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(National Headquarters Philippine Coast Guard)
139 25th Street, Port Area
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HPCG/CG-8/MSSC

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STANDING OPERATING PROCEDURES

NUMBER.....04-22

**REVISED GUIDELINES ON MARITIME CASUALTIES AND MARITIME INCIDENTS
INVESTIGATION**

I. AUTHORITY:

Section 3(j), Republic Act 9993 or Philippine Coast Guard Law of 2009 and its implementing Rules and Regulations (IRR)

II. REFERENCES:

- A. IMO Resolution MSC .255(84), adopted 16 May 2008 (Code of the International Standards and Recommended Practices for Safety Investigation into a Marine Casualty or Marine Incident).
- B. DOJ Memorandum for His Excellency, The President Re: Marine Accident Investigation and the Board of Marine Inquiry dated 22 August 2013.
- C. IMO MSC-MEPC .3/Cir.4/Rev.1 dated 18 November 2014 (Reports on Marine Casualties and Incidents: Revised harmonized reporting procedure-Reports required under SOLAS regulations 1/21 and XI-1/6, and MARPOL, Articles 8 and 12).
- D. NHPCG/CG8/MSSC Standing Operating Procedure Number 08-20 dated 15 April 2020.
- E. COMDTINST M16000.10A USCG Marine Safety Manual Volume V Investigations and Enforcement

III. PURPOSE:

To prescribe policies, procedures and responsibilities in the conduct of expeditious and impartial investigation of the cause of maritime casualty and marine incident occurred within the waters subject to the jurisdiction of the Philippines involving domestic vessel, foreign and Philippine flagged vessels.

IV. SCOPE:

- A. This SOP shall apply to concerned PCG Central Staff, Maritime Safety Services Command (MSSC), Coast Guard Districts, Maritime Casualty Investigation Service (MCIS), Maritime Casualty Investigation Board (MCIB) Maritime Casualty Investigation Team (MCIT), Maritime Safety Services Unit (MSSU), Coast Guard Stations and Sub-Stations in administering

maritime casualty and marine incident that occurs within the waters subject to the jurisdiction of the Philippines involving (a) domestic vessels, foreign and Philippine flag vessels.

- B.** In accordance with Rule 3(j) 4 of Implementing Rules and Regulations (IRR) of RA 9993, the scope of Maritime Casualty Investigation shall be separate and distinct from another form of investigation involving civil, criminal and administrative proceedings or an investigation to be conducted by the Maritime Industry Authority (MARINA), if any. The primary purpose of the investigation shall be to:
- (1) Identify the circumstances surrounding the maritime incident.
 - (2) Determine the causal and contributing factors; and
 - (3) Make appropriate recommendations and/or adopt measures to prevent the occurrence of similar incident.
- C.** A maritime casualty or incident that resulted marine pollution shall be limited to the primary purpose of investigation as prescribed in Section IV (B). Other than the said purpose, a separate investigation shall be conducted by the Marine Environmental Protection Command (MEPCOM).
- D.** A maritime casualty or incident does not include a deliberate act or omission, with the intention to cause harm to the safety of a ship, an individual or the environment. If such situation exists, this maritime casualty investigation is not applicable and shall resort to maritime security investigation.

V. DEFINITION OF TERMS:

- A. Agent** means a person engaged, in behalf of the owner, charterer or operator of a ship, or the owner of the cargo, in providing shipping services including managing arrangements of the ship being the subject of a maritime safety investigation.
- B. Causal factor** means action, omissions, events or conditions without which:
- (1) the maritime casualty or maritime incident would not have occurred; or
 - (2) adverse consequences associated with maritime casualty or maritime incident would probably not have occurred or have been serious;
 - (3) another action, omission, event or condition, associated with an outcome in (1) or (2), would probably not have occurred.
- C. Case Folder** means a folder with table of contents containing certified true copy of pertinent documents relevant to the marine casualty or incident to be used for maritime safety investigation.
- D. Draft Maritime Casualty Investigation Report** means a Maritime Safety Investigation Report, as defined in paragraph (p), completed by the Maritime Casualty Investigation Team (MCIT) or by the Maritime Casualty Investigation Board (MCIB) which has been reviewed, evaluated and submitted to O/CG-8, not yet adopted by the CPCG as "PCG Official and Final Investigation Report".

- E. Documentary Evidence** means a certified true copy documents marked with Exhibit (Upper Case Letter, Ex. Exhibit-A) in the upper right-hand corner next and below the mark Annex.
- F. Documentary Evidence Log** means the log, in a prescribed format in Annex 6 containing list of marked evidences obtained for used in maritime safety investigation.
- G. Executive Summary** means a document, prescribed in Annex-9, Appendix-C, placed next to the Cover Page and before the Table of Contents, containing a brief description of the maritime casualty or maritime incident, analysis, conclusion and safety recommendation.
- H. Factual Information** means information under Section V of the Maritime Safety Investigation Report required for GISIS reporting. The factual information is part of the GISIS MCI Module outlined in Appendix 2 of MSC-MEPC.3/Cir.4/Rev.1.
- I. Flag State** means a State whose flag a ship is entitled to fly.
- J. Generic Information Page** means a page, prescribed in Annex-9, Appendix E, in the maritime casualty investigation report next to the table of contents containing a tabulated General Information, Generic Casualty Data and External Environmental Data required for GISIS initial reporting. The Generic Information is part of the GISIS MCI Module outlined in Appendix 1 of MSC-MEPC.3/Circ.4/Rev.1.
- K. GISIS** stands for Global Integrated Shipping Information System. A system used by IMO that allows direct reporting by Member States in compliance with existing requirements and access to data compiled by the Secretariat, where, as prescribed Assembly Resolution A.1029(26) urges the Member State to specifically use GISIS reporting facilities to sustain and even enhance compliance with mandatory reporting requirements as contained in mandatory instruments to which they are Parties, thereby potentially assisting them in the context of the voluntary IMO Member State Audit Scheme (IMSAS).
- L. Initial Investigation Report** means a report of initial investigation on maritime casualty incident conducted by the Coast Guard District/Station/Sub-Station, in a message format prescribed in Annex-4, containing tabulated factual data, chronology of events, probable cause and recommendation. This Report shall immediately follow after the initial maritime casualty and incident report.
- M. Interested Party** means an organization or individual, who, as determined having significant interest, rights or legitimate expectations with respect to the outcome of maritime safety investigation.
- N. Marine Casualty Investigation Investigators' In-the-Field Job Aid MAIIF/IMO** means a detailed job aid document, outlined in Annex-7, of what to do information before, during and after the conduct of maritime casualty investigation.
- O. Maritime Casualty** means an event, or a sequence of events, that has resulted in any of the following which has occurred directly in connection with the operations of the ship:
- (1) the death of, or serious injury to, a person;
 - (2) the loss of a person from a ship
 - (3) the loss, presumed loss or abandonment of a ship
 - (4) material damage to a ship, or
 - (5) the stranding or disabling of a ship, or the involvement of a ship in a collision

- (6) material damage to marine infrastructure external to a ship, that could seriously endanger the safety of the ship, another ship or an individual; or
- (7) severe damage to the environment, or the potential for severe damage to the environment, brought about by the damage of a ship or ships.

However, a maritime incident does not include a deliberate act or omission, with the intention to cause harm to the safety of a ship, an individual or the environment.

P. Maritime Casualty and Incident Report means an initial report, containing tabulated information, action taken and intention, in a message format prescribed in Annex-1 of this SOP.

Q. Maritime Incident means an event, or sequence of events other than maritime casualty, which occurred directly in connection with the operations of a ship that endangered, or, if not corrected, would endanger the safety of the ship, its occupants or any other person or the environment. It may involve vessels which are involved in near miss incidents, or with very minor damage. However, a maritime incident does not include a deliberate act or omission, with the intention to cause harm to the safety of a ship, an individual or the environment.

R. Maritime Casualty Investigation (MCI) means an investigation or inquiry, into a marine casualty or marine incident, conducted with the objective of preventing maritime casualties and maritime incidents in the future. The investigation includes the collection of, and analysis of, evidence, the identification of causal factors and the making of safety recommendations as necessary.

S. Maritime Casualty Investigation Flow Chart means a flow chart, illustrated in Annex-10, recommended to serve as a quick guide for concerned units/offices in undertaking courses of action from the occurrence of maritime casualty or maritime incident to the conduct of maritime safety investigation and publication of maritime safety investigation report.

T. Maritime Casualty Investigation Report means a formatted report, prescribed in Annex-9, to be accomplished by MCIT as result of the maritime casualty investigation. This includes, but not limited to, the following:

- (1) A summary outlining the basic facts of the maritime casualty or maritime incident and stating whether any deaths, injuries or pollution occurred as a result.
- (2) The identity of the flag State, owners, operators, the company as identified in the safety management certificate, classification society and other certificates;
- (3) Where relevant the details of the dimension and engines of any ship involved, together with a description of the crew, work routine, and other matters, such as time served on the ship;
- (4) A narrative detailing the circumstances of the maritime casualty or maritime incident;
- (5) Analysis and comment on the causal factors including any mechanical, human, and organizational factors;
- (6) A discussion of the maritime casualty investigation's findings, including the identification of safety issues, and the maritime safety investigation's conclusion and
- (7) Where appropriate, recommendations with a view to preventing future maritime casualties and maritime incidents.

- U. Maritime Casualty Investigation Board (MCIB)** means a qualified investigation board to conduct a maritime casualty investigation on VSMC composing of chairperson (headed by the Deputy Commander, MSSC), one licensed Master Mariner, one licensed Chief Engineer, one Naval Architect, one Law Member and a Secretariat (headed by the Commander, MCIS).
- V. Maritime Casualty Investigation Team (MCIT)** means a qualified team designated to conduct interview of witnesses and collection of evidences in the event of any maritime casualty. For VSMC, they shall conduct the investigation until the team has been taken over by MCIS or the MCIB. For SMC and MI, they shall draft the MCI report and submit to C, CGD and endorsed to MSSC for review.
- W. Material or Physical Evidence** means an object that has significant value to establish a fact(s). Material or Physical evidence shall be kept in a secured storage for future use in case of reinvestigation. A picture shall be taken to form as documentary evidence.
- X. Material Damage** in relation to maritime casualty means:
- (1) damage that significantly affects the structural integrity, performance or operational characteristics of marine infrastructure or of a ship; and requires major repair or replacement of a major component or components; or
 - (2) destruction of the marine infrastructure of a ship.
- Y. Notification** means a letter, in a format prescribed in Annex-2, notifying the concerned Flag State(s) of the maritime casualty and incident involving vessel(s) registered under its flag. Concerned units, entities, organization shall be furnished with a copy of the notification.
- Z. Official and Final Investigation Report** means a maritime safety investigation report, upon endorsement, adopted by the Commandant, Philippine Coast Guard and stamped with "Official and Final Investigation Report".
- AA. Progress Report** means a follow-up report, in a message form prescribed in Annex-3, following the initial maritime casualty and incident report containing any progress or changes relating to maritime casualty and incident, in reference to initial maritime casualty and incident report.
- BB. Serious Injury** means an injury sustained by a person resulting in incapacitation where the person is unable to function normally for more than 72 hours, commencing within seven days from the date where the injury was suffered.
- CC. Serious Maritime Casualty (SMC)** means a casualty which does not qualify as a very serious casualty such as:
- (1) Fire, explosion, grounding, contact, heavy weather damage, hull cracking or suspended hull defect, etc. resulting in.
 - (2) Structural damage rendering the vessel unseaworthy, such as penetration of the hull underwater, immobilization of main engines, extensive accommodation damage etc., or
 - (3) Pollution (regardless of quantity); and/or
 - (4) A breakdown necessitating towage or shore assistance.

DD. Severe damage to the environment means damage to the environment that resulted to a major deleterious effect upon the environment.

EE. Severity of Maritime Casualty or Maritime Incident means the seriousness of maritime casualty and maritime incident categorized into Very Serious Maritime Casualty (VSMC), Serious Maritime Casualty (SMC) and Maritime Incident (MI)

FF. Substantially Interested State means:

- (1) Flag State of a ship involved in a maritime casualty or maritime incident; or
- (2) Coastal State involved in a maritime casualty or maritime incident; or
- (3) State whose environment was severely or significantly damaged by a maritime casualty (including the environment of its waters and territories recognized under international law); or
- (4) State where the consequence of a maritime casualty or maritime incident caused, or threatened, serious harm to that State or to artificial islands, installations, or structures over which it is entitled to exercise jurisdiction; or
- (5) State whose, as a result of a maritime casualty, nationals of that State lost their lives or received serious injuries; or
- (6) State that has important information at its disposal that the maritime safety investigating State(s) consider useful to the investigation; or
- (7) State that, for some other reason, establishes an interest that is considered significant to the maritime casualty investigating State (s).

GG. Very Serious Maritime Casualty (VSMC) means a maritime casualty involving the total loss of the vessel, death or severe damage to the environment.

HH. Vessel or ship means the term used interchangeably and shall mean any kind, class or type of craft or artificial contrivance capable of floating in water, designed to be used, or capable of being used as a means of water conveyances or platform;

II. Witness Statement Form means a form, prescribed in Annex-5, to be accomplished by the witness.

VI. POLICY

- A. In the event of a maritime casualty/incident, it shall be the policy of the PCG to have the same level of priority to conduct maritime casualty investigation as to the conduct of search and rescue response to any mentioned casualty/incident.
- B. Upon receipt of the maritime casualty or incident report, regardless of its severity, the CGD shall dispatch the MCIT who are qualified and trained investigators, as soon as practicable, to conduct interview of witnesses and collection of evidences regardless of the severity of the maritime casualty/incident in their respective AOR even while awaiting directives coming from CGD. As such, the CGD shall give the necessary assistance to their respective MCIT in the conduct of maritime casualty/incident investigation.
- C. The purpose of this is for the investigators to acquire accurate accounts of the witnesses through interviews and the gathering of perishable evidences. They are instances that witnesses are difficult to be located once they are already sent home and the affected vessel has already left bound to another port or has been already clean-up for repairs.

- D. For the purpose of investigation, the MCIT and MCIB are authorized to board a ship, interview witnesses, gather evidences and if necessary, the concerned Coast Guard District or Station shall hold or suspend the departure of the vessel, but shall avoid unnecessary delay.
- E. For SMC and MI, the MCIS shall render necessary technical assistance to the MCIT in the conduct of the MCI as well as in the drafting of MCI report. The MCIT shall likewise closely coordinate with MCIS for an accurate and fast submission of the MCI report. The MCIT shall submit their draft maritime casualty/incident investigation report to the CGD for review prior submission to MSSC.
- F. For VSMC, the MCIT shall collect the necessary evidences and interview the witnesses. The MCIS may take over the investigation activities of the MCIT if the need arises. Upon determining the sufficient evidence gathered and witness interview, MCIS shall recommend the convening of Maritime Casualty Investigation Board whose purpose is to have an accurate and credible investigation report being reviewed by licensed and professional individuals of the maritime industry.
- G. The Maritime Safety Services Command shall create an *ad hoc* body which is the Maritime Casualty Investigation Board (MCIB) and shall composed of the following:
- Chairperson: Deputy Commander, MSSC
 - One Licensed Master Mariner
 - One Licensed Chief Engineer
 - One Licensed Naval Architect
 - One Lawyer
 - A Secretariat
- H. MSSC shall request services of the nearest Philippine Coast Guard Auxiliary (PCGA) squadron to be members of the MCIB whose are licensed Master Mariner, licensed Chief Engineer and licensed Naval Architect. The PCGA members of the MCIB shall not have any conflict of interest when conducting any maritime casualty investigation.
- I. The CPCG, in his discretion, other than VSMC, may direct or designate a MCIB to conduct investigation on maritime casualty or maritime incident when any of the following issues is involve:
- (1) Diplomatic issue;
 - (2) Issues being investigated by SOTr;
 - (3) Issues most likely to be heard in a Congressional or Senate Hearing;
 - (4) Issues that are being followed by the media;
 - (5) Other special issues to be considered, upon determination, by the CPCG.
- J. Upon the convening of the Maritime Casualty Investigation Board, the CMCIS shall be the Head, Secretariat and shall present all evidences, witness statement and the draft maritime casualty investigation report. If necessary, coordinate the availability of the witnesses once the Board decided to interview the witnesses. The Secretariat shall prepare all the administrative and logistical requirements in coordination with Headquarters, MSSC during the convening of the said Board.

- K. The Maritime Safety Services Command shall support all administrative and logistics requirements during the convening of the said Board. Any additional requirements needed should be requested to NHPCG (Attn: CG – 8).
- L. All maritime casualty investigators including the MCIB shall have the authority to summon and interviews the witness, access evidences and review maritime casualty investigations as determined by CMSSC or by the CPCG;
- M. Investigators carrying out a maritime casualty investigation shall observe impartiality and objectivity; adopt the Casualty Investigation Code of the International Maritime Organization; to be free from direction or interference from any persons or organizations who may be affected by its outcome consistent with the principles of investigation; and observe confidentiality of the facts gathered.
- N. In case the person(s) to be investigated were brought directly from the place of maritime casualty or maritime incident to the place of domicile, the MCIT that has jurisdiction of the place of domicile shall conduct the maritime casualty investigation. However, this does not relieve the MCIT that has jurisdiction of the place of maritime casualty or maritime incident to render the necessary reports and in providing the investigation MCIT with data or information necessary in the conduct of maritime casualty investigation. Lateral coordination with MCIS and other concerned MCIT is encouraged to ensure a comprehensive investigation.
- O. The submission of duly notarized marine protest/sea protest shall be mandatory, to any person/entity responsible for the vessel, watercrafts and other water conveyances, within 24 hours from the occurrence of any maritime casualty or maritime incident.
- P. In the conduct of maritime casualty investigation involving foreign flagged vessels, the following shall be observed:
- (1) Coordination shall be made with substantially interested State(s) for their cooperation and/or participation in the conduct of Maritime Casualty Investigation, to the extent practicable. This provision shall be guided by the provision of Chapter 10, Part II (Mandatory Standards) of the Code of the International Standards and Recommended Practices for a Safety Investigation into a Maritime Casualty or Maritime Incident.
 - (2) Consultation shall be made with substantially interested State(s) to come with an agreement on which State(s) will the maritime casualty investigating State(s). Prior to reaching an agreement, or if an agreement is not reached, the maritime casualty investigation shall be conducted by the MCIT. This provision shall be guided by the provisions of Chapter 7, Part II (Mandatory Standards) of the Code of the International Standards and Recommended Practices for a Safety Investigation into a Marine Casualty or Marine Incident.
 - (3) If Substantially interested State(s) will conduct with their own separate investigation, coordination shall be made as to the timing of the conduct of investigation in order to avoid conflicting demands upon witnesses and access to evidence, where possible. This provision shall be guided by the provisions of Chapter 9, Part II (Mandatory Standards) of the Code of the International Standards and Recommended Practices for a Safety Investigation into a Marine Casualty or Marine Incident.

(4) The evidence shall be taken from the seafarer at the earliest practical opportunity and shall be allowed to return to his/her ship, or be repatriated at the earliest possible opportunity. The seafarer's right shall, at all times, be upheld including informing him the nature and basis of the maritime casualty investigation and allowing him/her for access to legal advice, regarding:

(a) any potential risk that he/she may incriminate himself/herself in any proceedings subsequent to the maritime casualty investigation;

(b) any right not to self-incriminate or to remain silent;

(c) any protection allowed to the seafarer to prevent the evidence being used against him/her provides the evidence to the maritime casualty investigation.

This provision shall be guided by the provisions of Chapter 12, Part II (Mandatory Standards) of the Code of International Standards and Recommended Practices for a Safety Investigation into a Maritime Casualty or Maritime Incident.

(5) Coordination may be made with other government agencies (e.g., Maritime Industry Authority) who might be involved with a view for parallel and/or cooperative investigation.

