the fire to the OOD and request that the IET be called away.

_____ Announce casualty to all engineering spaces.

_____ Ensure alternative power is available.

_____ Inform CDO and make recommendation for additional assistance (base fire department or assistance from other ships).

_____ Direct actions according to applicable EOCC.

_____ Ensure AFFF bilge sprinkling is activated, if installed, for a minimum of 1 minute.

_____ Ensure watchstanders in adjacent spaces obtain and shoulder an EEBD (if not already worn).

_____ Order space evacuated when the fire is reported out of control or if other circumstances arise which make evacuation necessary.

_____ Activate Halon and AFFF bilge sprinkling. (Activation of Halon should not be delayed because of fire fighting efforts).

_____ Ensure positive ventilation is set in the unaffected space.

_____ Order mechanical/electrical isolation.

_____ Order complete electrical isolation of the affected space once the space has been evacuated.

NOTE: Electrical power may be required to mechanically isolate various equipment (e.g. motor operated valves).

_____ Ensure affected AFFF station is manned and establish communication with station operator.

_____ If reasonably sure the watch team is trapped or killed ensure Halon and AFFF Bilge Sprinkling are activated.

TAB L - PRIMARY/SECONDARY SPACE REENTRY PLAN

NOTE: For each machinery space include lineup of #1/#2 hoses for both primary and secondary accesses. Including: fireplug location, number of required hoses, and use of in-line eductor or AFFF hose reel, as applicable. Specify designation of primary and secondary access for each space.

SPACE: _____

PRIMARY ACCESS (FILL IN LOCATION)

HOSE NUMBER
FIREPLUG NUMBER
LENGTHS OF HOSE
IN-LINE EDUCTOR? YES/NO
AFFF HOSE REELS? YES/NO

#1 HOSE

#2 HOSE

SECONDARY ACCESS (FILL IN LOCATION)

HOSE NUMBER
FIREPLUG NUMBER
LENGTHS OF HOSE
IN-LINE EDUCTOR? YES/NO
AFFF HOSE REELS? YES/NO

#1 HOSE

#2 HOSE

TAB M - DE-SMOKING

SPACE
LOCATION
PRIMARY
LOCATION
ALTERNATE
DCRS RESPONSIBLE
PRIMARY
DCRS RESPONSIBLE
ALTERNATE
DE-SMOKING PLAN

NOTE: Ships shall prepare de-smoking plans for each of the following contingencies.

- a. Use of positive ventilation/over pressurization.
- b. Use of installed ventilation. Ref (a), (b), (e) and Naval Firefighters Thermal Imager Technical Manual. (Requires Engineer Officer's permission).
- c. Use of portable de-smoking equipment.
- d. Use of active de-smoking ref (b).

STANDARD METHODS

FROM	VIA	TO
1. Compartment #	WTD - Passageway	Portside weather deck
	WTD - Passageway	WTD -
	WTD -	

ACTIVE DE-SMOKING METHODS (SEE ref (c), Section 7.7)

FROM	VIA	TO
1. Compartment #	WTD - Passageway	Portside weather deck
	WTD - Passageway	WTD -

TAB R - AFFF STATIONS

SAMPLE:

<u>DCRS</u>	<u>LOCATION/FRAME</u>	<u>COMPT SERVED</u>	<u>CUT-OUT VALVES</u> <u>REMOTE ACT</u>
5	2-136-01-L	MAIN ENGINE ROOM 5-210-0-E	2-156-3

COMNAVSURFORINST 3541.1 CH-1
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TAB S - DELETED

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APPENDIX A - DCRS FUNCTIONAL REQUIREMENTS

