Appendix 8-A: Spill Prevention and Control Plan

CASE 10-T-0139
SPILL PREVENTION AND CONTROL PLAN (SPCP)
HUDSON RIVER CABLE INSTALLATION – SEGMENT 19B

SEGMENT 19B

SPILL PREVENTION AND CONTROL PLAN

CASE 10-T-0139

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1.0 INTRODUCTION

The purpose of this Spill Prevention and Control Plan ("SPCP") is to outline procedures and best management practices to control the potential for the occurrence of spills of petroleum, hazardous substances, or other material that has the potential to pollute the environment, and the response measures that will be implemented to contain, cleanup, and dispose of any spilled petroleum or hazardous substances, during the marine cable installation portion of the Champlain Hudson Power Express (CHPE) Project. This plan addresses potential spills during the construction phase for a specific portion of the project and is not intended to completely satisfy SPCC regulations (40 CFR 112) that apply to the entire Facility post-construction.

This SPCP:

- Identifies specific petroleum or hazardous substances that will be used at the project location(s) and on vessels involved in cable installation.
- Outlines appropriate equipment and procedures used to prevent spills of petroleum or hazardous substances;
- Provides spill response procedures and reporting requirements; and
- Describes contractor training programs.

The contact information and qualifications of the Project's Inspectors is included in the Compliance Assurance Plan in Appendix 7-A of the Segment 19B EM&CP. This SPCP will be modified by the Certificate Holders or their designed contractor (NKT), as/if necessary, throughout construction of the marine portion of the CHPE Project.

All entities associated with the marine construction of the CHPE project will comply with all federal, state and local requirements applicable to this SPCP.

2.0 PREVENTION

Prior to the start of construction of the CHPE Project, the Construction Manager (CM) will prepare an inventory of petroleum and hazardous substances that are being used during the Hudson River Cable Installation. The inventory will be distributed electronically to the Certificate Holders, local emergency personnel, the Environmental Inspector (EI), Aquatic Inspector (AI) and Safety Inspector. Once the distribution list has been developed NKT will review all contact information and add any parties as needed. Table 2.1 below summarizes a list of potential pollutant sources for construction activities. Per the Occupational Safety and Health Administration (OSHA) HazCom Standard, the Construction Manager will maintain a Safety Data Sheet (SDS) for each petroleum and hazardous substance used during construction of the CHPE Project in a binder at the on-site job trailer/field office. The SDSs will be kept on-site, alongside the Health and Safety Plan (HASP), for the duration of construction. If a contractor or subcontractor proposes to use a petroleum or hazardous substance not on the List, the List shall be modified and the appropriate SDS provided to the distribution list prior to the use of the petroleum or hazardous substance during construction of the CHPE Project. All regulated chemicals and hazardous waste shall be secured in a locked and controlled area with secondary containment within the Project's site, on vessels and associated mobilization yards.

NKT will require that personnel adhere to all directions and warnings for petroleum or hazardous substances used during construction of the CHPE Project. Prior to construction, construction personnel will be trained in the use, storage, handling, spill control, and first aid measures required for these chemicals in accordance with the OSHA Construction Hazardous Communication Standard (29 CFR § 1926.59) and New York State Department of Transportation (NYSDOT) Standard Specifications Section 107-05 (see Section 5.0 for additional training requirements).

Table 2.1 – Potential Pollutant Sources for Hudson River Cable Installation Activities

Pollutant	Quantity	Container and Storage Description
Used Oil	50-100 Gallons	Drum with secondary containment
Lube- various oil types: 15-40, 10W, 30W, 50W, ATF, used coolant, new coolant, used oil	1000 Gallons	Vessels with bulk storage tanks inside secondary containment
Wire Pulling Lubricants	100 gallons	Approved containers
Hydraulic Fluid	Greater than 25 gallons	Approved containers
Gasoline	250 gallons	5-gallon steel containers located inside secondary containment for generators, pumps, etc.
Diesel	Greater than 500 gallons	Internal Vessel Fuel Tanks
Solid Waste (litter and construction debris)	Varies	20 Gal covered bins, 55- Gallon Drums, Covered dumpsters.
Sanitary Waste	Varies	Onboard Sanitary Facilities + Portable facilities.
Used filter and absorbent bins	330 Gallons	55-gal sealed lid drums, 330-Gallon Steel Containers
Chemicals associated with cable splicing/jointing activities, vessel and equipment maintenance	Varies	Flammable cabinets inside jointing habitats and in supply containers on vessel, shelves in vessel storage Connex, 2-drum Hazmat storage with built in secondary containment

2.1 STORAGE

Petroleum and hazardous substance storage (including, at least, fuel tanks) shall be appropriate to the substance stored and located a minimum of 100 feet from streams, waterbodies, and wetlands, unless: (i) the EM&CP provides justification, including those impacts have been avoided or minimized to the maximum extent practicable; or (ii) adequate secondary containment (at least 110 percent of the volume stored) is otherwise provided. If either item (i) or (ii) is satisfied, storage can occur within 100 feet of such resources. Table 2.1 above includes a list of potential pollutant sources including petroleum products and hazardous substances that may be stored and appropriate best management practices to prevent release into the environment. Details regarding chemicals, amounts and associated SDS sheets can be found in the SSHASP documents for this EM&CP (attached as Attachment 3 to Appendix 5-A of the Segment 19B EM&CP).

Aboveground storage tanks (ASTs) used to store petroleum fuels will comply with New York State Department of Environmental Conservation (NYSDEC) Bulk Storage regulations in 6 NYCRR Part 613. If more than 1,100 gallons of fuel is stored (6NYCRR § 613-1.3 [v]) at any site, the AST(s) at that site will be subject to 6 NYCRR § 613-4.1 (b) (1) (v) (b) relating to ASTs within 500 horizontal feet of surface or groundwater sources and 6 NYCRR § 613-4.1 (b) (1) (v) (d) relating to secondary containment. Additionally, every storage tank system containing more than 1,100 gallons must be removed within 180 days after installation or the Certificate Holders must register the tank to be included on a new facility registration (6 NYCRR § 613-1.9 (a)). Additionally, every storage tank system containing more than 1,100 gallons must be removed within 180 days after installation or the Certificate Holders must register the tank to be included on a new facility registration (6 NYCRR § 613-1.9 (a)).

2.1.1 Storage of Hazardous Wastes

As per the BMP Document, if hazardous waste is generated, the EI with the assistance of project CM(s) will implement all of New York State's hazardous waste regulations including:

1. Train and instruct employees and/or other handlers of hazardous waste on the proper reporting, storage, inspection and handling requirements;
2. Separate hazardous waste from solid waste through segregation of storage areas and proper labeling of containers;
3. Use appropriate storage and, when necessary, NYSDOT approved transportation containers, along with secondary containment measures where applicable;
4. Verify that the hazardous waste transporters servicing the Facility have all required licenses, registrations and/or USEPA identification number and that the waste is disposed of at an approved/licensed facility prior to shipping hazardous wastes;
5. Transport all hazardous waste under a cradle-to-grave system of manifests;
6. Follow accurate recordkeeping requirements as to the quantity and nature of hazardous wastes generated onsite, and maintain a file of MSDS for all onsite chemicals; and
7. Minimize, where possible the storage of hazardous wastes within 100 feet of a wetland, river, creek, stream, lake, reservoir, spring, well or other ecologically sensitive site or existing recreational area along the proposed rights-of-way (ROW).

2.2 FUELING

The Environmental Inspector (EI) will verify that any petroleum, hazardous substance, or other material that has the potential to pollute the environment encountered during any activity is properly handled and stored. Personnel responsible for fueling vessels, construction vehicles and equipment (including heavy equipment and hand tools) will be provided with information associated with spill prevention and containment during orientation. Fueling stations will be outfitted with spill kits and secondary spill containment measures, such as catchment basins (e.g., "plastic outdoor pools").

In accordance with the amended CC114, in general, and to the maximum extent practicable, refueling equipment, storage mixing, or handling of open containers of pesticides, chemicals labeled "toxic," or petroleum products shall not be conducted within one hundred (100) feet of a stream or waterbody or wetland. Requirements for refueling within 100 feet of wetlands or streams will be allowed under certain circumstances identified below.

a) Refueling of hand equipment will be allowed within 100 feet of wetlands or streams when secondary containment is used. Secondary containment will be constructed of an impervious material capable of holding the hand equipment to be refueled and at least 110% of the fuel storage container capacity. Crews will have sufficient spill containment equipment on hand at the secondary containment location to provide prompt control and cleanup in the event of a release.
b) Refueling of equipment will be allowed within 100 feet of wetlands or streams when necessary to maintain continuous operations and where removing equipment from a sensitive area for refueling would increase adverse impacts to the sensitive area. Absorbent pads or portable basins will be deployed under the refueling operation. In addition, the fuel nozzle will be wrapped in an absorbent pad and the nozzle will be placed in a secondary containment vessel (e.g., bucket) when moving the nozzle from the fuel truck to the equipment to be refueled. All equipment operating within 100 feet of a wetland or stream will have sufficient spill containment equipment on board to provide prompt control and cleanup in the event of a release.

c) Field personnel and Contractors shall be trained in spill response procedures, including the deployment and maintenance of spill response materials.

2.3 EQUIPMENT INSPECTION

During normal work hours, all installation vessels, construction vehicles and equipment will be inspected daily for petroleum or hazardous substance leaks (e.g., oil, hydraulic fluid, transmission fluid, lubricants, or brake fluid). All hoses, fittings, and other connections will be inspected daily during normal work hours, for signs of wear and tear. Any equipment observed to be leaking will be contained and repaired or removed. If the equipment cannot be repaired or removed immediately, secondary containment will be placed under the equipment to prevent the leaking petroleum or hazardous substance from being released to the water. Any observation of spills, leaking petroleum or hazardous substances, or improperly stored substances may trigger the issuance of a stop-work notice in the immediate area, as well as appropriate reporting procedures, until the situation is resolved, including the containment of the leaked and/or spilled petroleum or hazardous substance, and the appropriate field measures are implemented to avoid future releases.

2.4 MAINTENANCE AND REPAIR

All equipment will receive regular preventative maintenance to reduce the risk of leakage. Secondary containment will be used for locations where drips are anticipated during maintenance activities. Maintenance is best performed in a relatively flat area and on an impervious surface, such as a concrete pad or 6 mil plastic sheeting. Absorbent materials, such as filter socks, absorbent pads (“diapers”), and rags, will be strategically placed to prevent migration of any released petroleum or hazardous substance.

If petroleum or hazardous substances are leaking, portable secondary containment and absorbent materials, such as filter socks or diapers, will be used to control the release. Equipment requiring major repairs shall be moved off-site or to a laydown yard for repairs within 24 hours of identifying the equipment malfunction. Any vessel, construction vehicle or equipment found to be releasing petroleum or hazardous substances will be repaired as soon as practicable. All petroleum or hazardous substances released, impacted spill absorbents, and/or contaminated soil resulting from or before a repair will be stored on plastic or in sealed and labeled drums, as appropriate, for disposal at an appropriate state-approved disposal facility.

3.0 SPILL RESPONSE

Spill response includes three actions: assessment, containment, and cleanup. Prior to construction, the contractor will provide the distribution list with the name of the third-party spill response contractor that will be used for spills too large or hazardous for the contractor to address. Personal Protective Equipment (PPE) shall be worn by such workers at all times. PPE must be appropriate for use with the released material and must provide for the safety of construction workers.

3.1 SPILL RESPONSE EQUIPMENT AND MATERIALS

All vessels and equipment used during marine construction of the CHPE Project will have adequate spill kits. Fueling station locations will be outfitted with spill kits and secondary spill containment measures (e.g., catchment trays, booms). The contractor will maintain an adequate supply of "ready to use" spill response materials and equipment on the CHPE Project's installation vessels, laydown yards, and as necessary, at station construction sites. Spill response materials and equipment will include, but not be limited to, the following:

- Commercially available spill kits for marine construction equipment.
- Absorbent supplies, such as diapers and absorbent socks.
- Absorbent material, such as kitty litter and diatomaceous earth.
- Hand-held equipment, such as rakes and shovels.
- Straw bales used in conjunction with plastic sheeting.
- Plastic sheeting.
- Sealed containers, such as five-gallon buckets and 42-gallon barrels.
- Plastic trash bags.
- Chemical resistant gloves.
- Cleaning supplies, such as reusable and disposable rags, and
- Mechanical equipment for soil removal and placement.

3.2 ASSESSMENT

The first project personnel to recognize a spill has occurred are considered the first responders. The first responder will notify the CM, the EI and NKT immediately after a spill has occurred.

After the first responder contacts the CM and/or EI, the first responder will assess the status of the spill. The first responder should assess the following:

- Are all personnel accounted for and has the spill caused any injuries or direct exposures?
- Is it safe for personnel to remain in the vicinity of the spill?
- What is/was the source of the discharge?
- Is the petroleum or hazardous substance still leaking or has the discharge stopped?
    - Can the discharge be safely stopped?
- Approximately how much material has been released?
- Are any environmentally sensitive areas, wetlands, streams, etc. threatened?

The first responders will initiate the notification process detailed in Section 4 of this SPCP by completing the assessment and updating the CM and/or EI. If first responders are also spill cleanup personnel, they should begin containing the spill if it is safe. If the first responders are not spill cleanup personnel, cleanup personnel should be dispatched immediately to the spill to initiate containment.