- Q. The Maritime Casualty Investigation Report submitted to MSSC as reviewed by MCIS or MCIB shall remain a draft report until endorsed and adopted by CPCG as the "PCG Official and Final Investigation Report".
- R. When requested, the substantially interested State shall be sent with a copy of the draft Maritime Safety Investigation Report to allow the substantially interested State to comment on the draft report within 30 days, provided that the substantially interested State will affirm that the draft report will not be circulated, nor cause to circulate, publish or give access to the draft report or any part thereof, or that the evidence included in the draft report will not be admitted in civil or criminal proceeding against a person who gave the evidence. A copy of the draft report will be sent without affirmation to the substantially interested State. When the 30 days expired without comments from the substantially interested State, the draft Maritime Casualty Investigation Report shall be endorsed for adoption by CPCG as PCG Official and Final Investigation Report.
- S. Prior endorsement for CPCG's adoption of the Maritime Casualty Investigation Report as PCG Official and Final Investigation Report, the comments of substantially interested State on the draft report shall be considered. Either acceptance or rejection of the comments in a view of having a direct impact on the nation's interest, the substantially interested State shall be notified on the manner in which the comments were addressed.
- T. All PCG Official and Final maritime casualty and incident investigation records may be disclosed in criminal, civil, disciplinary or administrative proceedings upon orders of competent courts or upon written request duly approved by the CPCG in accordance with existing rules and regulations.

- U. The Official and Final Maritime Casualty Investigation Report shall, upon approval from the CPCG, be submitted to the IMO, publish in the proper forum and be made available to the public and the shipping industry or any substantially interested State.
- V. A Maritime Casualty and Incident database/information system shall be maintained, and a Maritime Casualty and Incident Analysis Annual Report shall be rendered and publish every 15th day of January.
- W. MSSC through MCIS and MSSTI shall conduct Maritime Casualty Investigation Course to deserving and qualified PCG with priority given to MSSU personnel who shall compose the Maritime Casualty Investigation Team in their respective Area of Responsibility and shall possess all or any of the following qualifications:
 - (1) Completed shipboard Junior Billet and has experience in the conduct of maritime casualty investigation or Board of Marine Inquiry;
 - (2) Graduate of Bachelor of Science in Marine Transportation or Marine Engineering and has sea experience aboard merchant marine vessel;
 - (3) For Non-Officers with shipboard experience;
 - (4) Naval Architect, Master Mariner, Chief Mate or Chief/2nd Engineer;
 - (5) Senior Port State Control Officer;
 - (6) Lawyer
 - (7) Other PCG personnel who has interest in conducting maritime casualty investigation.
- X. Once the PCG personnel completed and finished the maritime casualty investigation course, he/she shall be listed as member of the maritime casualty investigators and shall be designated as investigator whenever a maritime casualty / incident happens in his/her area of responsibility.

VII. PROCEDURE:

A. REPORTS

- (1) Maritime Casualty and Incident Report. A maritime casualty or maritime incident shall be confirmed immediately, and a Maritime Casualty and Incident Report shall be made immediately without delay and submitted through fastest means of communication. The absence of any relevant data shall not cause the delay in rendering the Maritime Casualty and Incident Report.
- (2) Progress Report. A Progress Report, when necessary, shall be rendered, every twelve (12) hours or as soon as substantial progress was observed or new significant information is obtained.
- (3) Marine Protest. A person/entity responsible for the vessel shall be required to submit, within 24 hours following the maritime casualty or incident, a duly signed and notarized marine protest.

- (4) Initial Investigation Report. An initial investigation shall be made immediately, as soon as is reasonably practicable, following the rendition of maritime casualty and incident report. The investigation report shall be rendered immediately within 24 hours from the start of the initial investigation.
- (5) Maritime Casualty Investigation Report. The MCIR shall be conducted without necessary delay and shall be in accordance with the prescribed format and detailed description in Annex-9 containing the following:
- (1) Security Page
 - (2) Cover Page
 - (3) Executive Summary
 - (4) Table of Contents
 - (5) Generic Information Page
 - (6) Investigation Sections containing:
 - (f1) Authority to conduct an investigation;
 - (f2) Matters to be Investigated;
 - (f3) Objective of the Investigation;
 - (f4) Short Description of the Incident;
 - (f5) Factual Information (Picture of vessel involve (before and after the incident), Ship's particular, voyage data, casualty data, consequence)
 - (f6) Narrative that includes, but not limited to, Environmental Condition, Safety Regulations, Enforcement, Ship's Documents/Certification, Manning (per Certificate, Actual Manning, Capacity and Limitation of Officers and, when necessary, crew), sequence of events.
 - (f7) Analysis that includes determination of the casualty event, circumstances and causal factors, such as human factors, operational factors and management or organizational factors, of maritime casualty or maritime incident.
 - (f8) Conclusion that includes conclusive narrative of the main cause of maritime casualty or maritime incident and laying out of the causal factors such as action, omission, events or conditions without which:
 - .1 the maritime casualty or incident would not have occurred;
 - .2 adverse consequences associated with maritime or maritime incident would probably not have occurred or have been serious; and
 - .3 another action omission, event or condition, associated with an outcome in (.1) or (.2) would probably not have occurred.
 - (f9) Safety Recommendations that includes safety regulations, company/shipboard procedures, other relevant safety recommendations or actions addressed to the ship's company and relevant agency.
- (6) Other Report(s) relevant to maritime casualty or maritime incident significant for maritime casualty investigation.

B. NOTIFICATION AND COORDINATION:

- (1) The flag State (foreign flagged vessels), shipowners/company (domestic vessels) shall be notified as soon as is reasonably practicable. The Notification shall not be delayed due to lack of complete information and shall be in a format prescribed in Annex-2 containing as much of the following information as is readily available:
 - (a) Name of the ship;
 - (b) Flag State;
 - (c) IMO ship identification number;
 - (d) Nature of maritime casualty;
 - (e) Location of maritime casualty;
 - (f) Time and date of the maritime casualty;
 - (g) Consequence(s) of the maritime casualty or incident;
 - (h) Identification of any other ship involved;
 - (i) Action Taken (Brief description of action taken by PCG unit)
- (2) Designate the investigation team, coordinate with the agent, set the date and venue of maritime casualty investigation, and coordinate with the Flag State (involving foreign vessel) or shipowner/company for any arrangement in the conduct of maritime casualty investigation (Refer to Section 6(l) of this SOP)
- (3) Notify the Owner, Master of the vessel and when necessary, the MARINA and other agency for the conduct of maritime casualty investigation.

C. CONDUCT OF MARITIME CASUALTY INVESTIGATION

- (1) In the event of a maritime casualty, the MCIT shall be on standby for the interview of witnesses and evidence gathering. The CGS and CGSS shall monitor the whereabouts and the availability of the witnesses and of the vessel. The CGS or CGSS shall temporarily suspend the departure of the vessel for evidence gathering but shall avoid necessary delay.
- (2) The CGS and CGSS shall compel the person/entity responsible to the vessel to submit duly notarized marine/sea protest within 24 hours from the occurrence of any maritime casualty or incident.
- (3) The MCIT shall conduct the investigation even while awaiting orders from their respective CGDs and depending on the availability of the witnesses and the vessel. When practicable, an organizational meeting may be made prior to the conduct of maritime casualty investigation;
- (4) For maritime casualty and incident that resulted to a MARPOL incident, a competent marine environment protection personnel shall be designated member of the MCIT.
- (5) For witness interview, the MCIT shall ensure that the Witness Statement Form is filled up by the witnesses. The interview shall be recorded (audio or video) with the permission coming from the witnesses.
- (6) As appropriate, the MCIT may require those who will be investigated, including witnesses, to file duly signed sworn statement or affidavit before the MCIT. This can be used as

documentary evidence, and validate personal accounts and testimonies to obtain factual events;

- (7) For evidence gathering aboard a vessel, it shall be necessary that the investigators have made the necessary risk assessment and the use of personal protective equipment (PPE) before boarding. They shall make sure that the evidences are carefully photographed and properly handled before its removal from the site.
- (8) As much as possible, the MCIT shall make use of Voyage Data Recording (VDR), Vessel Traffic System recording, radio records, navigational and engineering logs and all vessel's documents which are vital source of information. Evidence collected shall be marked and logged in the Documentary Evidence Log.
- (9) The investigation shall be, as far as practicable, guided in accordance to Annex 6 of this SOP wherein a Job Aide for Maritime Casualty/Incident Investigation shall be used in order to have an orderly and methodical approach in the conduct of said investigation. Often a ship's master will already have drawn up a report to owners which can be used to get an overview of the events;
- (10) In case the person(s) to be investigated were brought directly from the place of maritime casualty or maritime incident to the place of domicile, it shall be guided in accordance to Section VI (N).
- (11) The MCIT shall draft the MCI report on SMC and MI. The MCIT is encourage close coordination with MCIS for technical assistance during the drafting of the report. Upon submission of the report to CGD, the CGD shall review all SMC investigation reports and may composed a Maritime Casualty Investigation Board (MCIT) on a District level with the same composition except for the Chairperson which will be the Deputy Commander, CGD and the Head, Secretariat which will be the Commander, MSSU as mentioned in Section VII (D) (2) and may enlist the assistance coming from PCGA in their AOR to become members of the said Board as long as they have no interest or connection with the vessel being investigated.
- (12) The SMC and MI investigation reports shall be forwarded to MSSC (Attn: C, MCIS) for review prior forwarding to CPCG (Attn: CG – 8).
- (13) In the event of a VSMC, the MCIT shall still be the one to conduct witness interview and evidence gathering. MCIS may take over the investigation depending on the complexity of the Maritime Casualty/Incident. Once the MCIS has determine that sufficient evidences had been collected, the required witnesses had been interviewed and a draft MCI report is ready for review, MCIS may recommend for the convening of Maritime Casualty Investigation Board (MCIB).
- (14) For the conduct of MCI for foreign-flagged vessel shall in accordance with Section VI (P) of this SOP.

D. MARITIME CASUALTY INVESTIGATION BOARD:

- (1) The Maritime Casualty Investigation Board shall convene upon the recommendation of Commander, MCIS which shall be based on the conditions and issues as indicated in Section VI.I of this SOP.
- (2) The Commander, Maritime Safety Services Command shall convene the Maritime Casualty Investigation Board (MCIB) and shall compose the following:

Deputy Commander, MSSC	- Chairperson
One Licensed Master Mariner	- Member
One Licensed Chief Engineer	- Member
One Licensed Naval Architect	- Member
One Lawyer	- Member
Commander, MCIS	- Head, Secretariat

- (3) MSSC shall request the availability of members of PCGA who are licensed Master Mariner, Chief Engineer and Naval Architect to become members of the MCIB and do not have any conflict of interest in the conduct of the maritime casualty investigation.
- (4) MCIS shall be the Secretariat of the MCIB. The Maritime Safety Services Command shall support all administrative and logistics requirements during the convening of the said Board. Any additional requirements needed should be requested to NHPCG (Attn: CG – 8).
- (5) During the start of the investigation by the MCIB, the Chairman shall have his/her opening statement presenting the members of the Board and informing the purpose of the investigation and shall present all available evidences and witness testimonies as well as the draft maritime casualty investigation report to the board for review.
- (6) The MCIB may request to personally interview the witnesses of the marine casualty incident to the Secretariat, MCIB if they see that the existing witness interviews lacks the merit needed for an accurate MCI investigation report and the Secretariat shall request the CGD the availability of the witnesses for interview.
- (7) Before interviewing the witnesses by the MCIB, the Chairman shall inform the members of the MCIB to respect the rights of the witnesses and avoid insulting or shouting the witnesses during the interview.
- (8) The MCIB through the Secretariat, MCIB shall draft the results of the investigation and submit their findings not more than seven (7) days from the convening of the MCIB. The MCI investigation report shall be signed by all members of the MCIB stating that they concurred the results of the investigation report.

E. MARITIME CASUALTY INVESTIGATION REPORT:

- (1) Maritime casualty investigation report of SMC and VSMC shall follow the prescribed format as mentioned in Section VII (A) (5) in this SOP. For MI, the maritime casualty investigation report shall follow as prescribed in Annex 1 of this SOP.

- (2) All Maritime Casualty Investigation Report submitted to MSSC as reviewed by MCIS or MCIB shall remain a draft report until endorsed and adopted by CPCG as the "PCG Official and Final Investigation Report".
- (3) For MI and SMC, the MCIT on whose AOR the incident happened shall closely coordinate with MCIS for technical assistance during the investigation especially on the drafting of the said investigation report. The MCIT shall submit the draft report to C, CGD and once approved shall be forwarded to MSSC (Attn: C, MCIS) for review and after review shall be forwarded to C, PCG (Attn: CG – 8) for its adoption as the "PCG Official and Final Investigation Report".
- (4) For VSMC, the MCI Investigation report shall be signed by all members of the MCIB stating that all members of the MCIB concurred on the said investigation report which shall be forwarded to C, PCG (Attn: CG – 8) for its adoption as the "PCG Official and Final Investigation Report".
- (5) For maritime casualty incident involving foreign-flagged vessels, when requesting comments from a Substantially Interested State its procedure shall be in accordance with Section VI (R) of this SOP.
- (6) All maritime casualty investigation reports that were adopted as the "PCG Official and Final Investigation Report" shall have a page in the investigation report with the signature of C, PCG adopting the report as "PCG Official and Final Investigation Report".
- (7) The Official and Final Investigation Report shall upon approval from CPCG be submitted to IMO, publish in proper forum and be made available to the public, shipping industry and substantially interested state.
- (8) All PCG Official and Final maritime casualty and incident investigation records may be disclosed in criminal, civil, disciplinary or administrative proceedings upon orders of competent courts or upon written request duly approved by the CPCG in accordance with existing rules and regulations.

F. TRAINING, ADMISSION AND EVALUATION OF MARITIME CASUALTY INVESTIGATORS

- (1) Maritime Safety Services Command (MSSC) through Maritime Casualty Investigation Service (MCIS) and Maritime Safety Services Training Institute (MSSTI) shall conduct Maritime Casualty Investigation Course to deserving and qualified PCG with priority given to MSSU personnel who shall compose the Maritime Casualty Investigation Team in their respective Area of Responsibility and shall possess all or any of the following qualifications:
 - (a) Completed shipboard Junior Billet and has experience in the conduct of maritime casualty investigation or Board of Marine Inquiry;
 - (b) Graduate of Bachelor of Science in Marine Transportation or Marine Engineering and has sea experience aboard merchant marine vessel;

- (c) Non-Officers with shipboard experience;
 - (d) Naval Architect, Master Mariner, Chief Mate or Chief/2nd Engineer;
 - (e) Senior Port State Control Officer;
 - (f) Lawyer
 - (g) Other PCG personnel who has interest in conducting maritime casualty investigation.
- (2) Once the PCG personnel completed and finished the maritime casualty investigation course, he/she shall be listed as member of the maritime casualty investigators and shall be designated as investigator whenever a maritime casualty / incident happens in his/her area of responsibility.
 - (3) The MSSC through MCIS and MSSTI shall, if necessary, amend the said training course framework for the further improvement of said course.
 - (4) The MCIS shall evaluate each MCI team based on their maritime casualty investigation report which they submit. Their report shall be in accordance with Para 5 of this SOP. The report should clearly show the sequence of events that lead to the casualty/incident; and the probable cause of the casualty/incident;
 - (5) MCIS shall take note the observations on the above on the respective MCIT investigation report and shall inform the observations on the submitted investigation report to each respective MCIT team which they can use to further improve future investigation reports.
 - (6) MCIS shall conduct regular MCI refresher training to all MCI team and use the submitted investigation report of respective MCI team and also the MCIB investigation reports which shall be used for case study in basic and refresher MCI training.

VIII. RESPONSIBILITIES

A. Sub-Station Commander:

- (1) Shall render the Maritime Casualty and Incident Report and Progress Report, when necessary, to the Station Commander, Info: CPCG (Attn: CG-3/CG-8)/CMSSC/CMCIS/CMSSU);
- (2) Shall secure the Marine Protest and ensure that the witnesses shall fill-up the Witness Statement Form;
- (3) When practicable, shall require the Ship's Officers and Crews, and witnesses to submit to the Sub-Station their duly signed Sworn Statement indicating their personal account on the maritime casualty or incident;
- (4) Shall conduct initial investigation and report shall be submitted to the Station Commander, without delay;

- (5) Shall be responsible in the containment and preservation of any evidence that could be used during the conduct of the investigation;
- (6) Shall prior to the conduct of maritime casualty investigation, immediately secure and submit to the Station Commander a case folder with table of contents containing reports, authenticated documents and evidences relevant to the maritime casualty or incident, such as but not limited to the following:
 - a) Documentary Evidence Log
 - b) Picture of vessel on all sides (full view)
 - c) When necessary, picture of vessel during and after the maritime casualty and maritime incident;
 - d) Maritime Casualty and Incident Report;
 - e) Progress Report (if any)
 - f) Initial Investigation Report;
 - g) Marine Protest;
 - h) Witness Statement Form;
 - i) Duly signed Sworn Statement/Affidavits;
 - j) Master's Declaration of Safe Departure;
 - k) Crew List
 - l) Passenger Manifest;
 - m) Cargo Manifest;
 - n) Cargo Securing Plan
 - o) Ships Documents and Certifications
 - p) Officers and Crew seaman book and license;
 - q) Passport of foreign national;
 - r) Medical Examination/Post Mortem Examination Report
 - s) Authenticated portion of Ship's deck and engineering logs;
 - t) Bell book;
 - u) Copy of the section of Navigational Charts used during the occurrence of Maritime Casualty and Incident;
 - v) Course recorder Chart;
 - w) Navigational workbooks;
 - x) Compass deviation logbook (if necessary);
 - y) Gyro Record (if necessary);
 - z) Maneuvering Characteristics (if necessary);
 - aa) Night Order Logbook;
 - bb) Radio Logs;
 - cc) Watch Keeping Schedule/detail;
 - dd) Shipboard working arrangement;
 - ee) Voyage Plan and Record;
 - ff) Voyage Data Recording;
 - gg) Audio or Video Recording of Witness Interviews
 - hh) Photos or Video of the Casualty
 - ii) Photos of vital controls (e.g., engine – order telegraph settings in bridge and engine room, rudder angle indicator, position of rudder, clinometer and etc.)
- (7) Shall closely support and assist the MCIT to facilitate an expeditious and impartial investigation;

- (8) Shall perform other responsibilities as Station Commander may direct for the effective implementation of this SOP;
- (9) Perform other task as the Station Commander may direct.

B. Station Commander:

- (1) Shall ensure correctness, completeness, and immediate rendering of the Maritime Casualty and Incident Report. Progress Report (if necessary) and Initial Investigation Report to Commander, Coast Guard District, INFO: CPCG (ATTN: CG3/CG-8)/CMSSC/CMCIS/CMSSU, among others.
- (2) Shall be the primary responsible in the proper and immediate conduct of initial investigation;
- (3) Shall, upon clearance/approval from the District Commander, immediately notify the Flag State (involving for foreign vessel) as regards to the VSMC and SMC without delay. May coordinate with Port State Control Center for the complete address of flag State Maritime Authority containing in the Port State Control Manual;
- (4) Shall evaluate and ensure the case folder submitted by the Sub-Station Commander has the complete relevant documents and evidences, and ensure its immediate turn-over to the MCIT;
- (5) When necessary, shall coordinate with other agency or party of substantial interest for their availability during the conduct of maritime casualty investigation;
- (6) Shall coordinate for the appearance of those involved in the maritime casualty and incident and witnesses during the conduct of maritime casualty investigation;
- (7) Shall assist the MCIT in gaining access to port, facility, vessel(s) that may aid in the conduct of investigation;
- (8) Shall, upon clearance from the District Commander, make coordination with the flag State (for VSMC and SMC involving foreign vessel) as regards to arrangement/agreement in the conduct of maritime casualty investigation, such as among others:
 - (a) the schedule of maritime casualty investigation (to be set by the Station Commander with the approval of the District Commander);
 - (b) the intention whether the flag State will conduct its own separate investigation or participate in the maritime casualty investigation;
- (9) Shall inform the MCIT of the result of coordination with the flag State prior to the intended schedule of maritime casualty investigation, even an agreement is not reach;
- (10) May notify MARINA of the arrangement with the flag State in the conduct of maritime safety investigation;
- (11) Shall support and assist the MCIT to facilitate an expeditious and impartial investigation;

- (12) Shall ensure the Sub-Station Commander's compliance to its responsibilities;
- (13) Shall perform other responsibilities as the District Commander may direct for the effective implementation of this SOP;
- (14) Perform other tasks as the District Commander may direct.