	Function	# of Functional Personnel Required at Condition I	When Required at Condition I	Three or more DCRS ships
1	Officer in Charge			
2	Fire Marshall			
3	Repair Party Leader	1	All	1
4	Scene Leader	1	All	1
5	Plotter	1	All	1
6	Talker	1	All	1(*5)
7	Messenger	1	All	1
8	Investigator	2	All	2
9	Electrician	1	All	1
10	Team Leader	1	Fire	1
11	Nozzleman	2	Fire	2
12	Hoseman	4	Fire	4
13	Smoke Control / Removal	2	Fire	2(*11 & 12)
14	Boundaryman	4	Fire / Flooding	4(*23)
15	Accessman / Overhaulman	1	Fire / Flooding	1(*12)
16	Dewatering	2	Damage / Flooding	2(*18)
17	Shoring	3	Damage / Flooding	3 (*19)
18	Pipe Patching	2	Damage / Flooding	2(*16)
19	Hull Patching / Plugging	2	Damage / Flooding	2(*17)
20	Sounding	As Required	Damage / Flooding	1(*17)
21	Stretcher Bearer / First Aid	4 per BDS	Personnel Casualty	PROVIDE BY BDS NOT DCRS
22	AFFF Station Operator	As Required	Bravo Fire	VARIES BY SHIP CLASS (1/station)
23	Closure Detail / Zebra Setter	As Required by Area	When COND II DC or GQ is set	VARIES BY SHIP CLASS
24	Magazine Sprinkler Operator	1	Fire	PROVIDED BY WEPS/COMBAT NOT DCRS
25	P-100 Operator	As Required	As Required	AS REQUIRED (*12)
26	P-100 Assistant	As Required	As Required	AS REQUIRED (*12)
27	DCRS 5 Space Isolation Detail	As Required	When Ordered	AS REQUIRED (*23)
28	Radiological Plotter^	1	Radiological Defense	1 (*3)
29	Radiological Recorder^	1	Radiological Defense	1(*7)
30	Radiological CP-95 Operator^	1	Radiological Defense	1(*35)
31	Internal Monitor ^	1	All CBR Warfare	1(*16)
32	External Monitor^	1	All CBR Warfare	1(*17)
33	CBR Hoseman^	2	All CBR Warfare	2(*12)
34	CBR Scrubber^	1	All CBR Warfare	1(*11)
35	CBR Decon Station Leader^	1	All CBR Warfare	1(*30)
36	CBR Decon Station Cutter^	2	All CBR Warfare	2
37	CBR Traffic Control^	1	All CBR Warfare	1
38	CMWD System Operator^	As Required	All CBR Warfare	AS REQUIRED (*22)

1(*30) 1 is the min number of personnel required to perform the function

*30 is the line item that can be combined with this function

^ Function of whole ship

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	Function	# of Functional Personnel Required at Condition I	When Required at Condition I	MCM
1	Officer in Charge			
2	Fire Marshall			
3	Repair Party Leader	1	All	1
4	Scene Leader	1	All	1
5	Plotter	1	All	1
6	Talker	1	All	1(*7)
7	Messenger	1	All	1(*6)
8	Investigator	2	All	2
9	Electrician	1	All	1
10	Team Leader	1	Fire	1
11	Nozzleman	2	Fire	2
12	Hoseman	4	Fire	4
13	Smoke Control / Removal	2	Fire	3(*15)
14	Boundaryman	4	Fire / Flooding	3(*14)
15	Accessman / Overhaulman	1	Fire / Flooding	1
16	Dewatering	2	Damage / Flooding	1(*11)
17	Shoring	3	Damage / Flooding	1(*12)
18	Pipe Patching	2	Damage / Flooding	1(*12)
19	Hull Patching / Plugging	2	Damage / Flooding	1(*12)
20	Sounding	As Required	Damage / Flooding	As required
21	Stretcher Bearer / First Aid	4 per BDS	Personnel Casualty	2 (provide from BDS)
22	AFFF Station Operator	As Required	Bravo Fire	2 (total/ship)
23	Closure Detail / Zebra Setter	As Required by Area	When COND II DC or GQ is set	6 (total/ship)(*14 &15)
24	Magazine Sprinkler Operator	1	Fire	
25	P-100 Operator	As Required	As Required	1(*11)
26	P-100 Assistant	As Required	As Required	2(*12)
27	DCRS 5 Space Isolation Detail	As Required	When Ordered	
28	Radiological Plotter^	1	Radiological Defense	1 (*3)
29	Radiological Recorder^	1	Radiological Defense	1(*29)
30	Radiological CP-95 Operator^	1	Radiological Defense	1(*35)
31	Internal Monitor^	1	All CBR Warfare	1(*16)
32	External Monitor^	1	All CBR Warfare	1(*17)
33	CBR Hoseman^	2	All CBR Warfare	2(*12)
34	CBR Scrubber^	1	All CBR Warfare	1(*11)
35	CBR Decon Station Leader^	1	All CBR Warfare	1(*30)
36	CBR Decon Station Cutter^	2	All CBR Warfare	1
37	CBR Traffic Control^	1	All CBR Warfare	1
38	CMWD System Operator^	As Required	All CBR Warfare	AS REQUIRED (5 total/ship)

1(*30)