3.3 CONTAINMENT

The objective of spill containment is to prevent the spread of the spill. The first action of containment is to control any flame sources. Next, cleanup personnel should stop the flow of the petroleum or hazardous substance. While the release of the petroleum or hazardous substance is being stopped, cleanup personnel should use appropriate materials to prevent the spread of the spill. This can include absorbent supplies (such as absorbent socks or booms), sandbags, straw bales with plastic sheeting, or any other material deemed to be effective and safe to use. The containment area should be larger than the actual spill area to allow free space for the cleanup personnel to work the spill without being in coming in contact or spreading the spilled petroleum or hazardous substance. Cleanup personnel should be mindful that any materials used for containment that are contaminated shall be removed, placed in appropriate containers, and transported and disposed of at an approved disposal facility. Sensitive environmental areas should be protected, along with any pathways that can transport the spilled petroleum or hazardous substance, such as storm drains and sewer manholes. The EI will be notified by the Contractor where containment is being performed. The EI will visit the spill site as soon as practicable. Commencement of Containment activities will not wait for arrival of the EI.

3.4 CLEANUP

In general, spill cleanup should begin by removing any free petroleum or hazardous substance. All recovered free petroleum or hazardous substance in liquid form shall be placed in containers with secure lids to prevent further spillage. Solid and semi-solid free petroleum or hazardous substances can be placed in open containers. Once all free petroleum or hazardous substance have been removed, cleanup personnel should remove contaminated soils, vegetation, and other contaminated materials beginning at the perimeter of the spill and working toward the center. Contaminated materials (e.g., soil, vegetation) should be placed in containers appropriate for the contaminated material for transport to an approved disposal facility.

When all free petroleum or hazardous substance(s) and contaminated material(s) have been removed and secured, the spill site shall be cleaned. All non-contaminated debris and other refuse should be picked up and placed in containers for customary proper disposal. Equipment and contaminated PPE, including hand tools, used for the cleanup shall be cleaned. Cleaning materials, such as rags, should be collected and placed in containers for proper disposal.

The EI will be notified by the Contractor when cleanup is being performed. The EI will visit the spill site as soon as practicable. Cleanup activities will not be delayed while the EI arrives on site.

The above procedures should be followed for all releases where applicable. The information below describes the cleanup procedures that may be needed in the event of a specific spill in one of these areas.

Open Water

- In the event of a release of fuel, chemicals, or other potential pollutants listed in Table 2.1 in any open water area, the placement of a containment boom, deployment of divers, and the use of a vacuum hose with a barge and containment tanks may be needed to collect the relapsed material. These procedures and processes will be used as needed based on the size of the release, material released, and similar factors as determined by the EI, CM, Contractor, third party spill cleanup contractors, and the Certificate Holders.

Wetland

- In the event of a release in or near a wetland area, cleanup procedures may include the use of filter socks or mechanical cleanup. Depending on the size of the release, material released, and the ecology of the wetland, cleanup by hand using the materials discussed in Section 3.1 may be more practicable. These procedures and processes will be used as needed based on the size of the release, material released, and similar factors as determined by the EI, CM, Contractor, third party spill cleanup contractors, and the Certificate Holders.

3.5 RESTORATION

A spill site shall be restored once cleanup activities are completed. Post-spill site contours shall be as close to pre-spill contours as practicable. The soil surface should be raked and smoothed. Seed appropriate to the soil type and hydraulic regimen should be used to revegetate disturbed areas. Mulch should be used on seeded areas at the rate of one ton per acre during the growing season to provide cover and improve moisture content of the soil. Mulch should be applied to seeded areas at the rate of two tons per acre in non-growing seasons. The EI will be notified of the time and date when restoration will occur. The EI will coordinate with the site restoration crew to observe, document, and approve the restoration of the spill site.

3.6 DISPOSAL

Waste materials collected during cleanup will be transported to, and disposed at, a pre-approved disposal facility appropriate for the material. All materials transported to any such disposal facility will be in sealed or covered containers, as appropriate. The contractor may use a third-party spill response contractor to provide transport to the approved disposal facility. Disposal facilities may require testing to identify the absence/presence and amount of contaminant constituents depending on the type and amount of contaminated materials. NKT's contractor shall be responsible for maintaining the records for sampling and transporting all recovered petroleum, hazardous substances, and contaminated materials in accordance with the Hazardous Waste Management Plan (HWMP) in Appendix 8-B of the Segment 19B EM&CP.

Copies of the sampling and transport records will be provided to the EI.

3.6.1 Hazardous Materials Handling and Waste Disposal

Hazardous wastes are those materials that are specifically "listed wastes" per 6 NYCRR Part 371 and/or those that display hazardous wastes characteristics for ignitability, corrosivity, reactivity and/or toxicity. Petroleum products and hazardous waste (collectively "hazardous materials") will be managed in a manner to minimize the potential for threats to human health and the environment.

NKT has developed a Hazardous Waste Management Plan (HWMP) which details the management of hazardous waste generated on site and in the event hazardous materials are discovered. The transportation, handling, and storage of hazardous materials will be in conducted in compliance with 49 CFR Parts 100-185 (US DOT Pipeline and Hazardous Materials Safety Administration).

Prospective waste hauling/disposal contractors will be required to provide documentation to the Safety Inspector showing that they have all necessary permits/licenses in place prior to being awarded the work.

The following waste handling and waste disposal procedure will be implemented:

a) Hazardous Materials such as oily rags used for equipment maintenance will be stored in appropriate five (5) gallon to fifty-five (55) gallon drums;
b) Hazardous Materials will be properly packaged, with a written description and labeled as hazardous;
c) Hazardous Materials will be inspected at least weekly while stored on site;
d) Hazardous Materials will be transported via permitted transporters, hazardous waste manifest and permitted Treat, Store, Dispose, Recycle ("TSDR") facilities; and
e) The environmental health and safety officer will be notified of any Hazardous Materials that are generated and/or discovered.

4.0 SPILL REPORTING

The on-site/vessel Safety Inspector will be responsible for contacting the U.S. Coast Guard ("USCG"), NYSDEC, DPS Staff, or other agencies with regard to reportable spills or releases. In the event of a reportable hazardous substance release, the following spill release reporting procedure will be implemented:

a) Notify the site/vessel supervisor/officer in-charge;
b) Notify the owner's health and safety officer;
c) Notify the Certificate Holders;
d) Contact the NRC for reportable spills from vessels or into navigable waters;
e) Contact NYSDEC;
f) Contact local police department having jurisdiction in the spill area;
g) Contact local fire department having jurisdiction in the spill area; and
h) Contact local emergency/ spill response officials having jurisdiction in the spill area.

Any observation of spills, leaking fluids or improperly stored fluids may trigger the issuance of a "stop work" notice by the Safety Inspector or the Environmental Inspector until the situation is resolved. All applicable regulations governing the storage, transport, use, and disposal of fluids, including 49 CFR Parts 100-185, and all reporting requirements for spills which occur during construction will be complied with.

A list of all chemicals used or stored and their appropriate MSDS will be kept on site and onboard each vessel as necessary, and provided to the USCG, fire department and local emergency officials as necessary.

All employees will be trained in the use, storage, handling, spill control, and first aid measures required for these chemicals in accordance with the OSHA and Construction Hazardous Communication Standard ("HAZCOM") (29CFR1926.59).

The on-site/vessel Safety Inspector will ensure that any non-hazardous material discovered during any activity is properly handled. The on-site/vessel Safety Inspector will also ensure that any hazardous materials encountered are handled in accordance with a management and handling plan tailored to such material or that is adequate to protect human health and safety and the environment, until such time as the nature of the material is known.

In the event of a spill, first responders will immediately begin assessment and containment as described in Section 3. Once containment is initiated, the CM or EI will notify the Certificate Holders of the spill. When reporting the spill, the following information will be provided to the Certificate Holders:

1. Time of release;
2. Location;
3. Status of spill containment;
4. Duration of cleanup effort from time of release;
5. Type of material released;
6. Approximate amount of material released;
7. Identification of impacted surface water(s);
8. Type(s) of area(s) affected (upland, wetland, etc.);
9. Estimated volume of soil removed/cleaned;
10. Disposal method(s) of impacted materials; and
11. Photos of release and clean up

As required by State law, within 2 hours of discovery of a spill, the NYSDEC will be notified at the NYSDEC Spill Hotline (1-800-457-7362), unless the spill meets all of the following criteria:

1. The quantity is known to be less than five gallons; and
2. The spill is contained and under the control of the spiller; and
3. The spill has not and will not reach New York water or land (soil); and
4. The spill is cleaned up within two hours of discovery.

New York State Department of Public Service (NYSDPS) staff will also be notified of any reportable spills. The Certificate Holders will also be responsible for contacting the National Response Center (NRC) at 1-800-424-8802 or 1-202-426-2675 (2012 BMP Document 12.4).

A spill is considered to have not impacted land if it occurs on an impervious surface such as asphalt or concrete. A spill in a dirt or gravel parking lot is considered to have impacted land and is reportable. Details on notification and reporting requirements can be found in Section 1.1 of the NYSDEC Spill Guidance Manual. All spills regardless of volume, location and/or timely cleanup are to be reported to the distribution list upon discovery.

All spills that occur during CHPE construction regardless of volume, location and/or timely

cleanup are to be reported to the EI upon discovery.

NKT retains US Ecology, a licensed spill response contractor who will be on-call throughout construction. The contact information for the spill response contractor (US Ecology) is included in both the Oil Spill Contingency Plan (OSCP) and the Shipboard Oil Pollution Emergency Plan (SOPEP) included in this EMCP.

5.0 TRAINING

Training, instruction, and periodic briefings will be provided to all site and vessel personnel, as appropriate, to verify that health and safety precautions and measures are followed during construction. Construction personnel will be trained in the use, storage, handling, spill control, and first aid measures required for petroleum and hazardous substances in accordance with the OSHA Construction Hazardous Communication Standard (29 CFR § 1926.59) and NYSDOT Standard Specifications Section 107-05 prior to initiating work, or will be escorted by personnel who have been trained. The Construction Supervisor will verify the orientation was given prior to an employee working on any construction site. This training will include specific information on how work is conducted as well as the hazards the workers may be exposed to in relation to their own specific craft and work procedures. The EI or CM will maintain a record of training and NKT will provide documentation indicating this training has been successfully completed for all of their personnel.

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Attachment A – Oil Spill Contingency Plan (OSCP)

Oil Spill Contingency Plan (OSCP)

Champlain Hudson Power Express

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1. Introduction

The purpose of this Oil Spill Contingency Plan (OSCP) is to present an overview of the measures incorporated into the project marine operations to minimize the potential for a chemical or hydrocarbon release and to outline the procedures and protocols that will be utilized to prevent or respond to a marine oil spill resulting from project activities.

2. Potential Spill Sources and Prevention Measures

This project will involve both onshore and marine worksites from the shoreline along the cable laying route of the transmission system. Cable will be transported by barge or cable-lay vessel and placed on the lake or river bottom then buried to the designed depth. Support vessels will deliver crew and materials to the cable installation vessels from the onshore support locations.

Onshore Spill Risks and Risk Mitigation Measures

Potential spill sources of hydrocarbons at the onshore worksite includes typical construction spill risks from motorized equipment and refueling of equipment.

a. Onshore Spill Risks and Mitigation Measures

1. **Equipment Leakage** - Inspect equipment daily and remove any equipment with leakage offsite immediately or quarantine over a containment skirt until removed. Perform no onsite repairs.
2. **Refueling Spills** - Fuel equipment at designated fueling station located a minimum of 300 feet away from the shoreline (where possible). Equip fueling station with spill response materials and spill skirts (secondary containment).

Marine Spill Risks and Risk Mitigation Measures

Potential spill sources from the marine worksite consist of leakage from motorized deck equipment and refueling of equipment.

a. Marine Spill Risks and Mitigation Measures

1. **Equipment Leakage** - All portable deck equipment will be equipped with secondary containment of sufficient size to contain the volume of fluids contained in each piece of deck equipment. All mount equipment will be equipped with U.S. Coast Guard (USCG)-approved spill pans.
3. **Refueling Spills** - Refueling of deck equipment will be limited to use of an onboard fueling system using a fuel-rated hose and commercial fuel nozzle, all inspected before each refueling event. The fuel hose and nozzle will be replaced when signs of excessive wear are observed.
4. **Shipwreck** - Publication of a U.S. Coast Guard (USCG) Local Notice to Mariners regarding the marine phase of the project, the use of commercial navigational aids, the use of onboard differential global positioning system (GPS), the use of professional mariners, and the location of

the marine worksite outside of local navigation routes (where possible) are all measures that will mitigate the risk of shipwreck by the project's floating equipment. in the event of shipwreck of one project vessel, the other vessels will be able to provide first response using their onboard spill containment and clean up tools and materials.

3. Oil Spill Response

Oil Spill Response Team. NKT and ASSO will maintain an onsite spill response team to respond to and clean up minor spills during the installation activities. The onsite response team is responsible for reporting any spills as well as containment and cleanup of any small spills using onsite equipment and procedures. The onsite team will be supervised by the Site Supervisor and Site Installation Manager and will include all qualified NKT & ASSO personnel working onsite at the time of the spill and additional spill response and cleanup resources as listed in this section.

NKT will utilize US Ecology for secondary spill response and cleanup services. Although not anticipated, if a major marine release occurs that is beyond the response capabilities of the onsite response team, US Ecology will provide additional assistance in the mechanical containment and recovery of marine oil spills. US Ecology maintains a number of Emergency Response locations in New York and Vermont. The location closest to the project site is in Albany, NY. Table 1 lists the contact information for US Ecology.

Table 1

Role	Contact Information
Emergency Spill Response	**US Ecology** 494 Western Turnpike Altamont, NY 12009 United States (518) 355-0197

Marine Response Crews, Equipment and Materials. The marine spill response will involve the cable installation vessel, as well as other support vessels. All vessels involved in the cable installation will have spill response equipment and materials on board to assist with response efforts in the event of a minor or major spill to the Hudson River. This marine response spread will be maintained and ready to immediately respond to a spill during marine installation work. Smaller support vessels such as crew transfer boats will also support during spill response (when available) and will have more maneuverability to deploy spill containment and respond to changing conditions. **Fig.1** below , lists the oil spill response equipment available onboard the vessels.