C. Commander, Maritime Safety Services Unit (MSSU)

- (1) In reference to the report of Coast Guard District and Coast Guard Station, shall render the Maritime Casualty and Incident Report, Progress Report, Initial Investigation Report to CMSSC (Attn: MS3)/CMCIS;
- (2) Shall assist the Station Commander in coordinating and gathering of evidences;
- (3) Shall provide the Station Commander with the updated address of the concerned flag state or maritime authority from the updated Port State Control Manual;
- (4) When necessary, provide the assistance of Port State Control Personnel in the conduct of coordination and investigation involving foreign flag vessel;
- (5) Shall act as Head or Member of MCIT, whichever appropriate, as the District Commander may direct;
- (6) Shall assist in the conduct of maritime casualty investigation;
- (7) Shall act as the Head, Secretariat of the District Level MCIB;
- (8) Shall monitor, secure and maintain records and reports, of all maritime casualties and incidents in the AOR;
- (9) Shall maintain a maritime casualty and maritime incident database;
- (10) Shall render a Monthly Maritime Casualties and Incidents Report to the Commander, Maritime Casualty Investigation Service;
- (11) Shall render a Maritime Casualty and Incident Analysis Annual Report to the Commander, Maritime Casualty Investigation Service every 5th day of January;
- (12) Shall perform other tasks as the CMSSC, District Commander or CMCIS may direct.

D. Maritime Casualty Investigation Team (MCIT)

- (1) Shall coordinate with the District Commander or Station Commander or both for the following:
 - (a) schedule of maritime casualty investigation, and for recommended changes, if any;
 - (b) availability of case folder, person(s) and witnesses to be investigated, including representative from other agencies, and flag State (if any);

- (2) Shall convene the maritime casualty investigation and ensure speedy (as practicable) and impartial investigation. When needed, in aid of investigation, assistance may be sought from the Station Commander for gaining access to port, vessel, facility or office(s), or availability or documentary evidence from other agency or office;
- (3) Ensure that the witness or persons to be investigated have accomplished the Witness Statement Form and have filed their duly signed sworn statement/affidavit;
- (4) Shall ensure that while the investigation is in progress, any information shall not be divulged to any person who is not part of the MCIT. When necessary, shall immediately prepare an initial press release to be used by the Public Information Officer, designated by the District Commander, with experience in dealing with media queries. The press release shall only contain information that demonstrates to be factual to the press or public;
- (5) Shall ensure the completeness of the case folder and shall gather the lacking items as mentioned in Section X(A)(6) and shall give a copy of the case folder to MCIS in case of VSMC.
- (6) Shall monitor the recovery or salvage of the affected vessel for the purpose of additional evidence gathering.
- (7) Shall submit the maritime casualty investigation report in accordance with Section VII (A) (5) of this SOP.

E. Commander, Maritime Casualty Investigation Service (MCIS):

- (1) Shall Head or provide qualified representative for evidence gathering and witness interview and support the MCIT in investigating VSMC;
- (2) Shall evaluate the submitted SMC and MI Maritime Casualty Investigation Report and submit with recommendation to CMSSC within seven (7) working days;
- (3) Shall assume as Head, Secretariat for the Maritime Casualty Investigation Board;
- (4) Shall maintain records and reports of maritime casualties and incidents;
- (5) Shall maintain a database and information system, and render a Maritime Casualty and Incident Analysis Annual Report for publication upon approval of CMSSC and CPCG;
- (6) Shall publish the adopted Maritime Casualty Investigation Report upon clearance from CMSSC and CPCG;
- (7) Shall formulate and render a Monthly Maritime Casualty Incident Report to the Commander, Maritime Safety Services Command;
- (8) Shall provide specialize training and training/seminar on Maritime Casualty Investigation for personnel of MSSC, Coast Guard Districts and other relevant PCG units;
- (9) Shall initiate the production of informative materials relevant to maritime casualties and maritime incidents and for maritime casualty investigation;

- (10) Shall periodically review the SOP for continued effectiveness through time.

F. Head Secretariat, MCIB

- (1) Shall have the custody of the case folder during a VSMC or SMC as mentioned in Section X (A)(6);
- (2) Shall coordinate with HMSSC and NHPCG for the composition and designation of PCG and PCGA members of the said Board;
- (3) Shall present the initial draft investigation report as well as all the gathered evidences during the proceedings of the MCIB;
- (4) Shall follow-up the MCIT on the status of recovery or salvage of the affected vessel for the purpose of additional evidence gathering;
- (5) Shall advise the Interested parties of their designation and rights;
- (6) Shall advise the Interested parties and the witnesses to what documents (logbooks, charts in use, blueprints, safety manual and etc.) they are required to bring;
- (7) Shall prepare the information for the Chairman's opening statement;
- (8) Shall supervise the arrangement of tables and seating, arranging the needs of the witness and Board members;
- (9) Shall arrange for staff support to handle the needs of the witness and Board members and run errands;
- (10) Shall draft each day the summary of the day's proceeding which outlines the important points of the proceedings without comment or evaluation which shall be forwarded to CMSSC and CPCG with the approval of the Chairperson, MCIB.
- (11) Shall advise and inform the Chairman, MCIB for any substantial additional expenses incurred during the proceedings.
- (12) Shall perform other tasks as the Chairman, MCIB, CMSSC and CPCG may direct.

G. District Commander:

- (1) Shall immediately render Maritime Casualty and Incident Report, Progress Report, Progress Report (if any) and Initial Investigation Report to CPCG (Attn: CG3/CG8/CGAC) Info: CMSSC/CMCIS among others, in reference to the reports of Coast Guard Station.
- (2) Shall ensure that maritime casualty investigation of maritime casualties and incidents is immediately commenced to the extent practicable and without unnecessary delay;
- (3) Shall issue appropriate Orders designating the composition of MCIT;
- (4) Shall designate a Public Information Officer to deal with the press release and media queries;

- (5) Shall arrange and provide all requirements needed by the MCIT, including safety and security, as well as to MCIS in the conduct of maritime casualty investigation for, but not limited to VSMC, SMC and MI;
- (6) Shall review, evaluate and submit the Maritime Casualty Investigation Report, in accordance with Section VII (A) (5) of this SOP, within seven (7) working days from the date of submission of MCIT;
- (7) Shall designate the Deputy Commander, CGD as the Chairperson, MCIB on the District level and Commander, MSSU as the Head, Secretariat if he/she decide to convene said Board.
- (8) Shall program corresponding funds intended for the effective implementation of this SOP;
- (9) To assume other responsibilities as the CPCG may direct.

G. Chairperson, Maritime Casualty Investigation Board

- (1) Shall be head the Maritime Casualty Investigation Board (either CGD or National level);
- (2) Shall ensure the expeditious and impartial conduct of MCI by the Maritime Casualty Investigation Board;
- (3) Shall coordinate with CCGD (in case of SMC investigation) CMSSC (in case of VSMC investigation) for the request of any additional funds needed by the MCIB;
- (4) Shall be the liaison with the cognizant Coast Guard District Commander, CMSSC and CPCG;
- (5) Shall delegate authority and assigning specific duties to the MCIB members;
- (6) Shall develop the strategy for investigation and specific lines of inquiry;
- (7) Shall develop in formally designating Interested Parties;
- (8) Shall set up the rules of conduct for the participation of the Interested Parties;
- (9) Shall conduct regular briefings;
- (10) Shall endeavor to finish and produce the draft MCI report approved by the MCIB members seven (7) days after the convening of the MCIB;
- (11) Shall other responsibilities as CMSSC and CPCG may direct;

H. Commander, Maritime Safety Services Command:

- (1) Shall review and evaluate, through the MCIS, the Maritime Casualty Investigation Report submitted by District Commander prior endorsement for adoption by the CPCG;

- (2) Shall be designate the Deputy Commander, MSSC as the Chairperson, Maritime Casualty Investigation Board.
- (3) Shall coordinate with NHPCG for the request of any additional funds needed for the conduct of investigation by MCIB;
- (4) Shall program corresponding funds intended for the effective implementation of this SOP;
- (5) Shall coordinate with NHPCG for the composition of the MCIB;
- (6) Shall be responsible for the effective implementation of this SOP;
- (7) Shall assume other responsibilities as the CPCG may direct.

I. Deputy Chief of Coast Guard Staff for Maritime Safety Services, CG – 8:

- (1) Shall, in accordance with Section VI (R) and (S) of this SOP, furnish the substantially interested State of the draft Maritime Casualty Investigation Report;
- (2) Shall facilitate the processing of maritime casualty investigation report for adoption by CPCG into a "PCG Official and Final Investigation Report". Upon adoption by CPCG, the "Investigation Report" shall be stamped marked with "PCG Official and Final Investigation Report" in the appropriate placement within the Cover Page and in the first page of the Investigation Section of the report;
- (3) Shall, upon adoption of the Maritime Casualty Investigation Report and clearance from the CPCG, direct CMSSC (Attn: CMCIS) to publish the report via Maritime Casualty and Incident Information System and/or PCG website;
- (4) Shall, in accordance with Section VII (D) (7) of this SOP, the Official and Final Maritime Casualty Investigation Report, be made available to the public and the shipping industry or any substantially interested State;
- (5) Shall, in accordance with Section VII (D) (7) of this SOP, provide the requesting interested party with a copy of PCG official and final maritime casualty and incident investigation and records;
- (6) Shall, upon adoption, disseminate the safety recommendations to relevant government agencies and shipping company;
- (7) Shall, furnish MARINA with a copy of "PCG Official and Final Maritime Safety Investigation" of every Maritime Casualty and Incident for the purpose of GISIS Reporting.
- (8) Shall facilitate the submission of "PCG Official and Final Maritime Safety Investigation Report" of VSMC to the International Maritime Organization (IMO). Official and Final Maritime Casualty Investigation Report on maritime casualty or incident other than VSMC shall be submitted to the IMO if the report contains information which may prevent or lessen the seriousness of maritime casualties or incidents in the future.

(9) Shall program corresponding funds intended for the effective implementation of this SOP.

IX. AMENDMENTS/REVISIONS:

This SOP shall be amended and/or revised upon the approval of the Honorable Secretary, DOTr.

X. RESCISSION:

This SOP rescinds HPCG/CG-8 SOP No. 03-96 dated 06 May 1996, SOP No. 06-14 dated 20 October 2014, NHPCG/CG8/MSSC SOP No. 08-20 dated 15 April 2020 and all other publications inconsistent to the provisions stated herein.

XI. EFFECTIVITY:

This SOP shall take effect upon approval.



ARTEMIO M ABU
CG ADM

Annexes:

- Annex-1 Initial Maritime Casualty and Incident Report
- Annex-2 GISIS MCI Module
- Annex-3 Notice of Maritime Casualty and Incident
- Annex-4 Progress Report
- Annex-5 Witness Statement Form
- Annex-6 Documentary Evidence Log
- Annex-7 Marine Casualty Investigation Investigators' In-the-Field Job Aid MAIIF/IMO
- Annex-8 Maritime Casualty Investigation Report



PHILIPPINE COAST GUARD MESSAGE FORM			
CALL SIGN	MESSAGE NUMBER	DATE-GRP-SG	TRANSMITTING INSTRNS
FM: TO: CPCG (ATTN:CG3/COMCEN/CG8/CMSSC) INFO: CMCIS/CGPAO		DRFTD BY:	
		APPRVD BY:	
		RLSD BY:	
SECURITY CLASSIFICATION		PRECEDENCE:	

1. UNCLAS X CITE _____ X MARITIME CASUALTY AND INCIDENT REPORT ON (CASUALTY EVENT) INVOLVING (NAME OF VESSEL(S) CLN

2. INITIAL DATA CLN (EXAMPLE BELOW IF MARITIME CASUALTY INVOLVES TWO OR MORE VESSELS)

1	NAME OF VESSEL		
2	FLAG		
3	IMO NR/OFFICIAL NR		
4	CASUALTY EVENT	VSMC/SMC/MI	VSMC/SMC/MI
5	LOCATION OF MARINE CASUALTY		
6	DATE/TIME OF MARINE CASUALTY		
7	NR OF SERIOUSLY INJURED OR DEATH		
8	CONSEQUENCES OF MARITIME CASUALTY TO PEOPLE, PROPERTY AND/OR ENVIRONMENT		

3. SHORT DESCRIPTION OF THE INCIDENT CLN

4. ACTION TAKEN CLN

5. INTENTION CLN

- A. CONTINUE TO CONDUCT SAR OPNS
- B. WILL CONDUCT INITIAL INVESTIGATION
- C. THIS UNIT SHALL IMMEDIATELY NOTIFY FLAG STATE (IF INVOLVING FOREIGN VESSEL(S))

6. PROGRESS REPORT TO FOLLOW X

**GISIS MARINE CASUALTIES AND INCIDENTS MODULE
(GISIS MCI MODULE)**

Annex MSC – MEPSC.3/Circ.4/Rev.1 dated 18 November 2014
(Revised harmonized reporting procedures – reports required under
SOLAS Regulations i/21 and xi – 1/6 and MARPOL, Articles 8 and 12)

APPENDIX 1

GENERIC INFORMATION

General

Field number	Field Description	Field value type
.1*	Marine safety investigation state	See table 1
.2	Number of ship/s involved	Number
.3	Action Taken	Text
.4	Safety recommendation focus (loop for more than one safety recommendation)	See table 2 (multi-choice)
.5	Safety recommendation acceptance	Y/N/Partial
.6	Safety recommendation	Text

Generic casualty data

.1	Summary of Events	Text
.2	Date of initial marine casualty or marine incident (local)	Numbers
.3	Time of initial marine casualty or marine incident (local)	Numbers
.4	Position of initial marine casualty or marine incident - latitude	Numbers
.5	Position of initial marine casualty or marine incident - longitude	Numbers
.6	Location of initial marine casualty or marine incident	See table 3
.7	Overall occurrence designated casualty event	See table 4
.8	Overall occurrence severity	See table 5

External environmental data

.1	Sea state	See table 6
.2	Wind force	See table 7
.3	Natural light	See table 8
.4	Visibility	See table 9
.5	Type of weather	See table 10
.6	Ice	See table 11

APPENDIX 2

FACTUAL INFORMATION (Relating to each ship involved)

1 Ship Particular

.1*	IMO number	Number/Auto
.2*	Name of Ship	Text/Auto
.3	Call sign	Text/Auto
.4	MMSI number	Number/Auto
.5*	Flag State	Auto
.6*	Type of ship (drop list to include high speed craft)	Auto
.7	Gross tonnage	Auto
.8	Length overall	Auto
.9	Classification society	Auto
.10	Registered shipowner	Auto
.11	Ship's company	Auto
.12	Year of build	Auto
.13	Deadweight	Auto
.14	Hull material	Auto
.15	Hull construction	Auto
.16	Propulsion type	Auto
.17	Type of bunkers	See table 13
.18	Number of crew on the ship's certificate	Number
.19	Number of passenger/s on the ship's certificate	Number

2 Voyage data

.1	Type of cargo	Text
.2	Package dangerous goods or marine pollutants on board	Y/N/U
.3	Number of crew on board	Number
.4	Number of passenger/s on board	Number
.5	Number of other person on board	Number

3 Casualty data

.1	Casualty event (loop for more than one casualty event)	See table 4
.2	Casualty event severity	See table 5
.3	Ship operation	See table 12 (multi-choice)
.4	Under pilotage	Y/N/U
.5	GMDSS used	Y/N/U
.6	Life-saving appliances used	Y/N/U
.7	Ship abandoned	Y/N/U
.8	VDR /S – VDR fitted	Y/N/U
.9	VDR /S – VDR information available	Y/N/U
.10	VDR/S – VDR information downloaded	Y/N/U
.11	VDR/S – VDR information useable	Y/N/U

4 Consequences

.1	Number of dead or missing crew	Number
.2	Number of dead or missing passenger/s	Number
.3	Number of other dead or missing persons	Number
.4	Number of crew seriously injured	Number
.5	Number of passengers seriously injured	Number

.6	Number of other persons seriously injured	Number
.7	Total loss of ship	Y/N/U
.8	Material damage to ship	Y/N/U
.9	Breach of hull causing flooding	Y/N/U
.10	Ship unfit to proceed to sea	Y/N/U
.11	Third party damage (including non-ship source pollution)	Text
.12	Ship pollution – oil cargo type quantity	See table 13 (multi-choice)
.13	Ship pollution – oil bunkers type quantity	See table 13 (multi-choice)
.14	Ship pollution – chemicals in bulk pollution category and quantity	See table 15 (multi-choice)
.15	Ship pollution – packaged dangerous goods and marine pollutants type and pollutants type and quantity lost overboard	See table 14

APPENDIX 3

CASUALTY ANALYSIS DATA (relating to each ship involved)

For each casualty event

.1	Accident event (loop for more than one accident event)	See table 16
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For each "human erroneous action" accident event

.1	Subject – age	Number
.2	Subject – gender	M/F/U
.3	Subject – nationality	See table 1
.4	Subject – rank	See table 17
.5	Subject – time at sea	Number
.6	Subject – time in present rank	Number
.7	Subject – time held current qualification	Number
.8	Subject - Certificate of competency (type)	Drop down (STCW/Others)
.9	Subject – State issuing certificate of competency	See table 1
.10	Subject – time served with current employer	Number
.11	Subject – time with related experience	Number
.12	Subject – duration of handover	Number
.13	Subject – lack of relevant training	See table 18 (multi-choice)
.14	Subject – hours of rest in last 24 hours	Number
.15	Subject – hours of rest in last 7 days	Number
.16	Subject – number of rest periods in last 24 hours	Number
.17	Subject – longest rest period in last 24 hours	Number
.18	Subject – hours of sleep in last 24 hours	Number
.19	Subject – hours of sleep in last 7 days	Number
.20	Subject – time of duty before marine casualty or marine incident	Number
.21	Subject – time since last sleep period before marine casualty or marine incident	Number
.22	Subject – watchkeeping pattern (drop down list: 4 on/8 off or 6 on/6 off, or 12 on/12 off, or others)	Y/N/U
.23	Subject – time served on board ship up to occurrence/continuous service	Number
.24	Task operation	See table 12
.25	Description of accident event	Text
.26	Error type	See table 19

.27	Temporary related contributing factors	See table 20 (multi-choice)
.28	Permanent related contributing factors	See table 21 (multi-choice)
.29	Operational contributing factors	See table 22 (multi-choice)
.30	Management contributing factors	See table 23 (multi-choice)

For each "equipment failure" accidental event

.1	Subject – equipment systems	See table 24
.2	Subject – equipment type	Text
.3	Type of equipment failure	See table 25
.4	Description of accident event	Text
.5	Number of other person/s on board	See table 22 (multi-choice)
.6	Management contributing factors	See table 23 (multi-choice)

For each "hazardous material effect" accident event

.1	Subject – material type	See table 26
.2	Type of effect	See table 27
.3	Description of accident event	Text

For each "environmental effect" accidental event

.1	Subject – phenomenon	See table 28
.2	Description of accident event	Text

For each "external agencies" accidental events

.1	Subject – system	See table 29
.2	Task affected	See table 30
.3	Description accident event	Text
.4	Operational contributing factors	See table 22 (multi-choice)
.5	Management contributing factors	See table 23 (multi-choice)

APPENDIX 4

SUPPLEMENTARY INFORMATION

1 If “package marine dangerous goods of marine pollution on board” (Field at appendix 2.2.2) – then complete the following appendix data.

- 1.1 Cargo(es) involved
 - 1.1.1 Proper Shipping Name: UN Number: IMO Hazard Class
 - 1.1.2 Name and address of manufacturer or consignor or consignee
 - 1.1.3 Type of packaging/container
 - 1.1.4 Quantity and condition of goods
 - 1.1.5 Stowage/securing arrangements
- 1.2 Pollution – goods lost overboard (yes/no):
If yes:
 - Lost goods floated or sank;
 - Lost goods released from packaging (yes/no);

2 If “breach of hull causing flooding” (Field at appendix 2.4.9) AND “flooding/foundering” casualty event (Field at appendix 2.3.1) AND 25 meters or more “length overall” (Field at appendix 2.1.8) – then complete the following appendix 4 data.