1 is the min number of personnel required to perform the function

*30 is the line item that can be combined with this function

^ Function of whole ship

	Function	# of Functional Personnel Required at Condition I	When Required at Condition I	MHC 51
1	Officer in Charge			
2	Fire Marshall			
3	Repair Party Leader	1	All	1
4	Scene Leader	1	All	1
5	Plotter	1	All	1
6	Talker	1	All	1(*7)
7	Messenger	1	All	1(*6)
8	Investigator	2	All	2
9	Electrician	1	All	1
10	Team Leader	1	Fire	1
11	Nozzleman	2	Fire	1
12	Hoseman	4	Fire	2
13	Smoke Control / Removal	2	Fire	3(*15)
14	Boundaryman	4	Fire / Flooding	2(*8)
15	Accessman / Overhaulman	1	Fire / Flooding	1(*12)
16	Dewatering	2	Damage / Flooding	3
17	Shoring	3	Damage / Flooding	2
18	Pipe Patching	2	Damage / Flooding	4
19	Hull Patching / Plugging	2	Damage / Flooding	4(*18)
20	Sounding	As Required	Damage / Flooding	As required
21	Stretcher Bearer / First Aid	4 per BDS	Personnel Casualty	4 (provide from BDS)
22	AFFF Station Operator	As Required	Bravo Fire	1
23	Closure Detail / Zebra Setter	As Required by Area	When COND II DC or GQ is set	repair party
24	Magazine Sprinkler Operator	1	Fire	
25	P-100 Operator	As Required	As Required	1(*16)
26	P-100 Assistant	As Required	As Required	2(*16)
27	DCRS 5 Space Isolation Detail	As Required	When Ordered	
28	Radiological Plotter^	1	Radiological Defense	0
29	Radiological Recorder^	1	Radiological Defense	0
30	Radiological CP-95 Operator^	1	Radiological Defense	0
31	Internal Monitor ^	1	All CBR Warfare	0
32	External Monitor^	1	All CBR Warfare	0
33	CBR Hoseman^	2	All CBR Warfare	0
34	CBR Scrubber^	1	All CBR Warfare	0
35	CBR Decon Station Leader^	1	All CBR Warfare	0
36	CBR Decon Station Cutter^	2	All CBR Warfare	0
37	CBR Traffic Control^	1	All CBR Warfare	0
38	CMWD System Operator^	As Required	All CBR Warfare	0

1(*30)

1 is the min number of personnel required to perform the function

*30 is the line item that can be combined with this function

^ Function of whole ship

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	Function	# of Functional Personnel Required at Condition I	When Required at Condition I	PC
1	Officer in Charge			
2	Fire Marshall			
3	Repair Party Leader	1	All	1(*5,6)
4	Scene Leader	1	All	1
5	Plotter	1	All	1(*3,6)
6	Talker	1	All	1(*3,5)
7	Messenger	1	All	1(*8)
8	Investigator	2	All	2(*7)
9	Electrician	1	All	1(*13)
10	Team Leader	1	Fire	0
11	Nozzleman	2	Fire	2(*27)
12	Hoseman	4	Fire	4(*15, 23)
13	Smoke Control / Removal	2	Fire	1(*9)
14	Boundaryman	4	Fire / Flooding	2
15	Accessman / Overhaulman	1	Fire / Flooding	1(*12, 23)
16	Dewatering	2	Damage / Flooding	2(*17,18,19, 25,26)
17	Shoring	3	Damage / Flooding	2(*16,18,19, 25, 26)
18	Pipe Patching	2	Damage / Flooding	2(*16,17,19, 25, 26)
19	Hull Patching / Plugging	2	Damage / Flooding	2(*16,17,18, 25,26)
20	Sounding	As Required	Damage / Flooding	0
21	Stretcher Bearer / First Aid	4 per BDS	Personnel Casualty	BDS
22	AFFF Station Operator	As Required	Bravo Fire	0
23	Closure Detail / Zebra Setter	As Required by Area	When COND II DC or GQ is set	2(*12, 15)
24	Magazine Sprinkler Operator	1	Fire	WEP
25	P-100 Operator	As Required	As Required	1(*16,17,18,19, 26)
26	P-100 Assistant	As Required	As Required	1(*16,17,18,19, 25)
27	DCRS 5 Space Isolation Detail	As Required	When Ordered	1(*11)
28	Radiological Plotter^	1	Radiological Defense	0
29	Radiological Recorder^	1	Radiological Defense	0
30	Radiological CP-95 Operator^	1	Radiological Defense	0
31	Internal Monitor^	1	All CBR Warfare	0
32	External Monitor^	1	All CBR Warfare	0
33	CBR Hoseman^	2	All CBR Warfare	0
34	CBR Scrubber^	1	All CBR Warfare	0
35	CBR Decon Station Leader^	1	All CBR Warfare	0
36	CBR Decon Station Cutter^	2	All CBR Warfare	0
37	CBR Traffic Control^	1	All CBR Warfare	0
38	CMWD System Operator^	As Required	All CBR Warfare	0

1(*30)

1 is the min number of personnel required to perform the function

*30 is the line item that can be combined with this function

^ Function of whole ship