FIG. 1. Inventory of Oil Spill Response Equipment

ITEM	LOCATION	NUMBER / QTY
OIL ABSORBENT ROLL	Main Deck (PS) / Prov. Handling Room	1/2 (44mtrs x 97 cm)
OIL ABSORBENT PILLO)	"	40 pcs
OIL ABSORBENT BOOMS S10 5D' x 10'L	"	14 pcs
OIL ABSORBENT BOOMS (BIG) 3m	"	5 pcs
OIL ABSORBENT PADS	"	6 packs
SHOVEL	"	4 pcs
ENVIRON PACK COMPACTORS	"	13 bags
PAIRS OF BOOTS	"	3 x 44 size
RUBBER GLOVES	"	6 pairs
BROOMS	"	3 pcs
CLEANING WIPERS	"	3 pcs
(PLASTIC BAGS)	"	2 rolls
BUCKETS	"	4 pcs
RED RUBBER COVERALLS TRELLCHEM SPLASH XL	Main Deck (PS) / Fire Locker	4 pcs
BLUE LONG RUBBER HELMETS	"	3 pcs
WHITE COVERS L	Main Deck (PS) / Prov. Handling Room	29 x Large
WHITE COVERS KLEENGUARD A 40	"	3 x XXLarge
PLASTIC GOGGLES	"	6 pcs
DRAIN COVERS	"	65 pcs
BOOM STICKS	"	39 pcs
FIRE RETARDANT CLOTH (ΠΥΡΙΜΑΧΟ	"	2 pcs
SURFACE NYLON COVERS	Main Deck (PS) / Prov. Handling Room	1 pcs
DUST FACE MASK 3M	"	3 pcs
MARICHEM OIL SPILL DISPERSANT	"	1 x 30 Ltrs
NALCO NALSPERSE(ECOLAB DISPERSANT)	"	5 x 20 Ltrs
ORANGE QUICK RESPONSE BAG (SOPEP)		
BOX WITH NAILS(VARIOUS SIZES)	Main Deck (PS) / Prov. Handling Room	1 pack
METAL SAW	"	1 pcs
SAW BLADE	"	1 pcs
WOODEN WEDGES	"	1 pcs
ADZE	"	1 pcs
WRENCH	"	1 pcs
CROWBAR	"	1 pcs
RUBBER MAT	"	1 pcs
OIL SPILL KIT FOR BUNKERING		
YELLOW BAGS	Main Deck / Bunkering Station	3 pcs
MANUAL OF RESPONSE (GUIDEBOOK)	"	1 pcs
BLUE GLOVES	"	1 pair
PACK OF PROSORBENTS 40'' x 50''	"	3 packs (3 x 100 each)
GRAY BAG OF ABSORBING MATERIAL	"	1 bag
ABSORBENT CLOTHS	"	½ bag
BAG WITH RAGS	"	1 bag
OIL ABSORBENT BOOMS	"	3 pcs
OIL ABSORBENT PILLOW	Main Deck / Bunkering Station	1 pcs
MARICHEM OIL SPILL DISPERANT	"	4 ltrs
SHAWDUST	"	1 pcs
GRACO HUSKY 2150 PUMP	"	1 pcs
PACKS OF PROSORBENTS 40'' x 50''	"	½ pack
YELLOW ABSORBING WIPES	"	1 pack

4. Notification

Emergency Agency Notification. An important step in the response procedure is notification to others of an incident. Notification is essential to activate the response organizations, alert CHPE management, obtain assistance and cooperation of agencies, mobilize resources and comply with local, State, and Federal regulations. The order of notification is based on the premise that those parties who can render assistance in controlling or minimizing the impacts of an incident be notified before those that are remote from the incident. Refer to Table 2 for a list of agency notifications to be made in the event of an incident. The notification process encompasses the following categories:

- Emergency agency notification
- Company notification/onsite spill response team activation
- Cleanup contractors (if required)
- Notification of other interested parties
- Periodic progress updates and reports (if necessary)

Table 2 - Emergency Agency Notification Matrix

Type of Emergency	Agencies to be Notified	Telephone	Notification Criteria	Notification Time Frame	Information to Report
Oil Spill to Land or Marine Waters	NYS DEC Spill Hotline	(800)457-7362	Reportable Spills to land or water	Immediately	1. Location of release or threatened release 2. Qty released 3. Type of oil 4. Your name and phone number
	National Response Center	(800) 424-8802			
	USCG	(718)354-4353			
	NYS DPS	(562) 590-5201			

Type of Emergency	Agencies to be Notified	Telephone	Notification Criteria	Notification Time Frame	Information to Report
Medical Emergencies	Fire Department/ Ambulance	**911**	Medical assistance and/or transport required	ASAP	1. Type of injury 2. Location 3. Condition 4. Action taken 5. No. of victims
	NY OSHA Albany Office	(518) 464-4338		As required	

ASAP - As Soon as Possible OSHA - New York Occupational Safety and Health Administration

USCG - U.S. Coast Guard

Table 3 – Initial Spill Report Information

Name of reporter Facility name and location Date and time of the spill
Cause (if known -- don't speculate) and location of the spill Estimate of the volume of oil spilled and the volume at immediate risk of spillage Material spilled (e.g., crude oil), and any inhalation hazards or explosive vapor hazards, if known Prevailing marine conditions: • Wave height • Size and appearance of slick • Direction of slick movement • Speed of movement, if known Prevailing weather conditions: • Wind speed • Wind direction • Air temperature Measures taken or planned by personnel on scene • For containment • For cleanup Current condition of the facility Any casualties?

NOTE: When making reports, record the agency, name of person contacted, and the date and time of notification. Reporting of a spill shall NOT be delayed solely to gather all the information noted above.

All actions, including agency notification, should be recorded on the Event Log. A regulatory agency address directory is provided in Table 4.

Table 4 - Addresses of Regulatory Agencies

NATIONAL RESPONSE CENTER U.S. Coast Guard Headquarters 2100 Second Street SW Ste. 7102 Washington, D.C. 20593 **U.S. COAST GUARD, SECTOR NY** 212 Coast Guard Dr. Staten Island, NY 10305 718-354-4037 **NYS. DEPARTMENT OF TRANSPORTATION** 50 Wolf Road Albany, NY 12232 (518) 457-6195	**NYS DEC -DIVISION OF ENV. REMEDIATION** Bureau of Technical Support 625 Broadway - 11th Floor Albany, NY 12233-7020 (518) 402-954 **NEW YORK - OSHA** Leo O'Brien Federal Building 11A Clinton Avenue, Room 617 Albany, NY 12207-2355 (518) 464-4338

Essential agency notifications are further assured by the NYS DEC, DPS and the National Response Center, since they will notify related State and Federal agencies.

If a spill impacts navigable waters, notification of the National Response Center is mandatory and normally results in simultaneous notification of the USCG. However, it is recommended that a call be made to the local USCG office in New York t at (718)-354-4353.

Based on the spill trajectory analysis, if the spill is a threat to the shoreline, the appropriate fire department should also be contacted as well as other stakeholders who may be impacted by this spill, including public water systems in the vicinity. This would not normally be an immediate notification.

Company Notification. CHPE requires that all emergencies related to their respective scopes of work be brought to the attention of CHPE management. The Onsite Project Manager (Qualified Individual) will notify appropriate management by radio or telephone with an initial assessment of the extent and nature of the spill, and will activate additional company resources, if necessary.

Table 5 - Company Notification Matrix

Company	Individual to be Notified	Telephone	Title
NKT	Peter Sunnegardh	+46 703 55 64 93	Sr. Project Manager
NKT	Jonas Carlson	917-287-3989	Project Installation Manager - Submarine
NKT	Dylan Hammond	919-561-2002	Project Environmental Manager
NKT	Treavor Clarke	919-664-2997	Project Health and Safety Manager
CHPE	Sabrina Taylor	561-714-8555	Senior Project Manager
CHPE	Neil Henderson	832-370-1106	VP - Marine Operations
CHPE	Mark Brindley	832-845-6155	Director, Execution & Delivery - Marine
CHPE	Jason Peters	713-409-7620	VP - Infrastructure
WSP	Eric Karlson	+51 943626 338	Project Manager - Submarine
WSP	Bear Kirk	302-579-9390	HSS Director

5. Marine Spill Scenarios and Response Procedures

Minor Spills. This scenario consists of minor spillage of oil or oily water (less than five gallons) from a marine support vessel or installation barge. In this case, response will consist of deployment of sorbent boom and sorbent pads that are stored on the support vessels. In addition, containment boom will be deployed if necessary. Table 6 below lists the response procedures for a minor marine spill.

Table 6 - Minor Marine Oil Spill Response Procedures

Responsible Person	Action
Marine Superintendent - ASSO/Contractor	• Assess the spill size and type of material spilled. • Take action to contain the spill and prevent further spillage. • Inform the Project Superintendent as soon as possible as to the source of the spill, type of material spilled and status of control operations. • Maintain surveillance of source and oil slick. • Assist the onsite response team in implementing clean up procedures including deployment of the absorbent and/or containment boom and sorbent pads and proper storage and disposal of oily debris and sorbent pads. • Account for all personnel and ensure their safety. • Determine if there is a threat of fire or explosion. • If a threat of fire or explosion exists, suspend all control and/or response operations until the threat is eliminated. • Assess the spill situation to determine the status of response operations, estimate spill volume, estimate speed and direction of oil slick movement and determine resource needs. • Notify the NKT Project Manager.
Project Manager – NKT or Contractor	• Mobilize the onsite oil spill response team. • Determine if oil spill response contractor or oil spill response organization should be notified. • Notify appropriate agencies from Table 2. • Supervise response and cleanup operations. • File written reports to appropriate agencies.

Major Spills. For the purposes of this OSCP, a major spill is defined as any spill greater than five gallons. The worst-case potential spill volume is based on the largest vessel's fuel tank capacity. For this project, the ASSO Vessel – Ariadne has the largest fuel capacity of 830,821 gallons. All marine operations will be conducted per the procedures outlined in the Hudson River Cable Installation Methodology Statement (Method Statement), which emphasizes "good mariner practices" and further reduces the potential for a large spill to occur as a result of project implementation. In the unlikely event of a major spill, the same procedures described in Table 6 for a minor spill will be followed for initial spill response, and additional resources from US Ecology will be mobilized.

For both Minor and Major Spills, the Shipboard Oil Pollution Emergency Plan (SOPEP) which is included as Attachment B of the Spill Prevention and Control Plan will be followed. These plans are kept onboard every installation vessel and outline specific, detailed emergency response procedures in the event of a spill.

6. Onshore Spill Scenarios and Response Procedures

Minor Spills. This scenario consists of minor spillage of fuel, oil or hydraulic fluid from terrestrial equipment used to support the onshore activities. Any fuel, motor oil, or hydraulic spills that occur will be contained with appropriate containers (i.e. drip pans or other impervious material) and sorbent pads. Sorbent pads will be maintained at each onshore location where work with petroleum-fueled equipment is being performed. Minor spill cleanup is the responsibility of NKT and their subcontractor.

None of the other onshore activities are expected to involve any large volumes (greater than five barrels) of hydrocarbons.

Attachment B – Shipboard Oil Pollution Emergency Plan (SOPEP)

Document Type: **Plan**
Document ID: **SMM-M07.40 (Ariadne)**

APPROVED
on behalf of the
government
of the vessel's registry
subject to conditions
of ABS letter

ABS

Shipboard Oil Pollution Emergency Plan (SOPEP)

Ariadne (IMO 9413535, ABSCN 09271607)

This plan has been developed in accordance with Regulation 37 of Annex I of MARPOL 73/78.

Rev. No.	Date	Issue Description	Prepared by	Reviewed by	Approved by	Customer Approval
3	27/09/2021	3rd revision of the document	DPA	SEng.	GM	ABS
2	15/07/2021	2nd revision of the document	DPA	SEng.	GM	-
1	12/05/2020	First revision of the document incorporating all the approved changes in Rev.0 by RO	DPA	SEng.	GM	ABS
0	01/04/2020	First issue of the document for RO review and approval	DPA	SEng.	GM	-

Our certifications

Revision Summary			
Revision No	Revised Chapters	Revision Description	Reason for Revision
0	-	First issue of the document (all previous revisions / updates / amendments have been incorporated in the current document)	For RO review and approval
1	3.1.	Addition of reference to Checklists in Subsection 3.7.2.)	RO approved change for inclusion in working copy
	3.2.		
2	Vessel's Main Data	Update of Callsign/MMSI/Type of Ship/Country – Port of Registry/Deadweight/GT/NT	Change of flag / Conversion to CLV
	Vessel's Tank Capacities	Update of table	Tank amendments after conversion
	Appendix 4 – Ship Interest Contacts	Update P&I and H&M Insurance Brokers info	Info update
	Appendix 5 – Stability and Strength Assessment Notification Forms	Update vessel's acronym / tanks' table	Change of flag / Conversion to CLV
	Appendix 6 - National & Local Coordination Form	Update vessel's acronym	Conversion to CLV
3	Vessel's Main Data	'Deadweight' value completed	ABS Comments
	Introduction	Paragraph 3. updated.	
	List of Appendices	Update of 'SOPEP Page Nos' for items 5-6-7-8	
	Appendix 4	Addition of RRDA contact details.	
	Appendix 7	Quantity and location of Oil Spill Response Equipment carried on board were added in the table/list.	
	Appendix 8	Update of drawings/plans' numbers and addition of revision numbers in the table	
NOTE 1: Changes to Section 5 and the Appendices are not required to be approved by the RO/Administration. The appendices should be maintained up to date by the owners, operators and managers.			