- 2.1 Nature of damage
- 2.2 Length between perpendiculars
- 2.3 Moulded breadth B
- 2.4 Moulded depth D (to bulkhead deck in passenger ships and freeboard deck in non-passenger ships or the uppermost completed deck if bulkhead or freeboard deck not specified):
- 2.5 Draught before damage d:
- 2.6 Ship side (port/starboard/bottom):
- 2.7 Damage position (fore ship/after body/cargo hold/rudder/engine room/other)
- 2.8 Position (height) with reference to WL
- 2.9 Damage type (below and above/above but not below/below but not above/within – the physical limits of the ship structure)
- 2.10 Distance from AP to center of damage X
- 2.11 Distance from base line to the lower point of damage Z
- 2.12 Length of l: Height of h: Penetration d:
- 2.13 damage l1: damage h1: damage d1
- 2.14 dd mid: dd fore: dd aft: (draughts after damage)
- 2.15 dd mid calc:
- 2.16 Hole in ship: Y/N Struck ship: Y/N
Ship to ship collision: Y/N Striking ship: Y/N
(If damage extends above bulk/freeboard deck, additional dimensional should be given for the part located below this deck, these being marked with suffix “1”)
- 2.17 Speed of damaged ship at time of impact in knots
- 2.18 Speed of second ship at time of impact in knots
- 2.19 Angle of encounter:
- 2.20 Did the ship sink: Y/N
If so:
 - 2.20.1 Time taken to sink and manner of sinking:
- 2.21 Appropriation of breached compartment(s) (e.g. machinery room, cargo hold, etc.)
- 2.22 Type and quantity of cargo in damaged compartment, if any:
- 2.23 Were there any special circumstances which influenced the results of damage (e.g. open watertight doors, manholes, side scuttles or pipes, fractures, etc.)?
- 2.24 Position of watertight bulkheads in vicinity of damage (distance from AP to each of them):
- 2.25 How many compartments flooded?
- 2.26 Was there a double bottom in the damaged area? Y/N
If so:

- 2.26.1 Indicate whether the inner bottom was breached:
- 2.27 Separate penetration from the bulbous bow? Y/N
- 2.28 Transverse subdivision bulkhead damaged? Y/N
- 2.29 Collision bulkhead damaged? Y/N
- 2.30 Damage assessment
- 2.31 Any information considered useful

3 If “Capsizing/listing” casualty event (Field at appendix 2.3.1) OR “total loss of ship” (Field at appendix 2.4.7) AND 25 meters (15 meters for fishing vessels) or more in “length overall” (Field at appendix 2.1.8) – then complete the following data.

- 3.1 Length between perpendiculars Lpp:
- 3.2 Moulded breadth B:
- 3.3 Moulded depth D (to bulkhead deck in passenger ships and freeboard deck in non-passenger ships, or to the uppermost completed deck if bulkhead or freeboard deck are not specified)
- 3.4 Draught amidships to assigned loadline or subdivision line:
- 3.5 Service conditions (light or loaded, with appropriate percentage of cargo, stores, fuel and passengers):
- 3.6 Disposition of cargo:
- 3.7 Stowage factor of cargo
- 3.8 Type and quantity of deck cargo, if any:
- 3.9 Quantity of water ballast, if any
- 3.10 Wave length:
- 3.11 Wave height:
- 3.12 Direction of wind relative to ship’s head (degrees):
- 3.13 Direction of waves relative to ship’s head (degrees):
- 3.14 Speed of ship at time of casualty:
- 3.15 Name, length and height of enclosed superstructure and deckhouses above deck to which D was measured:
- 3.16 Bilge keels: width: longitudinal extent:
- 3.17 Depth of bar keel, if any:
- 3.18 Was water trapped on deck?

If so:

- 3.19 Indicate the extent:
- 3.20 Were all vulnerable openings effectively closed at time of casualty?
- 3.21 Was the ship under action of helm at time of casualty?
- 3.22 Were any special instructions relative to this ship in existence concerning the maintenance of stability, e.g. filling tanks, etc.?
- 3.23 Were any voyage limits and/or weather restrictions imposed for the ship?

For ship in fully loaded homogeneous arrival condition (with 10% stores, fuel, etc.):

- 3.24 Draught (amidships):
- 3.25 Displacement:
- 3.26 Center of gravity above moulded base line:
- 3.27 Metacentric height (uncorrected):
- 3.28 Distance between the transverse metacenter and center of buoyancy:
- 3.29 Reduction of GM due to any surface of liquids:
- 3.30 Block coefficient of fineness of displacement:
- 3.31 Coefficient of fineness of midship section:
- 3.32 Coefficient of fineness of waterplane:
- 3.33 Height of center of buoyance above moulded base line:
- 3.34 Lateral area of ship’s profile (including erections, etc.) exposed to wind:
- 3.35 Distance between center of lateral area of ship’s profile exposed to wind and corresponding waterline:
- 3.36 Estimated rolling period (P-S-P):
- 3.37 Rated amplitude of roll (maximum):
- 3.38 Angle of hell for immersion of uppermost continuous deck:

- 3.39 Righting levers based on center of gravity corrected for any free surfaces, for the following angles of heel: 0°, 10°, 20°, 30°, 40°, 50°, 60°, 70°, 80°, 90°
- 3.40 Maximum righting lever:
- 3.41 Angle of maximum stability:
- 3.42 Angle of vanishing stability:

For ship in condition at time of loss:

- 3.43 Draught (amidships):
- 3.44 Displacement:
- 3.45 Center of gravity above moulded base line:
- 3.46 Metacentric height (uncorrected):
- 3.47 Distance between the transverse metacenter and center of buoyancy:
- 3.48 Reduction in GM due to any free surface of liquids:
- 3.49 Block coefficient of fineness of displacement:
- 3.50 Coefficient of fineness of midship section:
- 3.51 Coefficient of fineness of waterplane:
- 3.52 Height of center of buoyancy above moulded base line:
- 3.53 Lateral area of ship's profile (including erections, etc.) exposed to wind:
- 3.54 Distance between center of lateral area of ship's profile exposed to wind and corresponding waterline:
- 3.55 Estimated rolling period (P-S-P):
- 3.56 Rated amplitude of roll (maximum):
- 3.57 Angle of heel for immersion of uppermost continuous deck:
- 3.58 Righting levers based on center of gravity corrected for any free surfaces, for the following angles of heel: 0°, 10°, 20°, 30°, 40°, 50°, 60°, 70°, 80°, 90°
- 3.59 Maximum righting lever:
- 3.60 Angle of maximum stability:
- 3.61 Angle of vanishing stability:
- 3.62 Lightship displacement:
- 3.63 Center of gravity above moulded base line:

(It is desirable to attach a sketch of statistical stability curves, drawn for both the below loading conditions, using the following scales: 20 mm for every 10° angle of inclination, 10 mm (or 20 mm) for every 0.1 meter of righting lever):

- 4 **If “fire/explosion” casualty event (Field at appendix 2.3.1) AND “very serious” casualty severity (Field at appendix 2.3.2) – then complete the following data:**
- 4.1 Wind direction:
- 4.2 Part of ship where fire broke out:
- 4.3 Explain how persons on board were alerted:
- 4.4 Means by which fire was initially detected: Fixed fire detection system/by ship's crew or passenger/not known
- 4.5 Briefly, describe the performance of structural fire protection (fire resisting and fire retarding bulkheads, doors, decks, etc.) with respect to containment and extinguishment of any fire in the space of origin, protection of means of escape or access for firefighting, adequacy of structural fire protection.
- 4.6 Ship's portable fire-extinguishing equipment used (foam, dry chemical, CO₂, water, etc.)
- 4.7 Fixed fire-extinguishing installation at site of origin of fire (specify the type), adjacent areas (specify the type)
- 4.8 Were fixed fire-extinguishing systems used in an attempt to extinguish the fire?
- 4.9 Did the use of fixed fire-extinguishing systems contribute to the extinguishment of the fire?
- 4.10 Briefly explain the action taken by the crew to contain, control and suppress the fire and explosion in the space of origin.
- 4.11 Was outside assistance provided (e.g. fire department, other ship, etc.)?
- If so:
- 4.12 What equipment was used?

- 4.13 Determine qualification and training of all ship's crew involved in the firefighting operations.
- 4.14 Report on whether company or industry procedures, including hot work procedures, were in place and relevant to the operation concerned.
- 4.15 If the procedures were in place, were they correctly implemented?
- 4.16 Time taken to fight fire from first alarm to control the fire, once controlled, to extinguish the fire.
- 4.17 Total duration of fire:
- 4.18 Damage caused by fire: loss of life or injuries, to the cargo, to the ship, release of pollutants.
- 4.19 Was there an adequate supply of air on board for self-contained breathing apparatus or was outside assistance needed to supply such air?

5 If "GMDSS used" (Field at appendix 2.3.5) – then complete following data.

- 5.1 GMDSS sea area or sea areas for which radio equipment was installed.
- 5.2 GMDSS sea area:
- 5.3 Description of distress and safety radio communication, including particular of means of communication (radiotelegraphy, radiotelephony, INMARSAT SES, DSC, EPIRB) and frequencies used for distress alert by ship, distress relay by RCC, SAR coordinating communications, use of alarm signal, contents of distress message, RCC(s), ships, coast station or coast earth stations which acknowledged distress message (state time and position), language difficulties.
- 5.4 If the ship was abandoned, description of distress radio communications and location signals from survival craft.
- 5.5 If a satellite EPIRB or EPIRB was used for alerting and/or locating survivors, give details (frequency, type of activation, etc.) and which LUT/CES or coast station received the alerting signal.
- 5.6 Description of on-scene/radio communication including surface/air communication.

6 If "oil cargo" (2.4.12) OR "oil bunker" OR "chemicals in bulk" (Field 2.4.14) OR "packed dangerous goods and marine pollutants" (Field 2.4.15) "quantity spilled" or "lost overboard" total 50 tonnes or more – then complete following data.

Direct Natural Resources Damage

Loss of wildlife	
.1	Impact on Birds
.2	Impact on marine mammals
.3	Impact on fish
.4	Impact on the marine life, including invertebrates
Loss of fisheries	
.1	Fin fish
.2	Shellfish
.3	Fish farming
Damage to the marine environment	
Damage to the shore environment	
Habitat Degradation	
.1	Soft habitats (salt marshes, mangroves, mudflats)
.2	Shoreline (beaches)
.3	Rocky coasts/reefs, including coral
.1	No action
.2	Pending
.3	Action taken i.e.

7 If "life-saving appliance used" (Field at appendix 2.3.6) – then complete the following data.

- 7.1 Wave height (observed):
- 7.2 Sea temperature °C:
- 7.3 Air temperature °C:
- 7.4 Warm climate: Y/N

- 7.5 Inflatable liferaft involved?
 If so:
 7.5.1 Capacity: POB Davit launched: Y/N
- 7.6 Marine Evacuation System (MES) involved?
 If so:
 7.6.1 Vertical? Side:
 7.7 Lifeboat involved?
 If so:
 7.7.1 Capacity: POB: Davit launched? Free fall?
- 7.8 Buoyant apparatus involved?
 7.9 Ship's rescue boat involved?
 7.10 Launching apparatus involved?
 7.10.1 Capacity: POB:
 7.11 Immersion suit used?
 7.12 Lifejacket used?
 7.13 Personal Floatation Device (PFD) other than lifejacket used?
 7.14 Anti-exposure suit used?
 7.15 Lifebuoy used?
 7.16 Reason for deployment of life-saving appliance emergency evacuation/abandonment/crew training/deployment as required by regulations/approval trials (give details)

APPENDIX 5

FIELD VALUE OPTION TABLES

Table 1

Marine safety investigating State/Administration/Nationality

As per GISIS nomenclatures

Table 2

Safety recommendation focus

.1	Carriage
.2	Electrical Installation
.3	Fire protection/fire-fighting equipment
.4	Human Factor
.5	Life-saving equipment
.6	Machinery
.7	Operational practice
.8	Radio installation
.9	Safety of navigation
.10	Sea worthiness
.11	Stability
.12	Other
.13	No safety recommendation

Table 3

Location of initial marine casualty or marine incident

.1	At berth
.2	Anchorage
.3	Port
.4	Port approach
.5	Inland waters

.6	Canal
.7	River
.8	Archipelagos
.9	Coastal waters
.10	Open sea
.11	Unknown
.12	Strait/channel
.13	Traffic separation scheme
.14	Offshore installation

Table 4
Casualty event

.1	Collision	Own ship not under way
.2		With multiple ships
.3		With other ship
.4	Grounding	While drifting
.5		While under power
.6	Contact	With fixed object
.7		With floating object
.8		With flying object
.9	Fire/Explosion	Fire
.10		Explosion
.11	Hull Failure	
.12	Loss of control	Loss of containment
.13		Loss of directional power
.14		Loss of electrical power
.15		Loss of propulsion power
.16	Ship/equipment damage	
.17	Capsize/listing	Capsize
.18		Listing
.19	Flooding/foundering	Flooding
.20		Foundering
.21	Ship missing	
.22	Occupational accident	Body movement under or with physical stress (generally leading to an internal injury)
.23		Body movement without any physical stress (generally leading to an external injury)
.24		Breakage, bursting, splitting, fall or collapse of material agent
.25		Overflow, overturn, leak, flow, vaporization, emission of material agent
.26		Electrical problems, explosion, fire
.27		Loss of control of machine, means of transport or handling equipment, hand-held tool, object, animal
.28		Shock, fright, violence, aggression, threat, presence
.29		Slipping, stumbling, falling of person overboard
.30		Slipping, stumbling, falling of a person to a lower level

.31		Slipping, stumbling, falling of a person on the same level
.32		Others
.33	Other	
.34	Unknown	

**Table 5
Casualty event severity**

.1	Very serious marine casualty
.2	Marine casualty
.3	Marine incident

**Table 6
Sea State**

.1	0 – Calm glassy – (0m)
.2	1 – Calm rippled – (0 – 0.1m)
.3	2 – Smooth – (0.1 – 0.5m)
.4	3 – Slight – (0.5 – 1.25m)
.5	4 – Moderate – (1.25 – 2.5m)
.6	5 – Rough - (2.5 – 4m)
.7	6 – Very rough – (4 – 6m)
.8	7 – High – (6 – 9m)
.9	8 – Very High – (9 – 14m)
.10	9 – Phenomenal – (+14m)
.11	Unknown

**Table 7
Wind Force**

.1	0 – Calm – knot (0 – 1) m/s (0 – 1)
.2	1 – Light air – knot (1 – 3) m/s (1 – 2)
.3	2 – Light breeze – knot (4 – 6) m/s (2 – 3)
.4	3 – Gentle breeze – knot (7 – 10) m/s (4 – 5)
.5	4 – Moderate breeze – knot (11 – 16) m/s (6 – 8)
.6	5 – Fresh breeze – knot (17 – 21) m/s (9 – 11)
.7	6 – Strong breeze – knot (22 – 27) m/s (11 – 14)
.8	7 – Near gale – knot (28 – 33) m/s (14 – 17)
.9	8 – Gale – knot (34 – 40) m/s (17 – 21)
.10	9 – Strong gale – knot (41 – 47) m/s (21 – 24)
.11	10 – Storm – knot (48 – 55) m/s (25 – 28)
.12	11 – Violent Storm – knot (56 – 63) m/s (29 – 32)
.13	12 – Hurricane – knot (+64) m/s (+33)
.14	Beaufort Scale Unknown

**Table 8
Natural Light**

.1	Daylight
.2	Twilight
.3	Night
.4	Unknown

**Table 9
Visibility**

.1	Very poor – Vis < 0.5nm
.2	Poor – $0.5 \leq \text{Vis} < 2\text{nm}$
.3	Moderate – $2 \leq \text{Vis} < 5\text{nm}$
.4	Good – $5 \leq \text{Vis} < 25\text{nm}$
.5	Very Good – Vis > 25nm
.6	Unknown

**Table 10
Type of Weather**

.1	Clear/partly cloudy
.2	Overcast
.3	Fog
.4	Rain
.5	Snow
.6	Humidity

**Table 11
Ice**

.1	Thickness (m) (drop down list)
.2	Percentage coverage (drop down list)
.3	Type of ice (multi-year, 1 st year, etc.)

**Table 12
Ship operation/Tas operation**

.1	Being towed		
.2	Emergency		
.3	Fishing	Gutting/handling/stowing fish	
.4		Preparing	
.5		Shooting/hauling fishing gear	
.6		Towing fishing gear	
.7		Normal service	Alongside/moored/anchored
.8		Ballasting/deballasting	
.9		Berthing	
.10.		Bunkering	
.11		Cleaning/washing tanks	
.12		Dropping/hosting anchor	
.13		Embarking/disembarking people	Displacement mode
.14			Non – displacement mode
.15		On passage	Transitional mode
.16			
.17		Loading	
.18		Maintenance	
.19		Maneuvering	
.20		Open/close door, hatches etc.	
.21		Repairing	
.22		Starting/stopping engine	
.23		Taking stores	
.24		Turning	
.25		Under pilotage	
.26		Unloading/discharging cargo	

.27		Water ballast exchange	
.28	Sailing	Beam reaching	
.29		Broad reaching	
.30		Close reaching	
.31		Cruising using engine	
.32		Head to wind	
.33		On the port/starboard tack	
.34		Running	
.35		Set and lower a sail	
.36		Tacking	
.37			Gybing
.38	Special service	Disposal of residues/slops	
.39		Dredging	
.40		Drifting	
.41		Drilling	
.42		Gas freeing	
.43		Hove-to/dodging	
.44		Ice breaking	
.45		Idle, off-hire	
.46		In icebreaker assistance	
.47		Offshore support	
.48		Inerting	
.49		On watch	
.50		Replenishment at sea operations	
.51		Rowing/paddling	
.52		Ship-to-ship transfer of cargo	
.53		Towing/pushing	
.54		Trials/drills/tests	
.55		Under tow/push	
.56		Anchor handling	
.57	Other		
.58	Unknown		

**Table 13
Oil cargo/Bunker type & quality**

	Dropdown list from MARPOL Annex 1, Appendix 1, applies to each item below	Quantity
.1	Asphalt solutions	
.2	Oils	
.3	Distillates	
.4	Gas Oil	
.5	Gasoline blending stocks	
.6	Gasolines	
.7	Jet fuels	
.8	Naphta	
.9	Unknown	
.10	None	

**Table 14
Dangerous goods in package form**

	Proper Shipping Name	UN Number	Quantity lost overboard
.1			
.2			
.3			
.4.1			

.4.2			
.4.3			
.5.1			
.5.2			

Table 15
Chemical in bulk in pollution category

		Quantity
1	Category X	
2	Category Y	
3	Category Z	
4	Category OS	
5	Unknown	
6	None	

Table 16
Accident Event

1	Human erroneous action
2	Equipment failure
3	Hazardous material effect
4	Environmental effect
5	External agencies
6	Unknown

Table 17
Rank

1	Master
2	Chief Mate
3	Deck Officer
4	Chief engineer officer
5	Second engineer officer
6	Engineer officer
7	Trainee cadet
8	Radio personnel
9	Rating deck
10	Rating engine
11	Others
12	Electro-technical officer
13	Electro-technical rating
14	Skipper
15	Other crew member
16	Pilot
17	Other non-crew member
18	Unknown

Table 18
Relevant training

1	Basic training	Personal survival techniques
2		Fire prevention and firefighting
3		Elementary first aid
4		Personal safety

5		Basic safety familiarization
6		Ship specific familiarization
7	Advance training	Advanced firefighting
8		Proficiency in survival craft and rescue boat
9		Proficiency in fast rescue boat
10		Shore-based firefighting
11	Specific training	Automatic Radar Plotting Aids
12		Bridge team management
13		Crane operation
14		Crew resource management
15		ECDIS
16		GMDSS
17		Oil tanker specialized
18		Chemical tanker specialized
19		Integrated bridge
20		Liquefied gas tanker specialized
21		Passenger ship familiarization
22		Passenger ship safety
23		Passenger ship crowd management
24		Passenger ship crisis management
25		Passenger ship safety, cargo safety, etc.
26		Ship/engine control
27		Tanker familiarization
28		Towing operations
29		Dynamic positioning
30	Training not according to national law	
31	Other	
32	None	
33	Unknown	

Table 19
Error type

1	Observation
2	Interpretation
3	Planning/intention
4	Action

Table 20
Temporary related contributing factors (select all that applies)

1	Distraction
2	Fatigue
3	Fear
4	Inattention
5	Memory failure
6	Performance variability
7	Physical or physiological stress
8	Psychological stress
9	Alcohol or drugs
10	Non-prescription/Prescription medication
11	Other (specify)

**Table 21
Permanent related contributing factors**

1	Cognitive bias
2	Cognitive style
3	Functional impairment

**Table 22
Operational contributing factors**

Social environment

1	Less than adequate labour-management relations
2	Less than adequate communications
3	Language problem
4	Social and cultural barriers and conflicts
5	Person-to-person conflict/animosity
6	Inadequate safety/risk awareness
7	Inappropriate or adventure behavior/component
8	Resistance to change

Supervision

9	Lack of coordination of tasks
10	Inadequate work preparation
11	Inadequate briefing/instruction
12	Lack of resources
13	Poor supervision
14	Inadequate work procedures
15	Conflicting orders/priorities
16	Inappropriate peer pressure
17	

Manning

18	Long working periods, excessive overtime
19	Frequent change of watch schedule
20	Inappropriate person assigned
21	Too high work load/flow work load
22	Idleness, waiting
23	Low job satisfaction, monotony
24	Lack of responsibility for own job
25	Inadequate manning

Personnel

26	Lack of motivation/morale
27	Lack of skill
28	Lack of knowledge
29	Less than adequate physical/physiological capability
30	Less than adequate mental and psychological state

Workplace conditioning

31	Anthropometric factors, dimensions
32	Lack of information, inadequate presented information
33	Display design, controls
34	Inadequate illumination
35	Hazardous/disorderly workplace

Internal environment

36	Noise, vibration
37	Sea motion, acceleration
38	Temperature, humidity
39	Toxic substance, other health hazards
40	Lack of oxygen

Inadequate tools and equipment

41	Right tools and equipment unavailable
42	Less than adequate assessment of needs and risks
43	Inadequate tool or aid
44	Inadequate standards or specifications
45	Use of wrong equipment

Maintenance

46	Failure not detected during maintenance
47	Lack of maintenance
48	Inadequate maintenance
49	Improper performance of maintenance/repair
50	System out of operation

Navigational/Geographical constraints

51	High traffic density hinders control
52	Hindrances in the seaway
53	Restricted fairway/channel

Emergency response

54	Contingency plans not followed
55	Inadequate/lack of training
56	Lack of initiative to deal with emergencies
57	Training ignored
58	Inadequate control of life-saving equipment
59	Lack of command and control
60	Inadequate/erroneous information to passengers

Table 23
Management/organizational contributing factors

Impact on business climate

1	Economic conditions
2	Market change
3	Bad relation with other organization
4	Extreme competition

Organizational and general management

5	Policy, ethical values
6	Focus on liability and punishment
7	Communication policy
8	Standard set by example
9	Company loyalty and commitment
10	Response to feedback from employees
11	Ship undermanned
12	Support from land organization
13	Too wide control span
14	Authoritarian command style

15	Unclear roles and responsibility
16	Cross-pressure from schedule and economy
17	Lack of communication and coordination

Operations management

18	Pressure to keep schedule and costs
19	Inadequate procedures and checklists
20	No review of critical tasks/operations
21	Management training

Safety and environmental management

22	Critical system and cargo documentation
23	Inspection/internal audits
24	Follow-up of non-conformities
25	Incident reporting, analysis, improvement
26	Work instruction
27	Concern for quality improvement
28	Inadequate promotion of safety
29	Less than adequate safety plan and programme
30	Less than adequate formal safety assessment, risk analysis

Occupational health management

31	Information about health risks
32	Personal protective equipment
33	Health control of personnel
34	Workplace inspections
35	Substandard hygiene on board
36	Less than adequate medical services provided
37	Follow-up of programmes and plans
38	No off-the-job safety policy

Personnel management

39	Hiring and selection policy
40	Inadequate training programme
41	Selection/training of officers
42	Control with the use of overtime
43	Opportunity for advancement
44	High turnover, lack of continuity

System acquisition

45	Substandard components
46	Substandard contractors
47	Control of contractors
48	Verification of contract requirement
49	Inadequate testing

Design

50	Deviation from standards/specifications
51	Inappropriate regulations
52	Design error
53	Less than adequate design verification
54	Less than adequate system review and evaluation
55	Less than adequate change management

Maintenance policy

56	Lack of priority
----	------------------

57	Lack competent repair personnel
58	Less than adequate planning
59	Lack of follow-up and compliance check

Emergency preparedness

60	Emergency plans
61	Emergency procedures
62	Management training
63	Crisis handling
64	Maintenance of life-saving equipment
65	Inadequate firefighting equipment
66	Emergency training programme
67	Life-saving equipment
68	Lack of decision support
69	Lack of warning systems

Regulatory activities

70	Regulatory procedures
71	Regulatory standards
72	Regulation
73	Inspection and survey
74	Monitoring
75	Surveillance
76	Audit
77	Checks

Table 24
Equipment system

1	Structural failure	Deformation (bulges, deflections, buckling)
2		Fractured (breaks or incipient cracks)
3		Penetrated, holed
4	Containment failure	
5	Physical binding or jamming	
6	Vibration	
7	Fails to remain (in position)	
8	Fails to open	
9	Fails to close	
10	Fails open	
11	Fails closed	
12	Internal leakage	
13	External leakage	
14	Fails out of tolerance (high)	
15	Fails out of tolerance (low)	
16	Inadvertent operation	
17	Intermittent operation	
18	Erratic operation	
19	Erroneous indication	
20	Restricted flow	
21	False actuation	
22	Fails to stop	
23	Fails to start	
24	Fails to switch	
25	Premature operation	
26	Delayed operation	
27	Erroneous input (increased)	

28	Erroneous input (decreased)	
29	Erroneous output (increased)	
30	Erroneous output (decreased)	
31	Loss of input	
32	Loss of output	
33	Shorted (electrical)	
34	Open (Electrical)	
35	Leakage (Electrical)	
36	Other	
37	Unknown	

Table 26
Hazardous material type

1	Cargo liquefaction	
2	Cargo shifting	
3	Chemical reaction	Corrosive effects
4		Dust effects
5		Explosive mixture
6		Poisoning
7		Flammable mixture
8		Radiation
9		Spontaneous combustion
10		Toxic fumes or gas
11	Insufficient stability	
12	Overflow/leak/escape	
13	Oxygenation	
14	Structural damage	
15	Other	
16	Unknown	

Table 28
Environmental effect phenomenon

1	Wind
2	Wave
3	Current
4	Tide
5	Shallow water
6	Channel effect
7	Hydrostatic head
8	Light
9	Whiteout
10	Fog, haze, smoke
11	Rain, snow, hail
12	Ice
13	Icing
14	Debris
15	Multi-phenomenon
16	Other ship interference
17	Uncharted underwater obstruction
18	Rope/net (own ship's)
19	Rope/net (other ship's or source unknown)
20	Natural disaster/tsunami
21	Other
22	Unknown

Table 29
External agencies system

1	Coastal VTS
2	Navigation aids
3	Navigation sign, buoy, etc.
4	Pilot service
5	Pollution response
6	Port VTS
7	SAR Center
8	SAR craft
9	Towing service
10	Other
11	Unknown

Table 30
External agencies task affected

1	Monitoring
2	Coordination
3	Communication
4	Planning
5	Operation
6	Other
7	Unknown

COAST GUARD DISTRICT HEADING

NOTIFICATION OF MARITIME CASUALTY AND INCIDENT

(Reference: Chapter 5, Part II (Mandatory Standards) of the Casualty Investigation Code)

Date:

CONSULATE OF PANAMA
ATTN: Panama Maritime Authority
Panama Embassy
11th Floor, National Life Insurance Building
6762 Ayala Avenue, Makati City
1200 Philippines

Dear Sir/Ma'am:

1. Please be notified of the collision, fire on board, grounding, etc.) occurred at vicinity waters 2 NM off, Iloilo City, Iloilo, Philippines involving vessel(s) under your flag, with the following information:

1	NAME OF VESSEL		
2	FLAG		
3	IMO NR/OFFICIAL NR		
4	NATURE OF MARITIME CASUALTY		
5	LOCATION OF MARINE CASUALTY		
6	DATE/TIME OF MARINE CASUALTY		
7	NR OF SERIOUSLY INJURED OR DEATH		
8	CONSEQUENCES OF MARITIME CASUALTY TO PEOPLE, PROPERTY AND/OR ENVIRONMENT		

2. We look forward to hearing from your good office as this maritime casualty and incident will soon be investigated by the Maritime Casualty Investigation Team (MCIT) to be designated by the Philippine Coast Guard.

3. For your information and reference.

Very truly yours,

JUAN DELA CRUZ
CG COMMO
Commander, Coast Guard District _____

c/c:

CPCG (Attn: DCGS for Maritime Safety, CG – 8)
Commander, Maritime Safety Services Command
Commander, Maritime Casualty Investigation Service

Maritime Industry Authority (MARINA)
Master of the Vessel
Owner of the Vessel

OUTGOING DISPATCH
HEADQUARTERS MARITIME SAFETY SERVICES COMMAND

MSG NR-(0__)-P-(DATE/TIME/MONTH/YEAR)

FM: DRAFTED BY:
TO: CPCG (ATTN: CG3/COMCEN/CG8)/CMSSC APPROVED BY:
INFO: CMCIS/CCGPAO/ RELEASED BY:

- BT... UNCLAS X CITE _____ X PROGRESS REPORT NR _____
1. REF CITE _____ RE MARITIME CASUALTY AND INCIDENT REPORT ON (CASUALTY EVENT)
INVOLVING (NAME OF VESSEL) X
2. (STATE ANY PROGRESS, ADDITIONAL INFORMATION OR CHANGES RELATING TO ABOVE
REFERENCES) X
3. STATE ANY UPDATE (EX. ONGOING SAR OPNS, ETC.) X
4. FOR INFO AND REF X
- ... BT

WITNESS STATEMENT FORM

Name:	Age:	Sex:	Job Title:
Nationality:	Status:		
Telephone No.	Home Address:		
Location at Time of Accident:			
Location of Accident:			
Please fully describe the accident sequence from the start to finish (use additional paper if needed):			
Please fully describe the work and condition in progress leading up to the accident (use additional paper as needed):			
What was your role in the accident sequence?			
What conditions influenced the accident (weather, time of day, equipment malfunctions, etc.)?			
What do you think caused the accident?			
How could the accident have been prevented?			
Please list other possible witnesses:			
Additional comments/observations:			
Signature:			Date:

Introduction to the Job Aid

This Job Aid's primary function is to provide in-the-field guidance for new investigators in the performance of their duties. It provides a comprehensive bullet point check list but there is no expectation that investigators will need to complete every step for every case as each incident is unique in its investigative requirements.

The guidance is extracted from, or based upon, information contained in these three principal source documents:

1. The Marine Accident Investigators' International Forum's (MAIIF's) Investigation Manual. (available at www.maiif.org) (MIM)
2. IMO Res. MSC.255(84) The Code of the International Standards and Recommended Practices for a Safety Investigation into a Marine Casualty or Marine Incident (CIC)
3. IMO Res. A.1075(28) Guidelines to assist Investigators in the Implementation of the Casualty Investigation Code (IG)

New safety investigators should be familiar with the contents of these three documents before going into the field. This Job Aid acts as an aide memoire of the necessary actions and considerations at each stage of the investigation. If there is any doubt about what is required the appropriate source document, which is referenced in the text as MIM, CIC or IG, should be consulted.

The Job Aid covers the investigatory stages up to and including the field phase. The source documents should be referred to for detailed guidance on the later investigatory stages of analysis, reporting and the formation of safety recommendations.

The Job Aid covers the stages in chronological order and its sections are colour coded to make it easy to use in the field.

1.	Actions on Notification	
2.	Preparing to go on Site	
3.	Arriving on Site/Site Management	
4.	Evidence Collection	
5.	Preliminary Analysis	
	Annex 1 - SHELL	
	Annex 2 - Areas to be Examined	

2 Job Aid - Actions on Notification

2.1 Gather information

Gather information to be able to classify the accident, assess its significance and decide on appropriate response.

2.1.1 Potential sources of information

- Flag State(s) and coastal States involved (contact details available through the IMO);
- 24-hour contacts for the investigating body in each Member State (GISIS or MAIIF website);
- National authorities involved, e.g. maritime Administration, coastguard, port authorities, police (inc. VTS), and other emergency services;
- Ship and company (contact details from Sea-web, SiReNaC, EQUASIS);
- VDR, ECDIS, GPS information resources, e.g. MAIIF/MAIB VDR Resource;
- AIS information sources, e.g. AISLive, SafeSeaNet;
- Environmental/hydrology conditions – National Meteorological Offices;
- Marine casualty information database(s), e.g. GISIS, EMCIP or national database;
- IMO Codes/Conventions/Regulations;
- Nautical publications, e.g. almanacs, charts, tidal data, pilot books;
- Media – monitor any media coverage of accident and possibly record

2.1.2 Typical information required

- Source of notification;
- Time and date of notification;
- Time and date of marine casualty or incident;
- The name of the ship(s), ship type, and its flag State;
- Name and contact details of owners and operators, the ship(s), the shipping company and other points of contact as may be applicable;
- Name and contact details of ship agents, if applicable;
- The IMO or ship number;
- The nature of the marine casualty;
- The location of the marine casualty, including latitude and longitude;
- The number of any seriously injured, missing or deceased persons;
- Consequences of the casualty to individuals, property and the environment;
- A brief description of the casualty event(s);
- The identification of any other ship or structure involved;
- Each ship's condition and intended movements;
- Contact details of anyone with information about the casualty;

- Details of VDR/SVDR, where fitted, and if the VDR data has been saved;
- The weather conditions on site;
- Contact information for the competent Authority of any Substantially Interested State, and their investigation body if applicable;
- Contact information and action taken by local first responders;
- Contact information for cargo details and location, e.g. loading company.

2.2 Consider level of inquiry

Is casualty a Very Serious Casualty (Definition CI Code 2.22)?

- YES
- NO

Decide:

- Marine Safety Investigation to be conducted
- Decide on level of investigation and or appropriate response– consider:
 - The seriousness of the marine casualty or incident;
 - The type of ship and/or cargo involved;
 - The potential safety value that may be gained by conducting an investigation;
 - The public profile of the casualty or incident;
 - Whether the casualty or incident is part of an identifiable trend, e.g. from GISIS database analysis;
 - The potential (as opposed to actual) consequences of the casualty or incident;
 - The extent of resources available and projected to be available in the event of conflicting priorities, including the extent of any investigation backlog;
 - Any risks associated with not investigating;
 - Serious injuries occurring to crew and/or passengers and/or third parties;
 - The pollution of environmentally sensitive areas;
 - Ships subject to significant structural damage;
 - The disruption, or potential disruption, of major port operations or other activities;
 - Whether another administration will be investigating.
- **Marine Safety Investigation;**
- **More information needed (Preliminary Assessment); or,**
- **No investigation necessary (MIM 1.5)**

2.3 Notify others

Notify other Substantially Interested States (SISs)(Definition CI Code 2.20) and Interested Parties (IPs) (definition CI Code 2.7)

2.3.1 SISs

The flag State (s) of the vessel(s) involved and/or the coastal State has an obligation to notify other SiSs (CI Code Ch. 5) with as much of the following information as is available:

- flag State(s) of the ship(s);
- IMO/identification number(s);
- nature of the marine casualty;
- location of the marine casualty;
- date and time of casualty;
- number of seriously injured or deceased persons (and nationalities);
- consequences of the marine casualty to people, property and/or environment;

THEN: Discuss and decide which State will be the Marine Safety Investigating State (CIC Ch.7)

2.3.2 Interested parties

If safety investigation is to be conducted inform the master, owner and agent of the ship(s) involved (CI Code Ch.20) as soon as practicable of:

- the casualty or incident under investigation;
- the time and place at which the investigation will commence;
- the name and contact details of the investigation authority;
- the relevant details of the underpinning legislation;
- their rights and obligations;
- the rights and obligations of the investigating State(s);

Early and regular contact with the Next of Kin is recommended (MIM 2.1.9). Good practice to establish a single point of contact with NoK.

Identify other interested parties and notify them if appropriate (MIM 1.6.4), for example:

- Flag and port State regulators, surveyors, enforcers;
- Police or other judicial authority;
- Search and Rescue/emergency response authorities;
- Port authority;
- P&I Club surveyors and lawyers;
- Classification Society;
- Lawyers representing cargo interests;
- Lawyers representing individual crew members and salvors;
- Industry representatives, e.g. fishing;
- Equipment manufacturers;
- Maritime training centres and organizations;
- Seafarers or other maritime unions

2.3.3 Superiors – press office – media

Ensure superior officers are aware of the actions being taken with respect to the safety investigation and consider whether a press release would be beneficial. (MIM 2.1.8):

A typical press release might contain:

- What happened;
- Where it happened;
- When it happened;
- What the immediate consequences were;
- What can still be expected;
- Launch of an investigation;
- Time and location of any press conference.

3 Job Aid - Preparing to Go on Site

3.1 Forming the Investigation Team

If resources allow it is always better to have at least two investigators in the team. To decide on the make-up of the team consider:

- Resources available
- Size and relative importance of investigation
- Necessary speed of response
- Complexities of investigation including:
 - Number of ships involved
 - Number of witnesses/interviewees involved
 - Difficulties associated with site, location
 - Number of locations (interviewees, ships)
 - Different aspects of investigation (deck, engine, stability)
- Need for specialist expertise (human factors, naval architecture, interpretation, technical analysis, recorder (VDR) specialists)
- Media interest – the possible need for dedicated media liaison

3.2 Evidence Preservation

3.2.1 Preserve the Site (MIM 1.7)

If possible and practicable, bearing in mind possible SAR and pollution prevention activities, the condition of the investigation site should be preserved until the arrival of the investigating team. Contact other interested parties to request assistance. Consider:

- The master and crew of the ship(s);
- The ship manager/owner/agent;
- Maritime administration inspectors/surveyors;
- Local police or fire service personnel;
- Harbour authority representatives;
- Coastguard and rescue authorities;
- Salvors.

3.2.2 Preserve the Evidence (MIM 1.7)

Identify perishable evidence and take steps to ensure that it is preserved. Consider, in particular:

3.2.3 Electronic

- Voyage Data Recorders (MIM 1.7.2)
 - Identify from ship owners or from ship's crew, type and model of VDR;
 - Use MAIIF/MAIB online VDR web resource;
 - Gain advice from VDR manufacturer;
 - **Instruct master to take appropriate steps to save data;**
 - Consider saving VDR data from witness ships.
- Electronic Chart Display and Information System (ECDIS;
 - Instruct master to take appropriate action to preserve data;
- ECS if fitted/used
- GPS Plotter
- CCTV cameras (on board and ashore);
- VTS radar and VHF recordings;
- Coastguard radar, VHF and AIS recordings.

3.2.4 Human

- Contact shipowner/manager, agent or master to ensure witnesses/interviewees remain available.

3.2.5 Documentary

- Contact ship to ensure charts, logbooks and other records remain unaltered.