Record of changes					
Change No.	Pages	Approved by (Name – Signature)	Date of Approval	Description of Change	Approval by Administration / RO

Approval of Changes by Administration			
Revision No	Date	Approved By	Official stamp

Table of Contents

Vessel's Main Data

ABS-Number	09271607
Name of Ship	ARIADNE
Call Sign / MMSI	SVDM7 / 241760000
IMO-Number	9413535
Type of Ship	Cable Laying Vessel
Country / Port of Registry	Greece / Piraeus
Year of Build	2009
Owner	Asso Ariadne Navigation Company Limited (IMO Reg. Owner ID 5534233)
Operator	Asso Marine Shipping Company (IMO Comp. ID 6004472)
Length OA	130.00 m
Length B.P	122.10 m
Breadth mld	25.00 m
Depth (A Deck)	10.00 m
Deadweight	10,295.30 mt
GT	11,739
NT	3,521
Draught (max.)	7.80 m
Main Generators	4 x MaK 9M25 - 2,850kW each 2 x MaK 9M20C - 1,530kW each
Emerg. Generator	Scania DI1262M
Main Propulsion	2 x AZP100 - 3,500kW each
Bow Thrusters	2 x Tunnel – 1,800kW each 1 x Azimuthing – 1,500kW each
Stern Thruster	1 x Azimuthing – 1,800 kW each
Voyages	International

Vessel's Tank Capacities

No	Air Pipe Heights	Tank No.	Tank ID	Frame		Contents	Density (t/m^3)	Volume (m^3)
				Min.	Max.			
1	273 ab B-Deck	T1	FORE PEAK TK.	162	175	WB	1.025	503.3
2	273 ab B-Deck	T4	DB/WING TK. PS	142	153	WB	1.025	178.9
3	273 ab B-Deck	T5	DB/WING TK. SB	142	153	WB	1.025	171.7
4	273 ab Main deck	T6	STAB.TANK 1	142	147	WB	1.025	235.7
5	273 ab B-Deck	T7	DB/WING TK. PS	132	142	WB	1.025	208.8
6	273 ab B-Deck	T8	DB/WING TK. SB	132	142	WB	1.025	205.1
7	273 ab Main deck	T9	DB/WING TK. PS	122	132	WB	1.025	63.5
8	273 ab Main deck	T10	DB/WING TK. SB	122	132	WB	1.025	63.5
9	273 ab Main deck	T11	DB/WING TK. PS	112	122	WB	1.025	68.1
10	273 ab Main deck	T12	DB/WING TK. SB	112	122	WB	1.025	68.1
11	273 ab Main deck	T13	DB/WING TK. PS	102	112	WB	1.025	83.9
12	273 ab Main deck	T14	DB/WING TK. SB	102	112	WB	1.025	79.7
13	273 ab Main deck	T17	HEELING TK.1 PS	89	102	WB	1.025	207.5
14	273 ab Main deck	T18	HEELING TK.1 SB	89	102	WB	1.025	207.5
15	273 ab Main deck	T22	CENTER TK.	89	102	WB	1.025	203.9
16	273 ab Main deck	T151	HEELING TK.2 PS	75	89	WB	1.025	197.7
17	273 ab Main deck	T151	HEELING TK.2 SB	75	89	WB	1.025	197.7
18	273 ab Main deck	T153	CENTER TK.	33	47	WB	1.025	192.3
19	273 ab Main deck	T154	CENTER TK.	75	89	WB	1.025	219.6
20	273 ab Main deck	T155	STAB.TANK 2	75	80	WB	1.025	314.0
21	273 ab Main deck	T159	HEELING TK.3 PS	61	75	WB	1.025	221.0
22	273 ab Main deck	T160	HEELING TK.3 SB	61	75	WB	1.025	222.3
23	273 ab Main deck	T169	DB/WING TK. PS	47	61	WB	1.025	216.3
24	273 ab Main deck	T170	DB/WING TK. SB	47	61	WB	1.025	216.5
25	273 ab Main deck	T171	DB/CENTRE TK.	47	61	WB	1.025	215.4
26	273 ab Main deck	T177	DB/WING TK. PS	33	47	WB	1.025	209.6
27	273 ab Main deck	T178	DB/WING TK. SB	33	47	WB	1.025	209.6
28	273 ab Main deck	T182	DB/CENTER TK	23	33	WB	1.025	83.2
29	273 ab Main deck	T185	WING TK. PS	11	23	WB	1.025	181.4
30	273 ab Main deck	T186	WING TK. SB	11	23	WB	1.025	181.4
31	273 ab Main deck	T187	STAB.TANK 3	17	23	WB	1.025	369.3
32	273 ab Main deck	T188	WING TK. PS	4	11	WB	1.025	105.9
33	273 ab Main deck	T189	WING TK. SB	4	11	WB	1.025	105.9
34	273 ab Main deck	T190	CENTER TK.	-8	4	WB	1.025	119.6
35	273 ab Main deck	T191	AFT PEAK/ STAB.TK.	-11	-4	WB	1.025	350.5
36	273 ab Main deck	T192	STAB.TANK 4	11	17	WB	1.025	372.3
37	273 ab Main deck	T193	DB/CENTER TK.	61	75	WB	1.025	221.9
38	273 ab B-Deck	T9U	WB WING TK PS	122	126	WB	1.025	51.1
39	273 ab B-Deck	T10U	WB WING TK SB	122	132	WB	1.025	127.0
40	273 ab B-Deck	T11U	WB WING TK PS	112	122	WB	1.025	106.3
41	273 ab B-Deck	T12U	WB WING TK SB	112	122	WB	1.025	106.3
42	273 ab Main deck	T13U	WB WING TK PS	102	112	WB	1.025	105.9
43	273 ab Main deck	T14U	WB WING TK SB	102	112	WB	1.025	105.9
44	273 ab B-Deck	T2	FW PS	152	162	FW	1.000	259.5
45	273 ab B-Deck	T3	FW SB	152	152	FW	1.000	259.5
46	273 ab Main deck	T183	WING TK. PS	23	33	FW	1.000	235.8
47	273 ab Main deck	T184	WING TK. SB	23	33	FW	1.000	219.6
48	FO overflow TK	T15	FUEL OIL TK. PS	102	112	FO	0.860	152.1

No	Air Pipe Heights	Tank No.	Tank ID	Frame		Contents	Density (t/m^3)	Volume (m^3)
				Min.	Max.			
49	FO overflow TK	T16	FUEL OIL TK. SB	102	112	FO	0.860	152.1
50	FO overflow TK	T19	FUEL OIL TK. PS	89	102	FO	0.860	207.3
51	FO overflow TK	T20	FUEL OIL CENTER TK.	92	102	FO	0.860	182.5
52	FO overflow TK	T21	FUEL OIL TK. SB	89	102	FO	0.860	207.3
53	FO overflow TK	T156	FUEL OIL TK. PS	75	89	FO	0.860	222.4
54	FO overflow TK	T157	FUEL OIL TK. CENTRE	75	89	FO	0.860	255.5
55	FO overflow TK	T158	FUEL OIL TK. SB	75	89	FO	0.860	222.0
56	FO overflow TK	T180	FUEL OIL TK. PS	33	47	FO	0.860	142.3
57	FO overflow TK	T181	FUEL OIL TK. SB	33	47	FO	0.860	142.3
58	-	T71	FO SETTLING TK.1 PS	112	118	FO	0.860	25.7
59	-	T72	FO SETTLING TK.2 SB	112	118	FO	0.860	25.7
60	-	T73	FO SERVICE TK.1 PS	118	122	FO	0.860	29.4
61	-	T74	FO SERVICE TK. SB (No1)	118	122	FO	0.860	29.4
62	114 ab Main deck	T75	FO DRAIN TK.	118	120	MIS	1.000	11.2
63	219 ab Main deck	T77	OVERFLOW TK.1	89	92	FO	0.860	54.8
64	219 ab Main deck	T78	OVERFLOW TK.2 SB	43	47	FO	0.860	65.4
65	-	T79	FO.TK. EM.GEN.ROOM	130	133	FO	0.860	4.0
66	114 ab Casing top	T52	SEWAGE TK. PS	126	132	MIS	1.000	89.2
67	76 ab B-Deck	T97	LO DRAIN TK.	116	118	MIS	1.000	15.5
68	114 ab B-Deck	T80	BILGE WATER TK. PS	112	116	MIS	1.000	15.2
69	60 ab A-Deck	T81	BILGE WATER SETTLING TK.1 PS	110	112	MIS	1.000	7.8
70	60 ab A-Deck	T82	BILGE WATER SETTLING TK.2 SB	110	112	MIS	1.000	7.8
71	114 ab Casing top	T83	SLUDGE TK.	119	122	MIS	1.000	19.8
72	114 ab B-Deck	T88	BILGE WATER TK. SB	112	116	MIS	1.000	15.2
73	-	T110	CHAIN LOCKER PS	162	165	MIS	1.000	25.0
74	-	T111	CHAIN LOCKER SB	162	165	MIS	1.000	25.0
75	76 ab Main deck	T56	UREA	122	128	UREA	1.125	46.4
76	60 ab A-Deck	T63	HP. HYDR. OIL STORE TK. PS	122	124	HO	0.924	5.5
77	60 ab A-Deck	T65	HYDR. OIL STORE TK. PS	100	102	HO	0.924	11.9
78	60 ab A-Deck	T66	HYDR. OIL STORE TK. SB	100	102	HO	0.924	5.7
79	76 ab A-Deck	T90	LO SPARE STORE TK. GEAR	124	126	LO	0.924	5.5
80	76 ab A-Deck	T93	LO STORE TK. MAIN ENG.	122	124	LO	0.924	5.5
81	76 ab A-Deck	T95	LO STORE TK. MAIN ENG.	122	126	LO	0.924	18.6
82	60 ab A-Deck	T96	LO SPARE STORE TK. SB	100	102	LO	0.924	11.9
83	60 ab A-Deck	T98	LO SPARE STORE TK. SB	100	102	LO	0.924	5.7
84	60 ab Main deck	T112	VOID SKEG	8	23	VOID	1.025	35.2
85	114 ab Main deck	T114	COFFERDAM ARND MOONPOOL	102	112	VOID	1.025	37.0

No	Air Pipe Heights	Tank No.	Tank ID	Frame		Contents	Density (t/m^3)	Volume (m^3)
				Min.	Max.			
86	114 ab Main deck	T115	VOID AROUND AZIPULL PS	-4	4	VOID	1.025	42.5
87	114 ab Main deck	T116	VOID AROUND AZIPULL SB	-4	4	VOID	1.025	42.5
88	60 ab Main deck	T123	COFFERDAM BELOW TANKTOP	152	162	VOID	1.025	44.9
89	Pipe 105	T125	VOID BELOW TANKTOP	151	153	VOID	1.025	5.8
90	None	T194	VOID WING DECK PS	66	94	VOID	1.025	26.8
91	None	T195	VOID WING DECK BS	66	94	VOID	1.025	26.8

Introduction

1. This Shipboard Oil Pollution Emergency Plan (hereafter referred to as the 'Plan') is written in accordance with the requirements of regulation 37 of Annex I of the International Convention for the Prevention of Pollution from Ships, 1973 as modified by the Protocol of 1978 relating there to (MARPOL 73/78).

2. The purpose of the Plan is to provide guidance to the Master and officers on board the ship with respect to the steps to be taken when an oil pollution incident has occurred or is likely to occur.

3. The Plan contains all information and operational instructions as required by the 'Guidelines for the development of the Shipboard Oil Pollution Emergency Plan' developed by IMO and published under resolution MEPC.54(32) adopted on the 6th of March 1992, as amended by Resolution MEPC.86(44) adopted on the 13th of March 2000. The appendices contain names, telephone, telex numbers, etc., of all contacts referenced in the Plan, as well as other reference material.

4. The Plan has been approved by ABS on behalf of the Administration and, except as provided below, no alteration or revision shall be made to any part of it without the prior approval of the Administration.

5. Changes to Section 5 and the appendices will not be required to be approved by the Administration. The appendices should be maintained up to date by the owners, operators and managers.

6. This plan will be regularly reviewed and updated. Revisions, other than those referred to in 5 above will be submitted to the Administration for approval. Revision will be the responsibility of the managers and will be carried out at intervals not exceeding 12 months.

7. Following an incident in which the plan has been activated, there will be a thorough review of its effectiveness.

Section 1: Preamble

1.1. This Plan is available to assist the ship's personnel in dealing with an unexpected discharge of oil. Its primary purpose is to set in motion the necessary actions to stop or minimize the discharge of oil and to mitigate its effects.

1.2. Effective planning ensures that the necessary actions are taken in a structured, logical, safe and timely manner.

1.3. The primary objectives of this Plan are to:

- prevent oil pollution;
- stop or minimize oil outflow when damage to the ship or its requirements occurs;
- stop or minimize oil outflow when an operational spill occurs in excess of the quantity or instantaneous rate permitted under the present Convention.

1.4. Further, the purpose of the Plan is to provide the Master, officers and certain crew members with a practical guide to the prevention of oil spills and in carrying out the responsibilities associated with regulation 37 of Annex I to MARPOL 73/78

- procedures to report an oil pollution incident
- Coastal State contacts (Focal Points) and Port Contact Lists to be contacted in the Event of an oil pollution incident
- response actions to reduce or control the discharge of oil following an incident
- co-ordination with national and local Authorities in combating oil pollution

1.5. In summary, the Plan will serve to promote a practiced response when the ship's personnel is faced with an oil spill.

1.6. Although the Plan is designed as a ship-specific tool it must also be considered as an additional instrument and as a link to shore-based plans. With this the Plans allow an efficient co-ordination between the ship and shore-based Authorities/ Organizations in mitigating the effects of an oil pollution incident.

1.7. The Plan includes a summary flowchart (see page 9) to guide the Master through reporting and acting procedures required during an oil pollution incident response.

1.8. The Plan is a document used on board by the Master and the Officers of the Ship. It is therefore written in English, which is the working language understood by the Master and Officers. A change in Master and Officers that brings about an attendant change on their working language or languages understood would require the issuance of the Plan in the new languages.

1.9. Without interfering with ship-owner's liability, some coastal States consider that it is their responsibility to define techniques and means to be taken against oil pollution incidents and approve such operations that might cause further pollution, i.e. lightening. States are in general entitled to do so under the International Convention relating to Intervention on the High Seas in Cases of Oil Pollution Casualties, 1969 (Intervention Convention).

SHIPBOARD OIL POLLUTION EMERGENCY PLAN – SUMMARY FLOWCHART

This flow diagram is an outline of the course of action that shipboard personnel should follow in responding to an oil pollution emergency based on the guidelines published by the Organization. This diagram is not exhaustive and should not be used as a sole reference in response. Consideration should be given for inclusion of specific reference to the Plan. The steps are designed to assist ship personnel in action to stop or minimize the discharge of oil and mitigate its effects. These steps fall into two main categories – reporting and action.

DISCHARGE OF OIL – PROBABLE OR ACTUAL

⇩

ASSESSMENT OF THE NATURE OF INCIDENT

⇩

ACTIONS REQUIRED

- Alert crew members
- Identity spill source
- Personnel protection
- Spill assessment
- Vapor monitoring
- Evacuation

REPORTING

By Master and/ or designated crew member

When to report

All probable and actual spills

How to report

- By quickest means to coastal radio station
- Designated ship movement reporting station or
- Rescue Co-ordination Centre (at sea)
- By quickest available means to local authorities

Who to report

- Nearest Coastal State Harbour and terminal operators (in port)
- Ship-owners manager; P & I insurer
- Head Charterer; Cargo owner
- Refer to contact lists

What to report

- Initial report (Res. A.851(20), as amended by MEPC.138(53))
- Follow-up reports
- Characteristics of oil spilled
- Cargo/ ballast/ bunker dispositions
- Weather and sea conditions
- Slick movement
- Assistance required
  - Salvage
  - Lightening capacity
  - Mechanical equipment
  - External response team
  - Chemical dispersant/ degreasing

ACTION TO CONTROL DISCHARGE

Measures to minimize the escape of oil and threat to the marine environment

NAVIGATION MEASURES

- Alter course/ position and/ or speed
- Change of list and/ or trim
- Anchoring
- Setting aground
- Initiate towage
- Assess safe haven requirements
- Weather/ tide/ swell forecasting
- Slick monitoring
- Record of events and communications taken

SEAMANSHIP MEASURES

- Safety assessment and pre-caution
- Advice on priority countermeasures/ preventive measures
- Damage stability and stress consideration
- Ballasting/de-ballasting
- Internal bunkers transfer operations
- Emergency ship-to-ship transfers of bunkers
- Set up shipboard response for:
  - Leak sealing
  - Fire fighting
  - Handling of ship-board response equipment (if available)
  - Etc.

STEPS TO INITIATE EXTERNAL RESPONSE

- Refer to Costal Port State listings for local assistance
- Refer to ship interest contact list
- External clean-up resources required
- Continued monitoring of activities

Section 2: Reporting Requirements

2.1. General

The reporting requirements of this section comply with those of regulation 37 of MARPOL 73/78, Annex I. When the ship is involved in an incident which results in the discharge (or probable discharge) of oil, the Master is obliged under the terms of MARPOL 73/78 to report details of the incident, without delay, to the nearest Coastal State by means of the fastest telecommunication channels available.

The intent of these requirements are to ensure that Coastal States are informed, without delay, of any incident giving rise to oil pollution, or threat of oil pollution, of the marine environment, as well as of assistance and salvage measures, so that appropriate action may be taken.

Without interfering with ship-owners' liability, some coastal states consider that it is their responsibility to define techniques and means to be taken against an oil pollution incident and approve such operations which might cause further pollution, i.e. lightening. States are in general entitled to do so under the International Convention relating to Intervention on the High Seas in Cases of Oil Pollution Casualties, 1969.

2.2. Reporting Procedures

For easy reference the reporting requirements in the context of this Plan are divided in the following information blocks:

2.2.1. When to report

Taking the summary flowchart as shown on page 9 as a basic guide into consideration reports are necessary in the following cases:

2.2.1.1. Actual Discharge

A report is required whenever there is:

- a discharge of oil above the permitted level for whatever reason, including those for the purpose of securing the safety of the ship or saving life at sea.
- a discharge during the operation of the ship of oil in excess of the quantity or instantaneous rate permitted under the present Convention (i.e. MARPOL 73/78).

Therefore, the Master is obliged to report to the nearest Coastal State whenever there is a discharge of oil resulting:

- from damage to the ship
- from damage to the ship's equipment
- for the purpose of securing the safety of a ship or saving life at sea
- during the operation of the ship in excess of the quantity or instantaneous rate permitted under the present Convention.

Reports to Coastal States should be in the style given in section 2.2.2.

2.2.1.2. Probable Discharge

The Master is obliged to report even when no actual discharge of oil has occurred but there is a probability that one could. However, as it is not practical to lay down precise definitions of all types of situations involving probable discharge of oil which would warrant an obligation to report the Master is obliged to judge by him-self whether there is such a probability and whether a report should be made.

Therefore, it is recommended that, at least, the following events:

- Damage, failure or breakdown which affects the safety of the ship, other ships or the protection of the marine environment (e.g. collision, grounding, fire, explosion, structural failure, flooding, cargo, cargo shifting etc.). OR
- failure or breakdown of machinery or equipment which results in impairment of the safety of navigation (e.g. failure or breakdown of steering gear, propulsion, electrical generating system, essential ship borne navigation aids etc.).

In judging whether there is a probability for oil discharge and whether a report should be made, the Master should take into account the nature of the damage failure or break- down of the ship, machinery or equipment as well as the ship's location, proximity to land, weather, state of the sea and traffic density – as cases in which a probable discharge of oil is most likely. If in doubt, the Master should always make a report in cases aforementioned.

In all cases Authorities should be kept informed by the Master as how the situation progresses and be advised when all threat of pollution passes.

2.2.2. Information Required

As required in article 8 and Protocol I of MARPOL 73/78 Convention the Master or other persons having charge of the ship should report the particulars of any pollution incident. In this context the International Maritime Organization (IMO), in 1997, adopted Resolution A. 851 (20) 'General Principles for Ship Reporting Systems and Ship Reporting Requirements, including Guidelines for Reporting Incidents involving Dangerous Goods, Harmful Substances and/ or Marine Pollutants', as amended by IMO Resolution MEPC.138(53).

The intent of the Resolution aforementioned is to enable Coastal States and other interested parties to be informed, without delay, of any incident giving rise to oil pollution, or threat of oil pollution, of the marine environment, as well as of assistance and salvage measures, so that appropriate action may be taken.

Nothing in this chapter relieves the Master in using sound judgement to make sure that any incident or probable discharge of oil is reported as quickly as possible in the prevailing situation.

When transmitting initial reports to the authorities of the nearest Coastal State the Master or other persons dealing with such a transmission should take note of Resolution A. 851 (20), as amended by IMO Resolution MEPC.138(53).

A. INITIAL REPORTS

Especially, the format of the initial report as well as supplementary of follow-up reports should conform to the guidance contained in Res.A.851(20). All reporting whether initial or follow-up, should follow IMO´s reporting format as outlined below and should contain the following information:

LABEL	FUNCTION	EXPLANATION
A	Ship	Name, call sign and nationality
B	Date and time (UTC) of event	A 6-digit group giving day of month (first two digits), hours & minutes (last four digits)
C (OR)	Position	A 4-digit group giving latitude in degrees and minutes suffixed with N or S, and a 5-digit group giving longitude in degrees and minutes suffixed with E or W
D	Position	True bearing (first 3 digits) and distance (state distance) in nautical miles from clearly identified landmark (state landmark)
E	True course	A 3-digit group
F	Speed at time of incident	In knots and tenths of knots as a 3-digit group
L	Route information	Details of intended track
M	Radio communications	Full details of radio stations (names) and frequencies being guarded
N	Time (UTC) of next report	A 6-digit group as under BB above
O	Ship's draught	
P	Cargo on board: can be included in „RR„ as relevant	Type(s) and quantity(ies) of cargo/ bunker on board and brief details of any dangerous cargoes as well as harmful substances and gases that could endanger persons or the environment
Q	Defects or damage or deficiencies or other limitations	Brief details of conditions of the ship as relevant; ability to transfer cargo/ ballast/ bunker fuel
R	Description of pollution or possible overboard discharge	Brief details of pollution; this should include the type(s) of fuel oil, an estimate of the quantity discharged, whether the discharge is continuing, the cause of the discharge and, if possible, an estimate of the movement and area of slick
S	Weather conditions	Brief details of weather and sea conditions prevailing including wind force and direction and relevant swell details
T	Ship's representative and/ or owner	Name, address, telex and telephone number of the ship's owner and representative (charterer, manager or operator of the ship or their agents)
U	Ship's size and type	Details of length, breadth and type of ship as well as capacity (tonnage)
X	Miscellaneous and additional information	Any other information including relevant details such as brief details of incident, need for outside assistance, action being taken to limit further discharge; details of any personnel injuries sustained, details of P & I Club and local correspondent.

A sample format for initial notification and a detailed example of an initial report is shown within the appendices under Appendix 1. All follow-up reports by the Master should include information relevant to the Coastal State Authorities to keep them informed as the incident develops.

B. FOLLOW-UP REPORTS

Once the ship has transmitted the initial report to the shore authorities, further reports should be regularly sent to the Authorities and the ship owner or operator so as to keep them informed of how the incident develops.

Follow-up reports should include information on any significant changes in the ship's condition, the rate of release and spread of oil, weather and sea conditions and clean-up activities underway.

In this context details of bunker disposition, condition of any empty tanks and nature of any ballast carried are information needed by those involved in order to assess the threat posed by an actual or probable discharge of oil from the damaged ship.

2.2.3. Who to Contact

The Master is responsible for reporting any incident involving an actual or probable discharge of oil. Taking into consideration the summary flowchart shown on page 10 the Master of the ship involved in any kind of an actual or probable discharge of oil, cases of which are defined under SECTION 2 (sub-paragraph 2.2.1.1 and 2.2.1.2) of this Plan should report details on the incident immediately (see Appendix1)

Nothing in this chapter relieves the Master from using sound judgement to make sure that any incident is reported as quickly as possible in the prevailing situation.

2.2.3.1. Coastal State Contacts

In order to expedite response and minimize damage from an oil pollution incident at sea, it is essential that appropriate Coastal States be notified without delay.

In this context the use of the list of agencies or officials of Administrations responsible for receiving and processing reports (so called "Focal Points") as developed by the Organization (IMO) in conformity with article 8 of the Convention is recommended. Such a list is shown under Appendix 2.

An updated list of existing "Focal Points" is available from the Internet pages of IMO under address:

http://www.imo.org/ >> National Contacts >>> MEPC.6/Circ. Xx

In the absence of such a list or listed focal point for a single country/ Coastal State, the Master should contact by the quickest available means

- The nearest coastal radio station or
- The designated ship movement reporting station or
- The nearest Rescue Co-Ordination Centre (RCC).

2.2.3.2. Port Contacts

For the ship in port, notification of local agencies, combating teams or clean-up companies will speed up response. If an oil spill occurs during the ship's stay in port, whether operational or as a result of an incident, the Master should inform the appropriate local agencies (e.g. National Response Center, Terminal/ Port Authorities etc.) without undue delay.

If the ship is engaged in a regular service between ports/ terminals the Master or any other person aboard delegated by the Master should provide a list with the relevant Port Contact addresses for each port served regularly of Authorities/ persons and/ or terminals dealing with an oil spill. This list should be regularly updated. The 'Port Contact List' is shown in the Appendix 3.

If a change in the ship's range of trade or a change in the addresses of persons/ Authorities of the ports/ terminals served regularly takes place the Master or any other person aboard delegated by the Master is required to issue a new list.

Where ship's service makes it not feasible to prepare such a list the Master should seek guidance concerning such local Port Contacts and local reporting procedures upon arrival in port.

Addresses obtained in this way should be documented aboard in the form that the Master considers most effective and should be attached to the Plan.

2.2.3.3. Ship Interest Contacts

For Ship Interest Contacts it is necessary to have information at the Master's disposal in case of an oil spill for informing the home office of the ship's owner or operator, the local agent of the company, the appropriate P & I Club and correspondents, clean-up contractors etc.

This information should be provided in the form of a so-called 'Ship Interest Contact List'. The 'Ship Interest Contact List' is shown in the Appendix 4.

To avoid a duplication of reports and to co-ordinate the Plan and the company's shore side plan(s) refer to the overleaf 'Notification Flowchart' (paragraph 2.2.3.4) that indicates the person responsible for informing the various Ship Interested Contacts.