3.2.6 Photographs

- Photographs accident site/scene by shipboard staff/others

Health & Safety Risk Assessment (MIM 1.3.7.1, 2.3; IG 5.3.1.2)

Consider, and if necessary mitigate, foreseeable risks facing the investigation team, including:

- Travel to location/site
 - Security considerations
 - Driver fatigue
 - Vaccinations
 - Sunscreen
 - Warm/Cold weather clothing
 - Access to site/ship
 - Ship at sea
 - Boat travel
 - Helicopter travel
 - Ship in port
 - Ladders
 - Tides
 - On ship
 - Ladders
 - Lighting
 - Enclosed space entry
 - Aloft or overside access if required
- Physical hazards
 - Condition of ship/accident site
 - Stability
 - Fire damage
 - Structural damage
 - Engine room – lighting, floor plates, noise
 - Condition of cargo
 - Hazardous cargo
 - Stability of cargo
- Chemical hazards
 - Substances hazardous to health
 - Bio hazards/pathogens
 - Blood
 - Other body fluids
 - Other
- Radiological hazards
- Psychological hazards
 - Bodies
 - Contact with grieving people

3.3 Equip the Team

Ensure investigation team has correct PPE and investigation equipment:

3.3.1 PPE

Consider:

- high-visibility and protective waterproof jacket;
- steel toe-capped, non-slip working boots;
- safety helmet with fitted ear protectors;
- safety goggles/glasses;
- high-visibility vest;
- automatic inflatable lifejacket;
- working gloves;
- overalls (reusable and disposable types);
- dust mask;
- latex type gloves for forensic evidence collection;
- waterproof trousers;

3.3.2 Investigation Equipment

Consider:

- safety torch;
- first aid/medical kit;
- mobile telephone;
- VDR downloading equipment;
- chart or map of area
- digital camera with video function;
- steel tape measure; laser measuring device
- digital voice recorder;
- laptop computer;
- measuring and sampling equipment - sample containers;
- spare batteries and other equipment accessories;
- note book and pen/pencil;
- oxygen /HS2/CO2 analyser with in-date test certification
- personal escape hood, to enable evacuation from confined space
- a basic tool kit should be considered when physical evidence removal is expected
- Evidence tags (numbered and/or bar coded)
- Forms – receipt for evidence taken

3.4 Logistics

Consider:

- Travel documentation - passports
- Tickets
- Visas
- Obligatory vaccinations
- Foreign exchange
- Accommodation
- Emergency contact information
- Hire car/local transport arrangements in port/place
- Road/City maps
- Establishing a rendezvous/base

4 Job Aid – Arriving on Site/ Site Management

4.1 H&S Dynamic Risk assessment (MIM 2.3; IG 5.3.3)

At accident site review risk assessments and take mitigating action as necessary, including:

- Access to site/ship
 - Ship at sea
 - Boat travel
 - Helicopter travel
 - Ship in port
 - Ladders
 - Tides
 - On ship
 - Ladders
 - Lighting
 - Enclosed space entry
 - Aloft or overside access if required
- Physical hazards
 - Condition of ship/accident site
 - Stability
 - Fire damage
 - Structural damage
 - Engine room – lighting, floor plates
 - Condition of cargo
 - Hazardous cargo
 - Stability of cargo
- Chemical hazards
 - Substances hazardous to health
- Bio hazards/pathogens
 - Blood
 - Other body fluids
 - Other
- Radiological hazards
- Psychological hazards
 - Bodies
 - Contact with grieving people
- Establish 'buddy' system – look after each other

4.2 Meeting Key People – Coordinating/Cooperating (IG 5.3.2)

There can be many different stakeholders involved in the aftermath of a marine casualty or incident, each with their own legitimate interests and responsibilities. Coordination at the casualty site is vital to make sure that the evidence collection is successful. To this end:

If boarding a working ship FIRST explain your role and requirements to the Master and seek his/her assistance as necessary.

Arrange a meeting with representatives from other substantially interested States (SISs), to discuss (IG 5.4):

- The sharing of knowledge
- Developing an investigation plan
- Delegation of investigation tasks
- Identification of additional help from specialists
- Legal powers

Identify other key stakeholders and arrange a coordination meeting to explain (MIM 2.1.7):

- Objectives
- Extent of Cooperation
- Legal powers
- Procedure and priority for interviews
- Procedure and priority for evidence collection
- Arrangements for updating on progress

4.3 Initial Site Survey (MIM 2.2.3, IG 5.6)

Walk through accident scene/site and:

- Ask for photographs taken earlier by shipboard staff/others
- Photograph scene
- Make written and voice notes
- Make sketches and diagrams
- Note positions of controls and switches
- Note position and use of emergency equipment
- Note extent of damage
- Establish what has changed since time of accident

4.4 Dealing with the media

If you are asked for information/interview. TAKE CONTROL

- Introduce yourself.
- Ask for their name, phone number, outlet and deadline.
- Ask how you can help them and what type of information they need.
- If they want an interview, ask if it is taped, live, on site or in studio.

SET LIMITS AND NEGOTIATE

- Tell the media what you can talk about and explain the parameters of your expertise.
- Tell the media up front how much time you will have to speak with them.
- Propose an interview time and location that is convenient for you and your schedule.
- Negotiate if your proposal does not work for the journalist.
- Do not agree to speak off the record—there is no such thing.

KEEP INTERVIEWS SIMPLE

- Tell them if you are investigating.
- Explain your job and your role in the investigation.
- Explain the mandate of the investigating organization.
- Explain the standard investigative process.
- Tell them the facts about the accident.
- Tell them you cannot speculate about the causes of the accident at this stage.
- Tell them you are gathering the facts.
- Explain that you will need to analyze the facts before you will know what happened.

BE YOURSELF

- Use plain language, no jargon.
- Speak slowly.
- Explain technical terms if used.
- Be courteous and accessible

PRESERVE THE INTEGRITY OF THE INVESTIGATING ORGANIZATION

- Protect the privacy rights of individuals.
- Protect confidential information (for example, other government organizations, operators, manufacturers).
- Never talk about matters that are before the courts.

5 Job Aid – Evidence Collection

5.1 General Aide Memoire - SHELL

When collecting evidence for a human factors investigation the use of the acronym SHELL is recommended to ensure that all factors that might have affected human performance are examined. (Annex 1 and MIM 3.1.4)

Use SHELL - Consider:

- Software (The information and support systems guiding people)
 - checklists,
 - manuals,
 - publications,
 - procedures,
 - regulatory requirements,
 - training,
 - education,
 - charts.
- Hardware (The ships, facilities, machinery, cargo, equipment, and material people work with)
 - Control station design
 - Navigational instruments
 - Bridge design
 - Ship design
 - Tools and equipment being used
 - Displays
 - Machinery being operated
 - Alarms
- Environment (The internal and external environment and the safety environment or culture in which the people were working)
 - External environment
 - Wind
 - Cloud cover
 - Precipitation
 - Visibility
 - Sea conditions
 - Ice
 - Internal environment
 - Temperature
 - Ventilation
 -
 - Lighting
 - Noise
 - Vibration
 - Safety environment or culture
- Liveware (The people involved and their interaction with each other)
 - The key people - their physical and mental capability to do the work they were tasked to do
 - Physical fitness, height, reach, weight, age
 - General health, fatigue, stress, alcohol, drugs
 - Knowledge, training, aptitude, attitude, personality
 - Interpersonal conflicts, financial problems, family problems.
 - The other people that the key people were interacting with
 - Communication, cultural and language differences
 - Pilot/master interaction
 - Bridge resource management
 - Supervision
 - Task assignment
 - Bridge engine room interaction
 - Crew interactions
 - Shore management

5.2 Evidence Collection - Human

5.2.1 Fair Treatment (MIM 2.1.10)

When collecting evidence from the people involved in the accident or from those who have information for the investigation, remember:

- Guidelines on the Fair Treatment of Seafarers (Res A.987(24))
 - Respect basic human rights
 - Investigate expeditiously
 - Allow seafarer repatriation as soon as possible
- Casualty Investigation Code (Res MSC.255(84))
 - Inform seafarer on nature and basis of investigation
 - Give access to legal advice

5.2.2 Identify Witnesses/Interviewees (MIM 3.5.2)

Identify:

- Key witnesses (those who played an active role in accident)
- Eye witnesses (those that saw something)
- Other crew and company personnel who can supply background information
- Port or Rescue service personnel
- Equipment designers/manufacturers
- Others

5.2.3 Plan interviews (MIM 3.5.1, 3.5.2)

Consider:

- Order of interviews (who first)
- A location for the interviews
- Preparing the location, seating , writing table, refreshments
- Ensuring that there is little or no disturbance
- Who will conduct interview and the 'team' size
- The roles of the interviewers
- Collecting relevant background and documentary information before the interviews
- Broad topic areas to be discussed with each witness/interviewee (See Annex 2)
- Is an interpreter required? (MIM 3.5.7. 3.5.8)
- Be aware of possible cultural differences

5.2.4 Conduct Interviews (MIM 3.5.4)

Remember:

- Develop a rapport from the start
 - Introduce yourself as a seafarer etc.
 - Be polite
 - Behave in a natural manner
 - Keep interruption to minimum
 - Develop a friendly conversation
 - Display sincere interest
 - Frequently summarise the information being given
- Respond to the particular needs of the interviewee
- Ask permission (if necessary) to use audio recorder
- Use cognitive interview techniques for cooperative eyewitnesses (MIM 3.5.6) to help them remember more details.
 - Start with free recall of events
 - Recreate the context
 - Picture the scene
 - Reverse order recall
- Do use:
 - Open questions
 - Specific questions to obtain detailed information

- Closed questions to clarify a particular point
- Indirect questions to obtain personal information
- Do not use:
 - Leading questions
 - Hypothetical questions
- Remain impartial – do not judge the interviewee

A detailed list of topic areas to be raised and information to be gained in different accident scenarios is included in **Annex 2**

5.3 Evidence Collection – Physical (MIM 2.4.2)

Consider:

- Equipment
- Tools
- Materials
- Details of structural damage
- Pre- and post-accident positions of accident-related elements
- Scattered debris
- Patterns, parts, and properties of physical items associated with the accident.
- FluidRemember:
- Sketch and map position of debris, equipment, injured persons etc
- Photograph physical evidence in situ
- Survey and inspect physical evidence before removing it
- Document and log removal of evidence

5.4 Evidence Collection – Documentary

Consider:

There are numerous documents kept aboard a ship which may be valuable in determining the facts surrounding an incident. The investigators should consider examining the following shipboard documents (when applicable):

Articles of Agreement

- Bar records – daily purchases – voyage receipts, etc.
- Bell Books (Bridge and Engine-room)
- Bridge Logbook (other than the official logbook)
- Captain's Night Orders
- Captain's Standing Orders
- Cargo Orders Book (like the Captain's Night Orders but issued by the Chief Mate regarding cargo operations)
- Course recorder
- Compass/gyro error log
- Crew list and crew Merchant Mariners' Credentials, including state pilots' licenses.
- Crew qualifications
- Current certificates
- Charts and record of chart corrections
- Chief Engineer's Standing Orders
- Deck Logbook
- Declaration of Inspection

- Echo Sounder Chart;
- Engine-room Log Book
- Engine telegraph logger
- Instruction manuals, drawings
- ISM Code certification
- ISM Documentation including: (MIM 2.4.3)
 - Familiarization training (ISM Code 6.3);
 - Training in support of the SMS to be identified and provided (ISM Code 6.5);
 - Information and language of ISM Code (ISM Code 6.6);
 - Plans, instructions and check lists for the safety of the ship and pollution prevention (ISM Code 7.0);
 - Emergency preparedness (ISM Code 8.0);
 - Reporting non-conforming incidents (ISM Code 9.1);
 - Corrective action (ISM Code 9.2);
 - Maintenance (ISM Code 10.1);
 - Critical equipment (ISM Code 10.3);
 - Documentation (ISM Code 11.0);
 - Record of internal audits (ISM Code 12.3).
- Maintenance manuals
- Maintenance record
- Master-Pilot conference card (typically held by the pilot)
- Notes kept by deck officers regarding cargo operations, etc., and by oilers regarding their rounds
- Oil Record Books for cargo and bunker.
- Oil Transfer Procedures
- Passenger list
- Personal logbooks (typically for deck and engine officers only)
- Pilot notes, trip sheets, and voyage/passage/pilotage plans
- Publications (nautical and others)
- Port log, and log abstract
- Radio Log
- Ship's statutory certificates/any conditions of class
- Ship's register
- Ship Reporting Records
- Ship Response Plans, garbage plans, etc.
- Ship Manoeuvring Characteristics
- Statement of facts/reports of accident/incident
- Voyage/passage plan
- Weather Log/printouts

Remember:

- Photograph documents using digital camera
- If removing documents ensure evidence log and evidential trail are maintained (MIM 2.4.7)
- Where possible obtain electronic (digital) versions of documents (e.g. SMS procedures and PMS records)

5.5 Evidence Collection – Electronic

Consider:

- Voyage Data Recorder (MIM 2.4.4)
 - Ensure VDR data has been saved
 - Retrieve the data – seek guidance if necessary from:
 - MAIB/MAIIF web resource (MAIIF members)
 - VDR manufacturer/service agent

Consider also:

- Other electronic evidence; (MIM 2.4.6)
 - Electronic Chart Display and Information Systems (ECDIS);
 - Electronic charting systems;
 - GPS devices;
 - AIS transponders;
 - Radars;
 - Engine management systems;
 - Fire protection systems;
 - Communications systems;
 - Security (CCTV) cameras;
 - Electronic log books;
 - Planned maintenance and safety management system records.
 - Personal computers
 - Cargo loading/stowage computers
 - Ship's stability computers
 - Alarm systems

Remember:

- The safety investigator has custody of the VDR data but the ship owner 'owns' it (MSC/Circ. 1024). Copy data and supply copy to ship owner.
- Log all actions taken in interrogating, downloading, copying and retrieving electronic evidence to provide full evidential trail.
- If you don't understand the computers/instrumentation, seek specialist help.

6 Preliminary Analysis (MIM 4.2.5, IG 5.11)

Evidence needs to be analysed as it is collected to find gaps and to ensure that all aspects of interest are covered.

6.1 Stage 1 - Sequence of events (MIM 4.3.1)

Start to compile a time line of events (MIM 4.2.5.3, IG 2.1) from the moment the first information is received. Build on it throughout the evidence gathering phase.

Consider:

Remember:

- Initial reports (inc. coastguard reports)
- VDR,
- GPS
- ECDIS or ECS
- AIS
- CCTV
- Course recorders
- Engine monitoring systems/logs
- Human evidence from interviews
- Log books
- VTS and CG VHF and radar recordings
- The times used must all be on same time base
- Each event describes a single discrete happening
- Describe event precisely
- Give each event a date and time
- Identify gaps in the events and seek more evidence to fill them
- The event lines describes "WHAT" happened

6.2 Stage 2 - Identify 'accident events' (MIM 4.2.5.3, IG 2.1)

To discover 'HOW' a casualty occurred. Consider:

Remember:

- Applying systematic approach (MIM 4.3.2, IG 5.11)
- Each event in turn asking question - Is this BOTH significant and inappropriate?
- 'Accident events' are those events in the sequence of events that were critical in the lead up to the casualty
- An accident event needs to be inappropriate in the context of what was happening and what was known at the precise time of the event in question.
- Accurately identifying the 'accident events' is the single most important stage in the analysis process

6.3 Stage 3 - Analyze 'accident events' (MIM 4.3.3)

To discover "WHY" the accident events occurred. Consider:

Remember:

- For each 'accident event' asking
 - 'Why?' the event occurred
 - Which risk controls or safety barriers failed to work?
 - What should have been in place to stop the event occurring?
- You should analysis in depth asking the questions though several layers of responsibility to uncover:
 - Human and technical failure mechanisms
 - Operational contributing factors
 - Management and organizational contributing factors

7 Annex 1

7.1 SHELL

Software, Hardware, Environment & Liveware

- Software:** The information and support systems guiding people. Software elements include checklists, manuals, publications, procedures, regulatory requirements, training, education, maps, and charts.
- Hardware:** The ships, facilities, machinery, cargo, equipment, and material people work with. Hardware elements include all machinery, gear, electronics, switches, controls, and displays.
- Environment:** The internal and marine environment in which people work. Environment elements include the internal environment such as workplace environment, room temperature, ventilation, lighting, pitching and yawing, and the marine environment such as sea state, wind, ice, precipitation, and visibility.
- Liveware:** The people themselves. Liveware elements include all of the people involved in the accident both directly and indirectly.

The SHEL model is typically depicted graphically to display not only the four categories or components of the maritime transportation system, but also the relationships or "interfaces" between the elements and the people (liveware) at the heart of the model. In this diagram:

H is Hardware
S is Software
E is Environment
L is Liveware



The rough edges between the components in the SHEL diagram are symbolic of the fact that the **mismatch** between an individual and these components is important. These possible mismatches warrant special attention by the marine investigator because mismatches in the system may point out safety deficiencies. Examples of mismatches between a person and other components include:

- **Person to Person (liveware-liveware) Mismatches:** Mismatches between people and other people include voice communications, working language, phraseology, speech rate, readback/hearback, briefings, personal interactions, crew coordination, and non-verbal cues such as hand signals.
- **Person to Policy & Procedures (liveware-software) Mismatches:** Mismatches between liveware and software include problems in the transfer of information between support systems and the person. Outdated publications, for instance, generate a mismatch by giving the person incorrect information.
- **Person to Equipment & Gear (liveware-hardware) Mismatches:** Mismatches between live and hardware include problems in the physical and mental interaction of people and machines. Design limitations, instrument/control design and location, instrument controls and readability, seat design, proper guards and protections and other ergonomic issues are instances of these mismatches.
- **Person to Environment (liveware-environment) Mismatches:** Mismatches between people and environment are facts that affect human performance. For example, temperature, humidity, illumination or glare, ambient noise, vibration, air quality, external visibility, pitch and yaw each have an effect on a person's ability to perform his or her task optimally.

8 Annex 2

Interview - Areas to be examined and information to be gained

8.1 INFORMATION FOR EVERY CASUALTY

[Note: Select only what's relevant]

8.1.1 General information

- Casualty type
- Date and local time of casualty
- Position/Location of casualty – Latitude and Longitude, bearing and distance from a known point or river mile marker reference
- Ship(s) involved
- Consequences
- Weather at time of casualty
- Visibility
- Sea area – offshore, coastal, port approaches, harbour
- Sea conditions
- Tidal/current conditions
- Water depth
- Aids to navigation used
- Failure of aids to navigation
- Vessel Traffic Service used

8.1.2 Ship related information

- Name of ship
- Previous name(s)
- Nationality (Flag)
- Previous nationality(s) (Flag(s))
- Documentation Number (IMO Number, State Number)
- Home port/port of registry
- Ship type/service
- Call sign
- Gross tonnage
- Deadweight
- Length overall
- Beam/breadth (moulded/extreme)
- Drafts – Fore, aft, midships
 - Leaving port
 - At time of casualty (best estimate)
 - After casualty (best estimate)
- List/heel
- Propulsion type and particulars
- Hull construction
- Hull material
- Classification society
- Previous Class Society
- Registered shipowner
- Ship manager/operator
- Date of contract/keel laid/delivery
- Date of major conversion
- Building yard
- Hull number
- Port at which voyage commenced and port at which it was to have ended, with dates
- Details of cargo
- Last port and date of departure
- Port bound for at time of occurrence
- Any incident during the voyage that may have a material bearing on the incident, or unusual occurrence, whether

- or not it appears to be relevant to the incident
- Plan view of ship's layout including cargo spaces, slop tanks, bunker/fuel lube oil tanks (diagrams from IOPP Certificate)
- Details of cargo, bunkers, fresh water and ballast and consumption
- Any deficiencies highlighted in Port State Control inspections
- Any conditions of class

8.1.3 Particulars of people involved in incident

- Full name
- Age
- Details of injury (if any)
- Description of accident
- Person supervising activity
- First aid or other action on board
- Capacity on board
- Certificate of Competency/Licence
 - Grade
 - Date of issue
 - Issuing country/authority
 - Expiration Date
 - Time Document Held
- Age
- Height
- Weight
- Sex
- Restrictions/Limitations/Disabilities
- Nation of Origin
- Native Language
- Other Certificates of Competency held

8.1.4 Particulars of sea state, weather and tide

- Direction and force of wind
- Direction and state of sea and swell
- Atmospheric conditions and visibility
- State and height of tide
- Direction and strength of tidal and other currents, bearing in mind local conditions

8.1.5 Particulars of the incident

- Type of incident
- Date, time and place of incident
- Details of incident and of the events leading up to it and following it
- Details of the performance of relevant equipment with special regard to any malfunction
- Persons on bridge
- Persons in engine-room
- Whereabouts of the master and chief engineer
- Mode of steering (auto or manual)
- Extracts from all relevant ship and, if applicable, shore documents including details of entries in official, bridge, scrap/rough and engine- room log books, data log printout, computer printouts, course and engine speed recorder, radar log, etc.

- Details of communications made between ship and radio stations, SAR centres and control centres, etc., with transcript of tape recordings where available
- Details of any injuries/fatalities
- Voyage data recorder information (if fitted) for analysis
- Details of cargo operations

8.2 SHIPBOARD ISSUES (IG APPENDIX)

8.2.1 Training and experience

- Position or rank held.
- Certificate held; length of time the certificate has been held; where trained.
- Experience in the position; both on this ship and over career.
- Length of time on this contract and overall on board the ship.
- Experience on other ships; both with this company and other companies.
- Details of other relevant training

8.2.2 Shipboard organizational structure and processes

- The management/department structure on board the ship.
- The individual's position within the on-board structure; who they work for, who they work with, who they report to and who they assign duties to.
- Normal day-to-day responsibilities, tasks/watches and duties.
- Description of any interaction with personnel ashore.