2.2.3.4. Notification Flowchart

Priority	Who	Action	Format	Who to inform	Where in SOPEP
1	Master	Send the initial notification	1 1 1 1	- Coastal state (ship at sea) - Port contact (ship at sea/port) - Owner/operator/qualified individual* - Technical advisor if applicable	Appendices 2,3 & 4
2	Master	Send the stability and strength assessment notification	2	- Technical advisor if applicable	Appendix 4
3	Master	Send follow up notifications	3	- Coastal state or port Contact - Owner/operator /qualified individual* - Technical advisor if applicable	Appendices 2,3 & 4
4	Owner / Operator	Activate clean up resources (if necessary)	1	- Oil spill removal Organisation and / or Salvage Association	Appendix 4
5	Owner / Operator	Send initial notification	1	- Insurer's Representative	Appendix 4
6	Owner / Operator	Send initial notification	1	- P & I representative	Appendix 4
7	Owner / Operator	Send the follow up notification	3	- Oil spill removal Organisation - Insurer representative - P & I club representative - Salvage Association - Classification Society	Appendix 4

*Qualified individual: The person responsible for mobilizing shoreside response personnel and equipment

2.2.3.5. Communication Flowchart

Communication method	Priority	Details
Primary	1	Written report transmitted by fax over the vessels satellite communication SATCOM (INMARSAT C)
Secondary	2	Verbal communication via SATCOM phone.
Secondary	3	Telex message via Satcom phone
Emergency	4	Verbal report via HF or VHF coast radio station

Section 3: Steps to control discharge

Ship personnel will most probably be in the best position to take quick action to mitigate or control the discharge of oil from their ship.

Therefore, this Plan provides the Master with clear guidance on how to accomplish this mitigation for a variety of situations.

It is the Master's responsibility to initiate a response in the event of a discharge of oil or substantial threat of discharge of oil – actual or probable – into the waters.

In no case action should be taken that in any way could jeopardize the safety of personnel either on board or ashore.

The following enumeration specifies different kinds of possible operational oil spills with regard to reactions to be taken.

Spill Category	Checklist	Spill due to	SOPEP Page No
Operational	1	Transfer System Leakage (Pipe leakage)	28
Operational	2	Tank Overflow	29
Operational	3	Suspected Hull Leakage	30
Resulting from a casualty	4	Collision With a Fixed Or Moving Object	31
Resulting from a casualty	5	Grounding / Stranding	32
Resulting from a casualty	6	Fire / Explosion	33
Resulting from a casualty	7	Hull Failure	34
Resulting from a casualty	8	Excessive list	35
Resulting from a casualty	9	Containment System Failure	36
Resulting from a casualty	10	Submerged / Foundered	37
Resulting from a casualty	11	Wrecked /Stranded	38
Resulting from a casualty	12	Hazardous Vapour Release	39

3.1. Operational Spills

(Refer to Checklists in Subsection 3.7.2.)

3.1.1. Operational Spill Prevention

- Crew members shall maintain a close watch for the escape of oil during bunker operations.
- Prior to bunker transfer the competent crew members should mobilize the oil spill equipment, as far as available on board, and place it close to the planned operation, e.g. along the railing on the side at which bunker operation takes place.
- Before bunker handling commences, all deck scuppers and open drains must be effectively plugged. Accumulations of water should be drained periodically and scupper plugs replaced immediately after the water has run off. Any free floating oil or oil droplets should be removed prior to draining.
- Bunker tanks which have been topped up should be checked frequently during the remaining bunker operations to avoid an overflow.
- Unless there are permanent means for retention of any slight leakage at ship/ shore connections for bunker transfer, it is essential that a drip tray is in place to catch any leaking oil.
- The removed bunker oil and the used clean-up material should be retained on board in proper containment units until it can be discharged to a reception facility.

3.1.2. Pipeline Leakage

- If a leakage occurs from a pipeline, valve, hose or metal arm, operations through that connection should be stopped immediately until the cause has been ascertained and the defect remedied.
- Defective pipe sections should be isolated. Affected sections should be drained down to an available empty or slack tank.
- If a leakage occurs from a hydraulic pipeline, operations should be stopped immediately.
- Initiate clean-up procedures.
- The removed bunker oil and the used clean-up material should be retained on board in proper containment units until it can be discharged to a reception facility.
- Inform in line with Section 2 all parties interested about Pipeline Leakage and the actions taken so far.

3.1.3. Tank Overflow

- If there is a tank overflow all bunker operations should be stopped immediately and should not be restarted until the fault has been rectified and all hazards from the released oil have been eliminated.
- If there is any possibility of the released oil or oil vapours entering engine room and accommodation intakes appropriate preventive steps must be taken quickly.
- Promptly shift bunker oil from the tank overflowed to an available empty or slack tank or prepare pump(s) or transfer the excess ashore.
- Initiate clean-up procedures.
- The removed bunker oil and the used clean-up material should be retained on board in proper containment units until it can be discharged to a reception facility.
- Inform in line with Section 2 all parties interested about Tank Overflow and actions taken so far.

3.1.4. Hull Leakage

- Identify leaking tank; consider diver if necessary and possible.
- Reduce level in tank in question well below sea level.
- If it is not possible to identify the leaking tank, reduce level in all tanks in vicinity. In this case give careful consideration to hull stress and stability.
- If there is a spillage due to suspected hull leakage reduce the head of bunker and promptly transfer the bunker oil to an available empty or slack tank or, if berthed, discharge ashore in suitable barges/ tanks.
- Inform in line with SECTION 2 all parties interested about Hull Leakage and the actions taken so far.

3.1.5. Spills caused by Equipment in Machinery Spaces

- If operational oil spills are caused by a failure of equipment in machinery spaces any further operations of this equipment should be stopped immediately or measures are to be taken to avoid an oil spill.
- Such equipment may be:
    - Oily-water separating equipment or oil filtering equipment to de-oil bilge water from the engine room bilges;
    - Valves in pipes connecting ballast/ bilge systems;
    - Cooling pipes in oil cooler systems;
    - Gearing of bow thrusters;
    - Stern tubes.
- The removed bunker oil and the used clean-up material should be retained on board in proper containment units until it can be discharged to a reception facility.

3.2. Spills Resulting From Casualties

(Refer to Checklists in Subsection 3.7.2.)

In the event of a casualty the Master's first priority is to ensure the safety of the ship's personnel, and to initiate actions which may prevent escalation of the incident and marine pollution.

3.2.1. Ship grounded / stranded

- The Master's priority should be to ensure that he as soon as possible receives detailed information about the damage that the ship has been sustained, in order to determine remedial action to be taken for ensuring the safety of the ship and its crew.
- Furthermore, the Master should also consider
    - Danger to the ship's complement if the ship should slide off grounding site
    - Danger of ship being shattered by heavy seas or swell
    - Health hazards to the ship's crew and surrounding population due to release of oil or other hazardous substances in dangerous concentrations
    - That fires may start due to released flammable substances and uncontrolled ignition sources
    - Should the damage which the ship has sustained be of such an extent that the stability cannot be computed on board, the Master should seek assistance according to sub-paragraph 3.6
- Also, the ship´s Master shall take into account the following considerations:
    - Is the vessel constantly being struck in the seaway?
    - Is the vessel exposed to torsion?
    - Is there a large difference in the tidal rangers at the grounding site?
    - Are there strong tidal currents in the grounding area?
    - May the vessel drift further up on shore due to high tides, wind and waves?

3.2.1.1. Prevention of Fire and Explosion

If the ship is aground and therefore cannot manoeuvre, all possible sources of ignition should be eliminated and action taken to prevent flammable vapours from entering the machinery spaces or the accommodation.

3.2.1.2. Extension of Hull Damage / Containment System Failure

- First, a visual inspection should be carried out.
- Check for visible oil along hull or in wake of the ship during day time. At night a stick with white cloth (or sheet of sorbent) around it may be lowered into the water alongside the ship to check for oil leakages.
- All ballast/ bunker tanks to be sounded (ullage),
- All other compartments which may have contact with the sea should be sounded to ensure that they are intact.
- Soundings of ballast tanks/ bunkers tanks are to be compared with last soundings to check for possible leaks.
- Sounding to be taken around the ship establish the ship's position on the grounding area.
- When the ship is aground, due regards should be given to the indiscriminate opening of ullage plugs, sighting ports etc. as loss of buoyancy could be the result of such actions.
- Any list of the ship shall be noted and included in the report for assistance.

3.2.1.3. Procedures to Reduce or Stop Outflow of Oil

- The Master should assess the possibility of damage to the environment and whatever action can be taken to reduce further damage from an oil release, such as:
    - Transfer of bunkers internally provided shipboard piping system is in an operational condition
    - If the damage is fairly limited and restricted, i.e. to one or two tanks, consideration should be given to transfer of bunkers internally from the damaged tank(s) to intact tanks, taking into account the impact on the ship's overall stress and stability

- Isolate damaged/ penetrated bunker tank(s) hermetically to ensure that hydrostatic pressure in tanks remains intact during tidal changes
- Evaluate possibility of pumping water into a damaged tank in order to form a water bottom stopping the outflow of oil
- Evaluate the necessity of transferring bunkers to barges or other ships and request such assistance accordingly
- Evaluate the possibility of additional release of oil.

- In case of large differences between the tide levels, the Master should try to isolate the damaged tank(s) to reduce additional loss of bunker oil.

3.2.1.4. Re-floating by own Means

The Master should also evaluate the question of re-floating the vessel by own means. Before such an attempt is made, it must be determined:

- whether the ship is damaged in such a way that it may sink, break up or capsize after getting off
- whether the ship after getting off may have manoeuvring problems upon leaving the dangerous area by own means
- whether machinery, rudder or propeller are damaged due to grounding or may be damaged by trying to get off ground by own means
- whether the ship may be trimmed or lightened sufficiently to avoid damage to other tanks in order to reduce additional pollution from oil/ bunker spillage
- Weather evaluation: whether there is time/ reason to await improvements in weather or tide.

3.2.1.5. Securing the Ship

If the risk of further damage to the ship is greater in an attempt to re-float the ship by own means, than in remaining aground until professional assistance has been obtained, the ship's Master should try to secure the ship as much as possible by:

- Trying to prevent the ship from moving from its present position
- By dropping anchors (adequate water depth and anchor ground provided) and using vessel's DP system
- By taking ballast into empty tanks, if possible
- Trying to reduce longitudinal strain on hull by transferring ballast or bunkers internally
- Reducing fire risk by removing all sources of ignition.

Inform in line with Section 2 all parties interested about the Grounding and the actions taken so far.

3.2.2. Fire/ Explosion

- Should an explosion and a fire occur on board, sound the GENERAL ALARM immediately
- Further actions should be initiated in accordance with the ship's Muster List.
- In case of fire and explosion the following priorities exist:
  - Rescuing lives
  - Limiting the damage/ danger to the ship and cargo
  - Preventing environmental pollution
- Steps to control the discharge of oil will depend largely on the damage to ship and cargo.
- Special information thereto is contained in subparagraphs 3.2.4, 3.2.5 and 3.2.6.
- Inform in line with Section 2 all parties interested about the Fire/ Explosion and the actions taken so far.

3.2.3. Collision (with fixed or moving objects)

- Should the ship be involved in a collision with another ship, the Master should as soon as possible identify the extent of damage to his own vessel.
- When a collision occurs, the GENERAL ALARM should be sounded immediately for the personnel to muster at their designated Muster Stations.
- The following check list should assist the Master in assessing the situation:
    - Are any tanks penetrated above or below the waterline?
    - If ships are dead in the water and interlocked, what is most prudent, to stay interlocked or separate?
    - Is there any oil spill at present – small or large? Will a separation of the interlocked ships create a larger oil spill than if the ships stay interlocked?
    - If there is an oil spill, will the separation of the ships cause sparks that can ignite the spilled oil or other flammable substances leaked out from the ships?
    - Are the ships creating a greater danger to other traffic in the area if they are interlocked than if separated?
    - Is there a danger to either ship of sinking after being separated?
- If separation of the ships takes place, alter course to bring the own ship windward of any oil slick, if possible.
- Shut down all none essential air intakes.
- Isolate damaged/ penetrated tank(s) by hermetically closing the tank(s), if possible.
- When it is possible to manoeuvre (with the assistance of tug boats), the Master, in conjunction with the appropriate shore authorities, should consider moving his ship to a more suitable location in order to facilitate emergency repair work or lightening operations, or to reduce the threat posed to any sensitive shoreline areas.
- Inform in line with Section 2 all parties interested about the collision and the actions taken so far.

3.2.4. Hull Failure

- Should the ship lose one or more shell platings, develop major cracks, or suffer severe damage to the hull, the Master should immediately sound the GENERAL ALARM to call the crew members to their Muster Stations, and inform them of the situation, and prepare lifeboats for launching if necessary.
- The Master should then assess the situation, and confer with his senior officers.
- The Master should obtain the latest weather forecast and asses its impact on the present situation.
- Furthermore, the following questions should be considered and should be asked: Is the ship in any immediate danger of sinking or capsizing?

  If YES:
    - Send distress message
    - Immediately abandon the ship

  If NO, initiate damage control measures as found necessary by considering the following points:
    - Can the vessel manoeuvre?
    - Has the ship lost buoyancy?
    - If the ship has a list due to loss of ballast, cargo/ bunker or buoyancy, is it necessary and possible to rearrange the bunker or ballast by internal transfer operation in order to bring the ship to an even keel?
    - Is it necessary to dump cargo in order to maintain stability without changing the stress situation?
    - Can this operation wait till another ship/ barge can receive that cargo?
    - Is there any abnormal change in the ship's stability and stress situation?
    - Can the change in the ship's stability and stress situation be monitored and calculated on board? If not, the Master should seek assistance according to subparagraph 3.6.

- Might it be prudent to salve part of the crew members in case the situation should worsen, or is it necessary to abandon the ship totally?

Inform in line with Section 2 all parties interested about the Hull Failure and the actions taken so far.