8.2.3 Nature of Tasks

- Specifics of the task(s) being undertaken at the time of the occurrence, including location.
- Differences between the task at that time and normal operations.
- Description of the social dynamics of the working environment (e.g. alone/pair/team).
- Understanding of the task.
- Familiarity with the task; last time it was performed, etc.
- Available discretion relating to how the task was to be accomplished.
- Training provided for the task; what was the training.
- Procedures, documents and guidance for the task.
- Equipment used for the task; reliability, previous failures, problems and were the crew familiar with it.
- Physical environment; heat, humidity, noise, confined space, exposure to chemicals, etc.
- Workload and/or effort required for the task:
 - To what extent was it within the crew's capability at the time.
 - Were there any tasks that were not done because of the workload.
 - Physical effort involved; pushing, pulling, lifting, etc.
 - Mental effort involved; thinking, deciding, calculating, remembering, looking, searching, etc.
 - Time pressure involved; adequacy of time allocated to the task.
 - Use of scaling questions may assist here (e.g. "on a scale of 1 to 10, where 1 is very easy and 10 is extremely difficult, how (physically) difficult was this task...").

8.2.4 Activities prior to occurrence

- Actions and/or activities before coming on watch or reporting for duty.
- Individual's role in the operation being conducted by the ship at the time of the occurrence.
- Individual's location on board at the time of the occurrence.
- What was being observed immediately prior to the occurrence; what was seen, heard, felt, smelled, and thought about.

8.2.5 Work period/rest period/recreation pattern

- Description of normal duty schedule (e.g. day worker or watchkeeper).
- Description of duty schedule on the day of the occurrence; on the day before and during the week before the occurrence.
- Length of time awake and/or on duty at the time of the occurrence.
- Overtime worked on the day of the occurrence; on the day before and during the week before the occurrence.
- Usual sleep/rest routine (what time asleep and awake).
- Sleep/rest routine in the three days (72 hours minimum) leading up to the occurrence:
 - 72-hour history of time to bed/time to sleep/duty times/nap times.

- If there is an indication of reduced sleep beyond 72 hours, collect sleep information beyond 72 hours (as a guide, collect information back to two good nights' rest prior to the occurrence).
- Quality of sleep; disturbances, light sleep, waking, how refreshed when waking.
- Time of day when sleep is taken (impact on quality).
- Last extended period of off-duty time.

8.2.6 Living conditions and shipboard environment

- Description of the adequacy of personal facilities; individual, shared or communal; noisy, cramped, vibrations, temperature, ship's motion, etc.
- Availability and consumption of alcohol and/or non-prescribed medications.

8.2.7 Physical health

- Symptoms of illness experienced within the 72 hours before the occurrence.
- Medications and other substances taken (prescribed, not prescribed).
- Description of the last meal consumed prior to the occurrence; what and when.
- Description of existence and regularity of exercise routine.
- Details of any recent medical examinations, illnesses or injuries.
- Details of any regular or irregular medication, both prescribed and not prescribed.
- Description of quality of vision (e.g. corrective lenses).
- Description of quality of hearing (e.g. hearing aids).
- Name and contact details of personal physician.

8.2.8 Mental Health

- Length of time spent away from family and loved ones
- Extreme emotions at any time in the days before the occurrence; e.g. feelings of extreme sadness, anger, worry, fear (use scaling questions (1 to 10) to determine level).
- Important and/or difficult personal decisions made recently; e.g. financial or family worries.
- Recent work performance; any concerns from others.
- Stress and/or difficult situations whilst on board and how these were being managed.
- Difficulties with concentration.
- Any mental health issues recently and/or in the past.
- Medications taken (prescribed, not prescribed).

8.2.9 Working relationships

- Friendships and/or support from other crew members.
- Conflicts and/or clashes with other crew members or supervisors.
- Trust in other crew members.
- Language barriers interfering with work performance.
- Clarity of roles and responsibilities with other crew members.

8.2.10 Employment conditions

- Contractual arrangements.
- Complaints or industrial action and systems for resolution of these.
- Recent changes to employment conditions.

8.2.11 Safety policy

- Awareness of the company's safety policy.
- Ship's procedures for dealing with safety issues; methods of reporting and addressing safety concerns.
- Safety training; type, nature and frequency.
- Emergency drills; type, nature and frequency.
- Personal protective equipment (PPE) provided.
- Records and/or knowledge of personal accidents or injuries prior to the occurrence.
- Review and correction of non-conformities, deficiencies.

8.2.12 Staffing levels

- Sufficiency of staffing/crewing levels on board.
- Appropriate allocation of crew members to duties.
- Changes to normal staffing/crewing levels.

8.2.13 Standing orders

- Master's standing orders; for all or part of the crew.
- How are the orders communicated.
- Are the orders in accordance with the company policies.

8.2.14 Level of automation and reliability of equipment

- Complexity of machinery and automated systems.
- Training provided for systems.
- Competency of crew in using the systems.
- Reliability of systems; any earlier failures.
- Maintenance of systems.
- Are the systems integrated with each other and with the task requirements.
- Backup systems

8.2.15 Ship design, motion/cargo characteristics

- Ship design, motion or cargo characteristics; any features which interfere with human performance (e.g. obstructed watchkeeper vision).

8.3 SHORESIDE MANAGEMENT ISSUES (IG APPENDIX)

8.3.1 Management policies and procedures

- Existence of and opinion about the effectiveness of the safety management system, including auditing, analysis, reporting and investigation of the occurrence and Plan-Do-Check-Act cycle.
- Existence of and opinion about the effectiveness of risk assessment and management policies and procedures relating to ships, personnel and the environment.
- Existence of and opinion about the effectiveness of the role of the Designated Person (DP).
-

8.3.2 Scheduling of work and rest periods

- The company's work schedule, relief policy and risk management policy on fatigue.
- Adherence to these policies.
- Recent changes to these policies.
- The company's policies and practices for determining staffing/crewing levels on board the ship.
- The effectiveness of these policies and practices.

8.3.3 Assignment of duties

- The company's policies for determining watchkeeping practices and other duties on board the ship.
- The actual watchkeeping practices.

8.3.4 Shore-ship-shore support and communications

- Means and level of support for the ship's master in conduct of operations.
- The master's reporting requirements.

8.3.5 Voyage planning and port call schedules

- Policies, procedures and guidelines provided to the master to enable voyage planning.
- Actual practices for voyage planning.

8.3.6 Recreational facilities

- The company's policies and practices for the provision of welfare and recreational services on board.

8.3.7 Contractual and/or industrial arrangements and agreements

- Contractual arrangements for all crew members.
- Complaints or industrial action in the last year.

8.3.8 National/international requirements

- Appropriateness of the applicable international conventions and flag State regulations.
- Effectiveness of the flag State's implementation of the requirements and recommendations of the applicable international conventions.
- Compliance with the requirements and recommendations of the applicable international conventions and flag State regulations.

8.4 NAVIGATION ACCIDENTS

Aspects for particular consideration for [collisions and near misses] are in square brackets and for (groundings and contacts/allisions) are in round brackets. The rest are applicable to all navigation accidents:

- Memory from VDR, ECDIS, ECS, GPS, ARPA, course recorders, engine data log.
- Navigation equipment: draw a plan or photo main consoles. What alarms could be set and what were actually set?
- Was navigation equipment working properly, when was it last checked, manuals?
- Familiarity of watchkeepers with the bridge equipment, training received.
- What was the OOW's experience of navigating in the area?
- Was chart in use corrected and up-to-date, were sufficient paper charts carried?
- Navigation methods being used, e.g. how were fixes obtained, what was the fixing interval, how was the ship's track monitored?
- Steering mode, manual follow up/non-follow up, autopilot normal/river pilot, rudder limits/weather helm set.
- Radars/ARPA in use, scale used, mode of display, EBL/VRM/parallel indexing used, alarm set, when was the radar index error last checked?
- GPS employed, correct datum in use?
- Passage plan- comprehensive? Was it used, who compiled and who approved it?
- Correct nautical publications carried?
- Company and Master's Standing orders and those for the conduct of navigation.
- Was the helm/rudder indicator used?
- Was the echo sounder used, alarms set, depth records kept?
- What was the gyro error, when was it last checked, were repeaters aligned?
- Magnetic compass deviation card posted up/available?
- What navigation lights and shapes were displayed?
- What were the watchkeeping arrangements?
- Content and standard of master/pilot briefing and liaison.
- Content and standard of handover between watchkeepers.
- Was information on squat and manoeuvrability available?
- Blind arcs/ranges for both visual lookout and ship's radar.
- Were clearing lines set and how?
- Was a watch alarm fitted, was it used, what was interval?
- Was the ship's whistle/horn operating correctly, manual and automatic modes?
- Propulsion information: shaft direction, rpm, pitch gauge.

- [Position of collision/near miss]. (Grounding/contact).
- [When and how was other ship first detected? E.g. position, course, speed, true bearing, relative bearing, range].
- [Courses, headings, speeds, and sound signals from first sighting]. (Height of tide).
- [Radio communications between the two ships].
- [Monitoring of other ship, was a radar plot kept, acquired on ARPA?
- (Draught of ship, forward, aft and amidships, last fix before grounding/contact).
- Weather, sea conditions, visibility, current and tidal flow.
- Weather forecasts obtained e.g. Navtex; obtain hindcast from Met. Office.
- Who was on the bridge, who had the con, where and what was he doing?
- Were the watchkeepers carrying out other tasks, distracted or fatigued?
- Was there a dedicated lookout?
- Lighting conditions and noise on the bridge.
- Machinery or equipment failure.
- General alarm sounded/broadcast on P/A system.
- [Compliance with collision regulations].
- State of watertight and weathertight doors.
- Point and angle of impact, sketches and photographs.
- [Chart of area showing position of collision/near miss]. (Grounding/contact)
- Engine movement book or computer readout of engine data log.
- [Post-collision action taken, degree of damage and repair, internal soundings].
- (Ship's draught, soundings taken around ship after grounding/contact).
- Extent of pollution, measures taken to minimise.
- [Paint deposit samples where it is not clear who collided with whom].
- (If applicable anchor details, length and scope of cable, holding performance).
- Information from pilot's PPU (if relevant)
- How did planned route differ from the actual route?
- Were other vessels involved?

8.5 FIRES AND EXPLOSIONS

The following evidence should be collected in the case of a fire or an explosion. However, it should be recognised that fire investigation is a specialist topic in itself for which additional training is required or specialist contractor assistance is recommended:

- Outfit of fire-fighting systems and appliances, fire plan.
- Fire-fighting appliances and systems properly serviced and maintained (PMS records, safety record book, certification etc.).
- Structural fire protection, e.g. insulation, fire doors, dampers, cable glands.
- Containment used, use of fire doors and hatches, boundary cooling.
- Sprinklers and gas drenching systems used.
- Instructions posted for fixed firefighting systems.
- Portable fire appliances used, e.g. fire hoses and extinguishers.
- Emergency fire pump use.
- Fire detection system, units activated, alarms given/noticed.
- Organisation and procedures for fire emergency control.
- Fire drills practised and logged.
- Seat of fire, source of ignition, material initially ignited.
- Spread of fire and smoke; was flashover involved?
- Means of escape.
- General alarm sounded, crew mustering, broadcast on P/A system.
- Deployment of fire parties.
- Fire dampers and fuel quick closing valves, shut down arrangements for fans and fuel pumps.
- Shore side fire brigade involvement.
- Hot work involved, permit to work procedure followed.
- Dangerous goods involved.
- Stability considerations with respect to fire-fighting water's free surface
- PMS/maintenance records of tests (QCVs, fixed systems, other equipment etc).
-

8.6 CARGO SHIFT INCIDENTS

The following is applicable to cases in which bulk cargo has shifted:

- Port of loading, arrival date, departure date.
- Was cargo stowed in accordance with IMO Code of Practice for the Safe Loading and Unloading of Bulk Carriers?
- Loading start and finish time and when ship left port, crew supervision of loading.
- Cargo stockpiled before loading, condition of stockpiles, wet base, weather before and during loading.
- Damp cargoes, moisture content, flow moisture point, transportable moisture limit, drainage to the bilges during voyage.
- Method of loading e.g. belt conveyor, grabs, pneumatic conveying.
- How was the cargo trimmed? E.g. rotating nozzle, deflector plate.
- Number and dimensions of holds, cargo amount in each hold.
- Shape of loaded cargo, approximate depths and slope angles.
- Anything different about this shipment or how it was loaded.
- Stability condition before sailing, conditions calculated while on passage.
- Weather, sea conditions, speed of ship.
- Heel angle before shift, list angle after shift.
- Structural or other damage as a result of shift.
- Remedial action e.g. ballasting, change of heading.
- Did list cause problems with:
 - Running of main engine or generators?
 - Downflooding through ventilation pipes into fuel tanks?
 - Valves in vent heads preventing downflooding?
- Cargo samples if applicable.
- Roles and responsibilities for safe loading.
- Wave direction, wave height, encounter period.
- Weather condition (precipitation) at berth.
- Rolling period while on passage.
- Measurement method of moisture content, survey report.
- Stowage plan.
- Details of the shipper and consignee.

8.7 FLOODING

- Source of flooding, failure of hull, deck and superstructure plating or planking, sea water cooling systems, scuppers, windows, stern or rudder glands?
- How was flooding first detected, what action was taken?
- Any unusual ship motion before flooding discovered?
- What was the extent of flooding?
- State of watertight and weathertight doors and hatches.
- How was flooding limited by bulkheads, decks, doors and hatches?
- Condition of closing appliances, especially the seals.
- Freeing ports adequate?
- Downflooding arrangements. Any used?
- Bilge alarms, fixed bilge pumps, portable pumps.
- Stop cocks and non-return valves in pipe systems.
- Stability condition before and after flooding.
- Did floodwater cause significant hogging, sagging, list or loll?
- Did hogging or sagging cause structural damage?
- Did head of floodwater cause damage to e.g. bulkheads, decks?
- Cargo damage.
- Effect on propulsion machinery and electrical supply.
- Damage control measures, e.g. wood bungs and wedges, cement boxes, pipe clamps.
- Fishing vessel specifics:
 - Did bilge alarm and pumps meet requirements of relevant regulations/code?
 - Testing regime and maintenance of bilge alarm system.
 - Extended spindles employed on sea inlets?
 - Unauthorized modifications to vessel

8.8 FOUNDERING

Events leading up to the foundering:

- Voyage plan, course and speed.
- Stability condition before foundering.
- Stability performance, obtain stability book, last inclining experiment, computer models if available.
- Weather, sea and visibility conditions.
- Radio communications with coastguard, VTS, other ships.
- How long afloat after initial accident?
- How did the ship sink? E.g. by bow, stern or capsized.
- Location of wreck and water depth.
- Salvage intentions?
- Fishing vessel specifics:
 - Type of fishing e.g. beam trawling, stern trawling, potting, dredging.
 - Recent changes to fishing gear.
 - Was vessel required to meet stability standard?
 - Sea bottom at wreck position, e.g. sand, mud, rock, wrecks nearby.
 - Details of equipment/gear on deck
 - Maintenance condition and size of freeing ports/scuppers

8.9 LIFESAVING APPLIANCES AND EVACUATION

- Required outfit of lifesaving appliances carried.
- Were lifesaving appliances properly fitted and in date for service etc.?
- Organization and procedures for drills and emergencies.
- Boat drills, including evacuation and man overboard, practised and logged?
- Liferafts correctly secured with Hydrostatic Release Unit?
- SOLAS type approved liferaft, or other recognised body?
- Distress signals card and SOLAS manual.

8.10 STRUCTURAL/MACHINERY/EQUIPMENT FAILURE

- Correct operating procedure used?
- Machinery/equipment maintained and serviced in accordance with the manufacturer's instructions (see Manuals), maintenance and servicing records, experienced and qualified staff.
- Genuine replacement parts used or parts of correct specification.
- Recent repairs, onboard or ashore.
- ISM - any non-conformity reports on failed components.
- Design flaw, material defect, manufacturing or assembly fault.
- Operating within environmental tolerance, e.g. temperature, humidity.
- Item suitable for marine use, equipment designed for intended environment.
- Fatigue failure, indicated by beach marks, repeated loading cycles below the maximum stress.
- Fatigue life exceeded, number of cycles greater than assumed for design.
- Material overstressed, indicated by tearing or buckling, e.g. ultimate tensile stress exceeded, excessive shear force or bending moment.
- Components subject to wear, foreign material present, oil samples, magnetic plug residue samples, fresh water samples.
- Impact damage or abused in some other way.
- Retention of failed specimens.
- Previous failures and repairs.
- Vibration noticed prior to failure.

- Non-destructive testing, information available?
- Heavy weather damage. Obtain weather hindcast and wave information, photos of weather conditions at the time.
- Ship motions, e.g. pitching, rolling and slamming.
- Action taken to reduce motions, e.g. course change.

8.11 SHIP LOST OR MISSING

- Ship history from, e.g. owners, agents, stevedores, pilots, surveyors.
- Date and time of departure from last port.
- Voyage plan, estimated time and date of arrival at next port.
- Type of cargo, where and how stowed and secured.
- Any communications e.g. radio and mobile telephone calls.
- Contact or sighting by other ships, (coastguard incident log).
- Weather, sea conditions, visibility, current and tidal flow.
- Reports of surveys, port state and general inspections.
- History of equipment failures or structural defects.
- Photographs of ship from, e.g. owners, previous crew, harbour masters.
- Fishing vessel specifics:
 - Fishing habits of skipper; normal fishing grounds. Ask previous crew, harbour master, agent, crews of other fishing vessels.
 - Did any of the crew inform next of kin of their intentions?

8.12 ACCIDENTS INVOLVING ENCLOSED/CONFINED SPACES

Enclosed space incidents are not limited to those that result in asphyxiation or atmospheric poisoning. They can also include other types of incidents such as falls from height. Investigations of any accident that occurs inside an enclosed space should address the following:

- Any definition/list of enclosed/confined spaces held on board ship?
 - Where relevant, does it sufficiently identify all enclosed spaces based on the design/construction of the ship, including but not limited to enclosed ladder trunks, upper stool spaces, etc.?
 -
- What enclosed space related procedures are in place, e.g., entry, ventilation, atmosphere monitoring, etc.?
- Scope/content of pre-task hazards assessments for enclosed space entry
 - Is the adequacy of the entry/exit included?
 - Lighting?
 - Is the risk assessment that was conducted generic or was it specific to the entry/operation being conducted when the accident occurred?
 - Did the risk assessment address any crew related issues, e.g., experience, fitness, etc.?
 - Did the risk assessment address environmental factors inside the space, e.g., heat, humidity, etc.?
- What equipment is available on board (atmosphere meters, BA, extraction equipment) and was it maintained properly?
 - Is there adequate span gas available on board for checking the proper operation of the gas detection equipment?
 - Was the span gas within its expiration date?
 - Is there an adequate number of personal gas detectors on board and are they in good working order?
 - Does the equipment that was on board match the enclosed space entry procedures?

- Was the equipment that was used the equipment required by the procedures?
- What measures/procedures are in place to prevent unauthorized entry? Were they in place at the time of the accident?
 - Particular issue is entry by third parties (stevedores, customs officials, etc.)- do the measures / procedures address this area?
 - Was entry into cargo holds addressed during pre-loading/discharge meeting with stevedores?
 - Did the incident occur during a planned enclosed space entry?
 - If planned, were the established procedures followed?
 - If not, was the space being entered identified as an enclosed space in the established procedures and was it recognized as an enclosed space by the involved crew?
 - If identified as an enclosed space and the procedures were not followed:
 - What was the reasoning for why they were not followed?
 - Did any crewmembers attempt to "Stop the Job?"
 - Was there something unusual about the design/construction of the ship that presented a previously unidentified hazard?
- Rescue effort:
 - Were there any initial rescue attempts that did not follow the established enclosed space rescue procedures?
 - Were the enclosed space rescue procedures followed?
 - Was the rescue conducted by ship's crew, shore-based personnel, or both?
 - Were there any difficulties entering the space by crew wearing required equipment, e.g., BA set, and/or removing rescued persons?
- Records and crew experience of enclosed space entry training and rescue drills:
 - How frequently were enclosed space entry training/drills conducted?
 - What is the content of the training and how is it conducted, e.g., computer based, in person training?
 - Does the Company have guidance for conducting rescue drills (use of equipment, scenarios, etc.)?
 - When was the most recent enclosed space entry training/rescue drill conducted?
 - Did any of the crew involved with the incident take part in the training?
 - When it was conducted?
 - What was the scenario?
- If possible, obtain independent measurement of atmosphere before ventilation after the accident.
 - Who conducted the measurements? When were they conducted and where in the space were the measurements taken?
- Investigators should not enter enclosed space until certified safe by a chemist or other competent authority as required by applicable national requirements.
- Check boundaries and penetrations of compartment for source of contamination.
- Consider whether weather and sea conditions were influential.

**MARITIME CASUALTY INVESTIGATION
REPORT FORMAT AND ARRANGEMENT**

The whole package of maritime casualty investigation report shall consist of five parts and shall be according to the following order, formatted in the appendices to this Annex:

1. Security page
2. Cover page
3. Executive Summary
4. Table of Contents
5. Maritime Casualty Investigation Report
6. Annexes (Documentary Evidence)

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PAMBANSANG PUNONGHIMPILAN TANOD BAYBAYIN NG PILIPINAS
(NATIONAL HEADQUARTERS PHILIPPINE COAST GUARD)
139 25th St., Port Area
1018

**MARITIME CASUALTY INVESTIGATION REPORT ON THE
COLLISION INCIDENT INVOLVING
MV "VIENNA WOOD" AND FV "IVY LIBERTY V"**

VERY SERIOUS MARITIME CASUALTY
(Severity of Maritime Casualty)

06 JULY 2020

EXECUTIVE SUMMARY

The Executive Summary has to be appended in the Report next to the Cover page. It is a summary of the long Maritime Casualty Investigation Report (MCIR). It consists of the following:

- a. Brief Description of the maritime casualty or maritime incident;
- b. Analysis (derives from the Analysis Section of the MCIR)
- c. Conclusion (derives from the Conclusion Section of the MCIR)
- d. Recommendation (derives from the Recommendation Section of the MCIR)

Example:

MARITIME CASUALTY INVESTIGATION ON THE COLLISION INCIDENT INVOLVING MV "BEL AND FV "MERCENARY"

EXECUTIVE SUMMARY

1. On or about 27 June 2020, MV BEL, a Hong Kong flag bulk carrier with 186.480 meters in length and 31,540 GT and with 20 crew, collided with a 42.16 meters in length and 254.62 GT Philippine registered fish carrier FV MERCENARY, with 12 crew and two passengers at vicinity waters of Occidental Mindoro. The said bulk carrier had no cargo on board while en route from Subic Freeport, Zambales to the Port of Groote Eylandt, North Australia. The fish carrier came from the fishing ground in Cagayan de Tawi-Tawi and Palawan en route to Navotas, Manila loaded with approximately four tubs of assorted fish. The collision incident resulted in possible loss of life, loss of ship and material damages.

2. The maritime safety investigation was conducted on 29 June to 01 July 2020 aboard MV BEL and at Headquarters Coast Guard District Southern Tagalog, Batangas City. In accordance with the Marine Casualty Investigation Code, the investigation lead to the following conclusions and recommendations:

a. CONCLUSIONS

- (1) The collision incident involving MV BEL and FV MERCENARY occurred not on 272220H as recorded in the deck log of MV BEL but on 272221H June 2020 at Lat 10° 11.9994'North, Long 120° 18.7385' East or at vicinity 12.6 NM WSW off Tubili Point, Mamburao, Occidental Mindoro that resulted the following:
 - (a) Capsizing and subsequently sinking of FV MERCENARY
 - (b) Missing of six crew, six fishermen and two passengers of FV MERCENARY
 - (c) Crack and hole damages in the stern portion of MV BEL

- (2) The following are causal factors without which the collision incident would not have occurred:
- (a) Lapse/failure to determine if risk of collision exist;
 - (b) Lapse to proceed at safe speed;
 - (c) Lapse to alter course, while still at safe distance, large enough to readily apparent to each other to avoid collision
- (3) Without the following conditions, adverse consequences associated with the collision incident would probably not have occurred nor have been as serious:
- (a) Failure to establish communication between vessels;
 - (b) Lapse to call the Master given the prevailing circumstances and condition;
 - (c) Lapse to stop right after the collision incident and to render any immediate assistance
- (4) Another conditions or actions associated with paragraph 2 and 3 would probably not have occurred:
- (a) Complacency of the watch in his intention and action to be taken;
 - (b) The shipboard working arrangement was not observed;
 - (c) Lapse/neglect in maintaining/detailing look-out;
 - (d) Competence of the Officer of the Watch;
 - (e) Delay in reporting of the collision incident;
 - (f) FV MERCENARY was not fitted with AIS

b. RECOMMENDATIONS

(1) For the ship owner/company

- (a) Implement navigational audit, enhance training program particularly on collision avoidance and evaluate competency of officers and crew;
- (b) Strictly implement sanction for violation of SMS;

(2) For the Maritime Industry Authority

- (a) Consider AIS as a requirement for type fishing vessel;
- (b) Consider the implementation of Safety Management System and issuance of Safety Management Certificate to fishing vessel;
- (c) Revisit the manning requirement and qualification of the crew needed for type of fishing vessel;

(3) For the Philippine Coast Guard

- (a) Enhance response capability for SAR and salvage/recovery operations;
- (b) Enhance the monitoring and communication capability;

B. TABLE OF CONTENTS (The whole package of the Maritime Casualty Investigation Report shall be arranged according to the order outlined in the Table of Contents below except for the annexes for the annexes which may vary according to the discussion in the Narrative and Analysis Sections of the Maritime Casualty Investigation Report. Not all the example annexes in item C below are not necessary to be included, but only those with relevance to the investigation).

**(SAMPLE FORMAT)
TABLE OF CONTENTS**

ITEM	CONTENTS	Page
	Generic Information	iii
	Maritime Casualty Investigation Report	
	Annexes:	
	Certificate of Ownership	Annex - 1
	Certificate of Registry	Annex - 2
	Load Line Certificate	Annex - 3
	Tonnage Certificate	Annex - 4
	Passenger Ship's Safety Certificate	Annex - 5
	Minimum Safe Manning Certificate	Annex - 6
	Certificate of Public Convenience	Annex - 7
	Certificate of Compliance	Annex - 8
	Classification Certificate	Annex - 9
	Ship Station License	Annex - 10
	Coastwise License	Annex - 11
	Maritime Labor Certificate	Annex - 12
	Declaration of Maritime Labor Compliance	Annex - 13
	Document of Compliance	Annex - 14
	International Oil Pollution Prevention	Annex - 15
	Documents for Carriage of Dangerous Goods	Annex - 16
	Oil Record Book	Annex - 17
	Record of Drills	Annex - 18
	Crew lists	Annex - 19
	Passenger Manifest	Annex - 20
	Schedule for watchkeeping personnel	Annex - 21
	Copy of Oil Record Book	Annex - 22
	Copy of Cargo Record Book	Annex - 23
	Cargo manifest	Annex - 24
	BFAR Certificates/Documents	Annex - 25
	Etc. e.g. Officer and crew licenses, other documents	Annex - 26
	Initial Maritime Casualty and Incident Report	Annex - 27
	Marine Protest	Annex - 28
	Vessel Maritime Casualty and Incident Report	Annex - 29
	Sworn Statement/Affidavits	Annex - 30
	Picture	Annex - 31

	Video/Audio recording	Annex – 32
	VTS Recordings	Annex – 33
	VTS Print Recording	Annex – 34
	Charts	Annex – 35
	Ship's logs	Annex – 36
	Weather Bulletin	Annex - 37
	(Place here other supporting documents/evidences)	

MARITIME CASUALTY INVESTIGATION REPORT FORMAT (The pages shall be numbered in lower right corner of each page (e.g. Page 1 of 5). The annexes shall be stamped marked in the upper right corner of the documents.

Example:



PAMBANSANG PUNONGHIMPILAN TANOD BAYBAYIN NG PILIPINAS
(NATIONAL HEADQUARTERS PHILLIPINE COASTGUARD)
139 25TH St. Port Area
1018 Manila

Date

Re: (e.g. Sinking of MV MERCENARY
2019

MCI Report No. CGDNCR-CL-02-

On 30 February 2019 at vicinity waters
Approximately Five (5) nautical miles NE
Off Barangay 156, Dihanical, Quezon
X-----X

**MARINE SAFETY INVESTIGATION REPORT ON
(CASUALTY EVENT) INVOLVING (Name of Vessel/s)
(FINDINGS RECOMMENDATIONS)**

I. AUTHORITY:

1. Section 3(j) of Republic Act no. 9993
2. (Indicate here the Orders designating the composition of Marine Safety Investigation Team, .e.g. Paragraph 2, Special Order No. 05, Headquarters Coast Guard District NCR-CL dated 30 February 2019)
3. (Indicate here other Authority, If any)

II. MATTERS INVESTIGATED

4. (.e.g. Sinking of MV MERCENARY at vicinity waters approximately five (5) NM NE off Dinahican Point. Infanta, Quezon on 30 February 2019 that resulted to the death of five (5) passenger and four (4) still missing.

III. OBJECTIVE OF THE INVESTIGATION:

5. The purpose of marine safety Investigation shall be to:
- 5.1 Identify the circumstances surrounding the marine casualty and incident.
 - 5.2 Determine the cause and contributing factor (.e.g. that resulted to the sinking of MV MERCENARY, loss of life and properties and injuries to passengers).
 - 5.3 Make appropriate recommendation and/or adopt measure to prevent the occurrence of similar marine casualty and incident. The recommendation shall in no case create a presumption of liability or blame, and that this report has not been written, in terms of content and style, with the intention of it being used in legal proceedings.

IV. SHORT DESCRIPTION OF THE INCIDENT:

6. This part shall outline the basic facts of the marine casualty or incident. What Happened, when, where and how it happened; whether any deaths, missing person, injuries, damage to the ship, cargo, third parties of environmental damage occurred as a result.

V. FACTUAL INFORMATION (Ref: GISIS MCI MODULE)

7. **Picture of vessel(s) involved.** (Post on a clearer, colored and whole picture of vessel(s) directly involved in the marine casualty or incident. The picture must be labeled with the name of the vessel and Fig. number)
8. **Ship Particular:** (Fill-up the 3rd column as required. If two (2) vessels are involved add a 4th column).

8.1	IMO Number/Ship Identification Number	Number
8.2	Name of Ship	Text
8.3	Call Sign	Text
8.4	MMSI Number	Number
8.5	Flag State	Text
8.6	Type of Ship	Text
8.7	Registered Ship's Owner	Text
8.8	Ship's Company	Text
8.9	Construction details	
	8.9.1 Length	Number
	8.9.2 Breadth	Number
	8.9.3 Gross Tonnage	Number
	8.9.4 Net tonnage	Number
	8.9.5 Depth	Number

	8.9.6 Hull	
	8.9.6.1 Hull Materials	Text
	8.9.6.2 Hull Construction	Text
	8.9.7 Propulsion type	Text
	8.9.8 Screw	Number
	8.9.9 Engine	Number
	8.9.10 Type of bunkers	See Annex 2, Appendix 5, Table 13
	8.9.9 Year Built	Number
	8.9.10 Deck	Number
8.10	Number of crew on ship's certificate	Number
8.11	Number of passenger on ship's certificate	Number

9. Voyage Data: (Fill up the 3rd column as required)

9.1	Port of call	Text
9.2	Port of Origin	Text
9.3	Port of Destination	Text
9.4	Type of voyage	Text
9.5	Type of cargo	Text
9.6	package dangerous goods or marine pollutant on board	Yes/No/Unknown
9.7	Number of Crew on board	Number
9.8	Number of passenger on board	Number
9.9	Number of other person on board	Number

10. Casualty Data: (Fill-up the 3rd column required)

10.1	Casualty of call (loop for more than casualty)	See Annex 2, Appendix 5, Table 4
10.2	Casualty event severity	VSMC/SMC/MI
10.3	Date	Text and Number
10.4	time	Number
10.5	Location	Text
10.6	Position	
	9.6.1 Latitude	Number
	9.6.2 Longitude	Number
10.8	Place on board	Text
10.9	Ship operation	See Annex 2, Appendix 5, Table 12
10.10	Under pilotage	Yes/No/Unknown

10.11	GMDSS Used	Yes/No/Unknown
10.12	Lifesaving appliances used	Yes/No/Unknown
10.13	VDR/S-VDR Fitted	Yes/No/Unknown
10.14	VDR/S-VDR Information available	Yes/No/Unknown
10.15	VDR/S-VDR Information downloaded	Yes/No/Unknown
10.16	VDR/S-VDR Information useable	Yes/No/Unknown
10.17	Human erroneous action	See Annex 2, Appendix-3
10.18	Equipment Failure	
	10.17.1 Equipment System	See Annex 2, Appendix 5, Table 24
	10.17.2 Equipment Type	Text
	10.17.3 Type of Equipment Failure	See Annex 2, Appendix 5, Table 25
	10.17.4 Operational contributing Factor	See Annex 2, Appendix 5, Table 22
	10.17.5 Management contributing Factor	See Annex 2, Appendix 5, Table 23
10.19	External Agencies	
	10.18.1 System	See Annex 2, Appendix 5, Table 29
	10.18.2 Task Affected	See Annex 2, Appendix 5, Table 30
	10.18.3 Description of accident	Text
	10.18.4 Operational contributing Factor	See Annex 2, Appendix 5, Table 22
	10.18.5 Management contributing Factor	See Annex 2, Appendix 5, Table 23

11. Consequences: (Fill up 3rd column as required)

11.1	Number of dead missing crew	Number
11.2	Number of dead missing passenger	Number
11.3	Number of other dead or missing person	Number
11.4	Number of crew seriously injured	Number
11.5	Number of passenger seriously injured	Number
11.6	Total loss of ship	Number
11.7	Material damage to ship	Yes/No/Unknown
11.8	Breach of hull causing flooding	Yes/No/Unknown
11.9	Ship unfit to proceed to sea	Yes/No/Unknown
11.10	Third Party damage (including non-ship source pollution)	Text
11.11	Ship pollution – Oil Cargo type & quantity	See Annex 2, Appendix 5 table 13

11.12	Ship Pollution – Oil bunker type & quantity	See Annex 2, Appendix 5 table 13
11.13	Ship pollution – Chemical in bulk pollution category and quantity	See Annex 2, Appendix 5 table 15
11.14	Ship pollution – Packaged dangerous goods and marine pollutants type & quantity lost overboard	See Annex 2, Appendix 5 table 14
11.15	Environmental effect (Phenomenon)	See Annex 2, Appendix 5 table 28
11.16	Environmental effect (Description of event)	Text

IV. NARRATIVE. This section shall provide relevant data/information that will conduct the event of marine casualty and incident (Refer to appendix 4 supplementary Information for particular situation and consequence) which will be the basis in the formulation of analysis. This Section shall be formatted in sequence not limited to the following information which may vary depending on the nature on marine casualty of incident.

- 12. ENVIRONMENTAL CONDITION** (As appropriate, this include a summary of but not limited to , weather forecast, weather advisories, sea state, wind force and direction, tide and current which can be obtain from the tide and current table, and witness account of the local environmental condition.
- 13. SAFETY REGULATION** (Enumerate the maritime safety regulation either international (Convention), National (MARINA, PCG, BFAR, or Local (LGU) regulations, etc.) that are relevant and applicable to the marine casualty and incident.
- 14. ENFORCEMENT.** (This will include enforcement actions taken by the PCG and/or other agency in compliance with the aforesaid safety regulations relevant to the marine casualty or marine incident event.)
- 15. SHIP’S DOCUMENTS/CERTIFICATIONS.** (Enumerate, in a tabulated format all pertinent documents/certification of each vessel issued by recognized authority/organization. This will determine whether or not the documents are valid. Other documents relevant to the marine casualty on marine incident such as, but not limited to, safety management manual, cargo security manual, dry docking record shall also be included.
- 16. MANNING.** (This section will determine whether or not the actual manning of each vessel is in accordance with the issued Ship’s Manning Certificate and/or the Ship’s Manning Certificate is in accordance with STCW Convention.

16.1 Minimum Safe Manning per Certificate

16.2 Actual Manning. (This will determine whether or not the actual manning of each vessel is in accordance with the

issued Manning Certificate which includes the number of officers and crew, their Capacity and limitation base on the License.

17. Navigation and Communication Equipment on board (if relevant to the marine casualty or marine incident).
18. Safety Equipment and Lifesaving Appliances (if relevant to the marine casualty and incident)
19. **SEQUENCE OF EVENT** (This includes chronological event from the point of departure up to the casualty or incident event which also includes, but not limited to, action taken by the ship's officers and crew, and the start until the end of SAR operations).
20. **ACTIONS DURING EMERGENCY/DISTRESS SITUATION.** (A narrative of action taken by the officers and crew of the ship during emergency/distress situation, including SAR Response).
21. **CONSEQUENCES** (A short narrative of the consequences such as, but not limited to death, loss of ship, damage to environment, material damage, and etc.)
 - 21.1 Loss of Life. (if applicable)
 - 21.2 Loss of Ship (if applicable)
 - 21.3 Material damage (if applicable)
22. **SAFETY MANAGEMENT SYSTEM.** (A narrative on Officer's and Crew's compliance and/or non-compliance to Company/Ship Safety Management System in reference to SMS Manual of Company and/or Ship).
23. **STANDARD OF TRAINING CERTIFICATION AND WATCHKEEPING.** (A narrative of compliance and/or non-compliance to STCW regulations).
24. **OTHERS**

V. ANALYSIS. This include a number of discrete sections, providing an analysis of each event related to the marine casualty or incident, with comments relating to the result of any investigatory activities and to any safety action that might already have been taken. These also include analysis of factual information against testimonies to determine the casual and contributing factors in each sequence of events. Illustrations/drawings (PowerPoint) and/or pictures should be included to clearly describe the circumstances. This section shall cover casual and contributing factors such as, but not limited to the following;

24. HUMAN FACTOR (States and explain your analysis in one or more paragraphs for any or all of the following contributing factors to the maritime casualty or maritime incidents):

- 24.1 Experience
- 24.2 Human Error
- 24.3 Lapses
- 24.4 Negligence

25. Operational Factors (States and explain your analysis in one or more paragraphs for any or all of the following contributing factors to the maritime casualty or maritime incidents):

- 25.1 Environmental Condition
- 25.2 Mechanical failure
- 25.3 Poor Maintenance
- 25.4 Supervision
- 25.5 Safety Management
- 25.6 Training
- 25.7 Drills
- 25.8 Communications
- 25.9 Workload and Hour of Rest

26. Management/Organizational Factor (State and explain your analysis in one or more paragraphs for any or all of the following contributing factors to the maritime casualty or maritime incident).

- 26.1 Company/Ship Training policies
- 26.2 Structural/Mechanical and others Ships related Design
- 26.3 Maintenance Policy
- 26.4 Recruitment Policy
- 26.5 Emergency procedure
- 26.6 Safety Management

VI. CONCLUSIONS. This section shall consolidate the established casual and contributing factors to the marine casualty and incidents from which safety actions are develop to prevent marine casualties or incidents in the future (This includes non-compliance to national and International Regulations). Where causal factors mean action, omissions, events or conditions without which:

- (1) The marine casualty or marine incident would not have occurred; or
- (2) Adverse consequences associated with marine casualty or marine incident would probably not have occurred or have been serious;
- (3) Another action, omission, event or condition, associated with an outcome in (1) or (2), would probably have not occurred.

VII. SAFETY RECOMMENDATION. This section shall contain safety recommendations based on the analysis and conclusions. The recommendations may include, among others, legislation, policies and procedures, seaworthiness, inspection, equipment issues, design ship safety management, health and safety at work, trainings and competencies, repair works and maintenance, external issues. The safety recommendations shall be addressed to those that are best placed to

implement them (e.g. ship owners, managers, recognized organization, maritime agency/organizations, other agencies, etc):

SO RECOMMENDED:

MARITIME CASUALTY INVESTIGATION TEAM/BOARD

(Head/Chairperson, Maritime Casualty Investigation Team/Board)

(Asst. Head/Chairperson, Maritime Casualty Investigation Team/Board)

(Law Member)

(Member)

(Member)