3.2.5. Excessive List

- Should the ship for some reasons suddenly start to list excessively during discharging/ loading operations, or bunkering, all ongoing operations should be stopped immediately until the cause has been determined.
- The Officer on Duty should inform the Master and/or Chief Officer without delay and the General Emergency Alarm should be sounded.
- The Master should try to determine the reason for the excessive list, and take steps to rectify the situation and to stabilize the ship's condition:
  - Check reason(s) for list
  - Soundings/ ullage to be taken in all tanks
  - Bunker/ ballast pumps to be made ready
  - Consider measures to minimize list in transferring liquid from one compartment to another
  - Ensure water tightness of empty spaces
  - Close all openings
  - Secure vent pipes to avoid ingress of water
  - If bunkering: Change to corrective tanks for rectifying the situation
  - If ballasting/ de-ballasting: Change to corrective tanks to rectify the situation
  - If there is reason to believe that the list may cause an oil spill, notify as per Section2
  - If the ship's crew is in jeopardy, prepare lifeboats for launching, and notify as per Section 2
- If the situation is brought under control, inform all parties interested.

3.2.6. Ship submerged / foundered / wrecked

If the ship is wrecked to the extent that it or parts of it are submerged

- ring the General Alarm;
- take all measures to evacuate all persons on board;
- avoid contact with any spilled oil;
- alert other ships and/or the nearest coastal state for assistance in rescuing lives and the ship as far as possible;
- exhibit NUC lights/shapes and use sound signals;
- notify the appropriate parties, as per section 2.

3.2.7. Hazardous Vapour release

- In case of any vapour release out of the containment system precautions have to taken to protect the persons on board against contamination.
- The ship should be brought with the accommodation upwind ot the spill area as far as possible.
- The crew should be evacuated from any area of risk.
- All possible sources of ignition should be eliminated and non-essential air intakes shut down to prevent intake of vapour into accommodation and engine spaces.
- If unavoidable work has to be carried out within risk areas, the involved persons have to wear protective closing and breathing apparatus.

3.2.8. Containment System Failure

(Drip trays, bunkering stations and D.O & L.O vents on Main Deck)

- First, a visual inspection should be carried out.
- The General Alarm should be sounded and all operations in progress (e.g. bunkering, dry cargo loading, etc.) should be suspended.
- A check for visible oil along hull or in wake of the ship during daytime should be made. At night a stick with white cloth (or sheet of sorbent) around it may be lowered into the water alongside the ship to check for oil leakages.
- All ballast/ bunker tanks should be sounded (ullage). All other compartments, which may have contact with the sea, should also be sounded to ensure that they are intact.
- Soundings of ballast tanks/ bunkers tanks are to be compared with last soundings to check for possible leaks.
- If necessary, drip trays are to be placed under bunker manifolds and round vents of fuel/lub oil tanks.
- Sounding should be taken around the ship to establish the ship's position on the grounding area.
- When the ship is aground, due regard should be given to the indiscriminate opening of ullage plugs, sighting ports etc. as loss of buoyancy could be the result of such actions.
- Any list of the ship shall be noted and included in the report for assistance.
- The Master should assess the possibility of damage to the environment and whatever action can be taken to reduce further damage from an oil release, such as:
    - Initiate clean-up procedures in case of oil spillage onboard
    - Transfer of bunkers internally provided shipboard piping system is in an operational condition
    - If the damage is fairly limited and restricted, i.e. to one or two tanks, consideration should be given to transfer of bunkers internally from the damaged tank(s) to intact tanks, taking into account the impact on the ship's overall stress and stability
    - Isolate damaged/ penetrated bunker tank(s) hermetically to ensure that hydrostatic pressure in tanks remains intact during tidal changes
    - Evaluate possibility of pumping water into a damaged tank in order to form a water bottom stopping the outflow of oil
    - Evaluate the necessity of transferring bunkers to barges or other ships and request such assistance accordingly
    - Evaluate the possibility of additional release of oil
    - In case of oil spillage overboard, notify the appropriate parties, as per Section 2.
    - In case of large differences between the tide levels, the Master should try to isolate the damaged tank(s) to reduce additional loss of bunker oil.
    - Consider and follow (if applicable) the procedures specified in cases of subsections 3.1.1 and 3.1.2 (pipe leakage and tank overflow).

3.3. Priority Actions

Top priority shall in all cases of casualty be put on the safety of the persons onboard and to take actions to prevent escalation of the incident. Immediate consideration should be given to protective measures against fire, explosions and personnel exposure to toxic vapour.

Detailed information about the damage sustained to the ship and its containment system has to be obtained. On the basis of the information the Master can decide next actions for the protection of lives, the ship, the cargo and the environment.

The Master should take into account the following when he is determining whether salvage assistance will be needed or not:

- Nearest land or hazard to navigation

- Vessel's set and drift
- Estimated time of casualty repair
- Determination of nearest capable assistance and its response time.

In case of necessary internal transfer of fuel/ballast, careful consideration is to be given to hull strength and stability.

Plans/tables about the location and specification of the current cargo as well as bunkers and ballast have to be readily available.

3.4. Mitigating Activities

When the safety of the vessel and the personnel onboard has been successfully addressed, the following aspects are to be further considered:

Assessment and monitoring requirements
Emergency situations should be monitored and assessed to identify possibilities for the situation to escalate. These situations should be monitored through the frequent sounding of tanks, monitoring of flammable toxic vapours by using portable / fixed instruments, monitoring of the surrounding situations including any changes of weather and, if the vessel is aground, monitoring of soundings around the ship. Sampling should be employed where considered necessary, which could indicate the broaching of fuel or lub oil containment.

Personnel protection issues
Marine Safety Data Sheets (MSDS) should be consulted for all bunkers and applicable safety precautions should be taken. MSDS can be obtained for chemical cargoes through the USCG Chemical Hazards Response Information System (CHRIS) Manual, and Liquid Natural Gas through the ICS Tanker Safety Guide, Liquefied Gas Manual. MSDS for bunkers are issued to vessels. MSDS give details of emergency procedures and health physical data for particular grades. Protective clothing should be issued and worn in accordance with the advice in the MSDS. With the information from the aforementioned manuals available, all possible threats to the health and safety of the involved personnel are to be evaluated before any actions taken. Only persons with suitable personnel protection (such as breathing apparatus, masks, glows, leggings, aprons, sleeve protections etc.) and knowledge of its use are to be engaged in dangerous operations even if this will reduce the activity.

Isolation procedure
All possible consideration should be given to isolate bunker spaces that have been breached in order to mitigate the quantity discharged. Consideration should also be given to transferring bunkers from any breached compartment to sound compartment(s).

Decontamination of personnel
Protective clothing should be worn in accordance with the particular grade of bunkers which personnel are likely to come in contact with. On completion of operations all protective clothing should be cleaned and stored for further use. On no account should contaminated clothing be allowed within the accommodation areas. Personnel should ensure that all contaminants are cleaned from their bodies.

Disposal of Removed Oil and Cleaned – Up Materials
Disposal of all recovered oil and contaminated clean up materials should always be in accordance with Marpol 73/78 and the Vessel's Garbage Management Plan.

3.5. Transfer of Bunker/ Lightening

If the ship has sustained extensive structural damage, it may be necessary to transfer all or part of the bunkers to another ship.

In Ship-to-Ship-transfer operations involving a specialized service ship, the Master of that ship will normally be in overall charge.

In the case of non-specialized ships the Master or other person in overall charge of the operation should be mutually agreed and clearly established by the Masters concerned prior to the start of operations.

The actual bunker transfer should be carried out in accordance with the requirements of the receiving ship.

In all cases each Master remains responsible for the safety of his own ship, its crew, and cargo/ bunker and equipment and should not permit their safety to be jeopardized by the action of the other Master, his owner, regulatory officials or others.

The Ship-to-Ship-transfer operations should be coordinated with the appropriate responsible local Authority.

When selecting the area of operation the Master(s) should consider the following points

- The need to notify and obtain the agreement of any responsible authority
- The destinations of the ships concerned
- The shelter provided, particularly from sea and swell
- The sea area and depth of water, which should be sufficient for manoeuvring during mooring, unmooring and transfer operations and allow a safe anchorage if operations have to be undertaken at anchor
- The traffic density
- The weather conditions and the weather forecasts

Further, before commencing Ship-to-Ship transfer operations each ship should carry out, as far as possible, appropriate preparations like

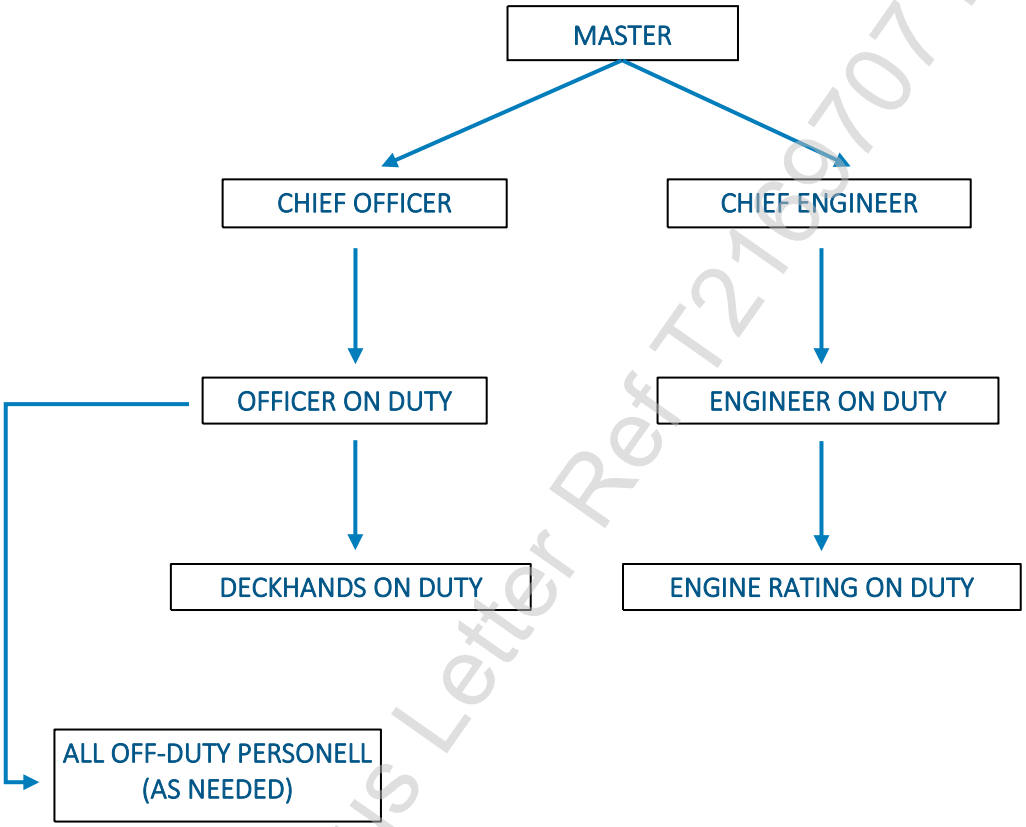
- Pre-mooring preparations of the ships (use of DP system)
- Positioning of fenders if such equipment is available on board
- Mooring equipment arrangements
- Checking the communication channels between the two ships

3.6. Damage Stability and Hull Stress Calculation

It should be noted that, in an emergency, the best course of action required to save the ships, crew and protect the environment may not be obvious. Water ingress and oil outflow resulting from incidents such as collision, grounding, fire, explosion or hull failure can be made worse if the wrong decision is taken. In such a situation, a full appreciation of the vessels stability and longitudinal strength is essential. If these calculations are beyond the ships resources, assistance must be sought from the shore. The Master must complete and transmit the Casualty Report Forms (Appendix 5) to the technical department of the company in order that the relevant analysis can be made. The technical department can be assisted, depending on the situation, by the following technical bureau.

DIM.PAPADIMITRIOU & ASSOCIATES
92 KOLOKOTRONI STR., GR18535
PIRAEUS – GREECE
TEL:+30 210-4175660
TEL:+30 210-4175655
FAX:+30 210-4220060
E-MAIL: dpb@otenet.gr

3.7. General Responsibilities of the Master and designated Officers / Crew Members



3.7.1. General Responsibilities

The following crew members are in charge in the event of an oil spill – actual or probable – to bring the accident under control, limit outflows, organize on board clean-up procedures and determine the additional manpower needed. Arrangements shall be made that in case of sudden unavailability of superior ranks other available ranks are prepared to take over.

Ranking	Duties
Master	Overall in charge of operation on board dealing with an oil spill; responsible for all steps to be taken especially for the two main categories – reporting and action. Keeps log off all events and progress of actions.
Chief Officer	In charge of deck operation; Should keep the Master informed and updated on the situation and the results from action taken to stop or minimize an oil outflow.
Chief Engineer	In charge of bunker operation; Should keep the Master informed and updated on the situation and the results from action taken to limit oil outflow.
Deck Duty Officer	Tank overflow (bunkering): Alert and inform Chief Officer/ Chief Engineer on situation; Mobilize off duty crew as necessary
Duty Engineer	Assist Chief Engineer; Prepare for firefighting; Ensure sufficient power and water to deck; Organize on board clean-up equipment
Duty Rating(s)	If an oil leakage is detected alert immediately by all possible means; Inform Officers(s) on Duty immediately; Position sorbet material/ clean-up material to prevent any escaped oil from reaching the railing; Commence clean-up by using, as far as available on board, the clean-up equipment

3.7.2. Checklists

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Checklist No1	Transfer System Leak

No	Action	Responsible	Done	When
1	Secure all transfer pumps and close all valves in order to stop the flow of product	Chief Engineer		
2	Notify shore terminal	Chief Engineer		
3	Notify Master	Chief Engineer		
4	Activate the on board response team	Master		
5	Complete initial notification (format 1)	Master		
6	Send format 1 according to the notification flow chart in section 2.2.3.4	Master		
7	Individuate the pipe stretch where leakage has occurred	On board Response Team		
8	Operate the containment dispersion and recovery of polluted oil	On board Response Team		
9	Take appropriate steps to prevent petroleum gas from entering in the engine room intake	Chief Engineer		
10	Complete this checklist	Chief Engineer		
11	Send supplementary and / or follow–up format 1 information	Master		

Checklist No2	Tank Overflow

No	Action	Responsible	Done	When
1	Secure all transfer pumps and close all valves in order to stop the flow of product	Chief Engineer		
2	Notify shore terminal	Chief Engineer		
3	Notify Master	Chief Engineer		
4	Activate the on board response team	Master		
5	Complete format 1 initial notification as per section 2	Master		
6	Send format 1 according the notification flowchart given in the section 2.2.3.4	Master		
7	Transfer the bunkers from the affected zone to an available empty or slack tank(s)	Chief Engineer		
8	Operate the containment dispersion and recovery of polluted oil	On board Response Team		
9	Take appropriate steps to prevent petroleum gas from entering in the engine room / accommodation intakes	Chief Engineer		
10	Complete this checklist	Chief Engineer		
11	Send supplementary and / or follow–up format 1 information	Master		

Checklist No3	Suspected Hull Leakage

No	Action	Responsible	Done	When
1	Notify Master	Chief Officer / Chief Engineer		
2	Activate the on board response team	Chief Officer / Chief Engineer		
3	Complete format 1 initial notification as per section 2	Master		
4	Send format 1 according the notification flowchart given in the section 2.2.3.4	Master		
5	Individuate the specific tank from which leakage is occurring	On board Response Team		
6	In the event the source of the leakage cannot be located from onboard, employ a diver to investigate possible bottom leakage	On board Response Team		
7	Carry out appropriate actions taking into account the effect corrective actions may have on hull stress and stability	Master		
8	Reduce the head of oil in the tank involved by draining bunkers into an available empty slack tank(s)	Chief Engineer		
9	Repair the leak if possible	Oil Spill Response Team		
10	Operate the containment, dispersion and recovery of polluted oil	Oil Spill Response Team		
11	Complete this checklist	Chief Officer / Chief Engineer		
12	Send supplementary and / or follow –up format 1 information	Master		

Checklist No4	Collision with a Fixed or Moving Object

No	Action	Responsible	Done	When
1	Activate the on board response team / Ring the General Alarm	Master		
2	Obtain detailed information on the damaged sustained by the ship	Master		
3	Complete format 1 initial notification	Master		
4	Send format 1 according the notification flowchart given in the section 2.2.3.4	Master		
5	Sound all bunker tanks and other compartments which are of or close to the damaged area	Chief Oficer / Chief Engineer		
6	Compile the format 2 stability and strength assessment notification	Master		
7	Send format 2 according the notification flowchart given in the section 2.2.3.4	Master		
8	Avoid indiscriminate opening of ullage plugs or sighting ports	Oil Spill Response Team		
9	Take appropriate steps to prevent petroleum gas from entering in the engine room / accommodation intakes	Chief Officer		
10	Complete this checklist	Master		
11	Send supplementary and / or follow –up format 1 and format 2 information	Master		
12	Isolate damaged / penetrated bunker tanks	Chief Engineer / Chief Officer		
13	With the assistance of tug boats, move the ship to a more suitable location for emergency repairs and / or lightening	Master		

Checklist No5	Grounding / Stranding

No	Action	Responsible	Done	When
1	Activate the on board response team	Master		
2	Obtain detailed information on the damaged sustained by the ship	Master		
3	Complete format 1 initial notification	Master		
4	Send format 1 according the notification flowchart given in the section 2.2.3.4	Master		
5	In the event the source of the leakage cannot be located from on board, employ a diver to investigate possible bottom leakage	Oil Spill Response Team		
6	Sound all bunker tanks and other compartments which are of or close to the damaged area	Chief Officer / Chief Engineer		
7	Direct the sounding around the vessels to establish the vessels position on bottom	Chief Officer		
8	Compile the format 2 stability and strength assessment notification	Master		
9	Send format 2 according the notification flowchart given in the section 2.2.3.4	Master		
10	Reduce the risk by removing all ignition sources	Chief Officer		
11	Evaluate the necessity of transferring cargo to barge or internally	Master		
12	Complete this checklist	Master		
13	Send supplementary and / or follow –up format 1 and format 2 information	Master		
14	Isolate damaged / penetrated bunker tanks	Chief Engineer / Chief Officer		

Checklist No6	Fire / Explosion

No	Action	Responsible	Done	When
1	Find out immediately where the fire / explosion has taken place	Chief Officer / Chief Engineer		
2	Sound the fire alarm	Deck Duty Officer		
3	Activate the fire – fighting team	Master		
4	Activate the on board response team	Master		
5	Obtain detailed information on the damaged sustained by the ship	Master		
6	Compile the format 1 initial notification and format 2 stability and strength assessment notification	Master		
7	Send format 1 and 2 according the notification flowchart given in the section 2.2.3.4	Master		
8	Deploy the members of the vessels damage control team to the positions deemed best for fighting the fire	Chief Officer		
9	Use all available means to fight the fire	Chief Officer		
10	Try to contain the fire and prevent it from spreading to the other part of the ship	Chief Officer		
11	Complete this checklist	Master		
12	Send supplementary and / or follow –up format 1 and format 2 information	Master		
13	Consider response actions of Checklists 7, 8, 10 or 11	Master		

Checklist No7	Hull Failure

In case of immediate danger of sinking or capsizing

No	Action	Responsible	Done	When
1	Prepare for immediate evacuation of the vessel	Master		
2	Send distress signal	Master / Officer on Duty		
3	Complete format 1 initial notification as per section 2 if possible	Master		
4	Send format 1 according the notification flowchart given in the section 2.2.3.4	Master		

In case of no immediate danger of sinking or capsizing

No	Action	Responsible	Done	When
1	Determine the extent of damage	Master		
2	Activate the on board response team	Master		
3	Complete format 1 initial notification as per section 2	Master		
4	Send format 1 according the notification flowchart given in the section 2.2.3.4	Master		
5	Direct sounding on all tanks to determine the extent of all flooding and number of tanks breached	Chief Officer / Chief Engineer		
6	Compile the format 2 stability and strength assessment notification	Master		
7	Send format 2 according the notification flowchart given in the section 2.2.3.4	Master		
8	Complete this checklist	Master		
9	Send supplementary and / or follow –up format 1 and format 2 information	Master		
10	Consider internal transfer of bunkers or water ballast in case of excessive list	Master		

Checklist No8	Excessive List

No	Action	Responsible	Done	When
1	Notify Master	Chief Officer		
2	Determine the reason for excessive list	Master		
3	Compile format 1 initial notification	Master		
4	Send format 1 according the notification flowchart given in the section 2.2.3.4	Master		
5	Change to corrective tanks to rectify the situation if in bunkering / ballasting operation	Master / Chief Officer / Chief Engineer		
6	Activate the on board response team	Master		
7	Consider corrective actions	Master		
8	Compile the format 2 stability and strength assessment notification	Master		
9	Send format 2 according the notification flowchart given in the section 2.2.3.4	Master		
10	Complete this checklist	Master		
11	Send supplementary and / or follow –up format 1 and format 2 information	Master		
12	Close all openings and watertight doors, secure vent pipes	Chief Officer / Chief Engineer		

Checklist No9	Containment System Failure

No	Action	Responsible	Done	When
1	Carry out visual inspection	Chief Officer		
2	Sound General Alarm – Suspend all operations in progress	Officer on Duty / Engineer on Duty		
3	Muster personnel mustered and brief them on the situation and potential dangers.	Master		
4	Activate the on board response team	Master		
5	Check for visible oil along hull or in wake of the ship during daytime. At night lower a stick with white cloth (or sheet of sorbent) around it into the water alongside the ship to check for oil leakages.	Chief Officer		
6	Sound all ballast / bunker tanks. Soundings should be compared with last soundings to check for possible leaks.	Chief Officer Chief Engineer / Engineer on Duty		
7	Sound all other compartments that may have contact with the sea to ensure they are intact.	Chief Officer / Chief Engineer		
8	If necessary, drip trays are to be placed under bunker manifolds and round vents of fuel/ lube oil tanks.	Chief Officer / Chief Engineer		
9	Sounding should be taken around the ship to establish ship's position on the grounding area	Chief Officer / Officer on Duty		
10	The owner / operator informed	Master / Officer on Duty		
11	Notify the nearest states authority	Master/ Officer on Duty		
12	When the ship is aground, due regard should be given to the indiscriminate opening of ullage plugs, sighting ports etc. as loss of buoyancy could be the result of such actions.	Master / Chief Officer		
13	Any list of the ship shall be noted and included in the report for assistance.	Master		

Personnel behaviour has to be as such as no risks may arise, endangering their own lives or the lives of any other crewmembers

The Master should assess the possibility of damage to the environment and whatever action can be taken to reduce further damage from an oil release, such as:
- Initiate clean-up procedures in case of oil spillage onboard
- Transfer of bunkers internally provided shipboard piping system is in an operational condition
- If the damage is fairly limited and restricted, i.e. to one or two tanks, he should consider transferring of bunkers internally from the damaged tank(s) to intact tanks, taking into account the impact on the ship's overall stress and stability
- Isolate damaged/ penetrated bunker tank(s) hermetically to ensure that hydrostatic pressure in tanks remains intact during tidal changes
- Evaluate possibility of pumping water into a damaged tank in order to form a water bottom stopping the outflow of oil
- Evaluate the necessity of transferring bunkers to barges or other ships and request such assistance accordingly
- Evaluate the possibility of additional release of oil
- In case of oil spillage overboard, notify the appropriate parties, as per Section 2.
- In case of large differences between the tide levels, the Master should try to isolate the damaged tank(s) to reduce additional loss of bunker oil.
- Consider and follow (if applicable) the procedures specified in cases of subsections 3.1.1 and 3.1.2 (pipe leakage and tank overflow).

Checklist No10	Submerged / Foundered

No	Action	Responsible	Done	When
1	Activate General Alarm	Master		
2	Exhibit NUC lights / shapes and use sound signals	Officer on Duty		
3	Check all watertight doors are closed	Chief Engineer / Chief Officer		
4	Take soundings of all tanks and bilges	Chief Engineer / Chief Officer		
5	Locate the source if any, of ingress of water	Chief Officer		
6	The owner / operator informed	Master / Officer on Duty		
7	Notify the nearest states authority	Master/ Officer on Duty		

If the master realises that the situation is no more recoverable notwithstanding all attempts and it is no more safe for the crew to remain on board GIVES THE ORDER TO ABANDON THE SHIP

Personnel behaviour has to be as such as no risks may arise, endangering their own lives or the lives of any other crewmembers

The following emergency actions and duties have to be taken and followed:

Master	Duty Officer	Crew-members
• Assesses the situation and takes the decision to abandon the ship. • Gives the order to transmit the distress signal. • Gives verbal order to abandon the ship.	• Sound the life boat station alarms.	• Put on lifejackets, safety helmets and warm dresses and proceed to muster stations.

Master and Bridge party	Emergency and stand-by parties	Technical party
• Ensure muster check has been completed, all personnel accounted for and details of missing persons (if any) passed to lifeboat commanders. • Record events and collect log books. • Monitor preparation and launch of lifeboats. • Advice all ships by VHF CH16 DSC CH70 and activated GMDSS Distress Alarm • Advice by sat-phone / telex, etc. • Reduce way of the vessel as far as possible, time allowing. • Switch on deck floodlighting. • Time allowing, instruct Emergency and Stand-by parties to gather: extra blankets, water, provisions, torches, hand held radios, etc. • Put on lifejackets and proceed to boat embarkation points bringing to the boats EPIRB, SARTs, GMDSS radios extra pyrotechnics log books sextant, almanac, calculator, pens, paper.	• On hearing life raft station alarm proceeds to abandon ship stations • Carry out muster check and ensure lifejackets donned properly. • Advise the Master of missing persons (if any) and arrange search. • Prepare lifeboats-life rafts lower top embarkation deck and make ready for rapid boarding. • Time permitting, arrange for extra blankets, water, provisions, torches, etc. • Advise the Master that lifeboats are prepared and crew ready for abandoning ship. • When master's order to abandon ship is received embark to life raft. • Lower rescue boat and life rafts • On hitting water, release from falls and stand-by to pick up Master and launch crew	• Maintains power supplies for lighting. • Ensures manoeuvring of the Propulsion System whilst launching lifeboats/life rafts. • On instruction from the Master stops the Propulsion System, secures Engine Room and proceeds to assigned lifeboats stations.

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Checklist No11	Wrecked / Stranded

No	Action	Responsible	Done	When
1	Activate General Alarm	Master		
2	Exhibit NUC lights / shapes and use sound signals	Officer on Duty		
3	Check all watertight doors are closed	Chief Engineer / Chief Officer		
4	Take soundings of all tanks and bilges	Chief Engineer / Chief Officer		
5	Locate the source if any, of ingress of water	Chief Officer		
6	The owner / operator informed	Master / Officer on Duty		
7	Notify the nearest states authority	Master/ Officer on Duty		

If the master realises that the situation is no more recoverable notwithstanding all attempts and it is no more safe for the crew to remain on board GIVES THE ORDER TO ABANDON THE SHIP

Personnel behaviour has to be as such as no risks may arise, endangering their own lives or the lives of any other crewmembers

The following emergency actions and duties have to be taken and followed:

Master	Duty Officer	Crew-members
• Assesses the situation and takes the decision to abandon the ship. • Gives the order to transmit the distress signal. • Gives verbal order to abandon the ship.	• Sounds the life-raft station alarms.	• Put on lifejackets, safety helmets and warm dresses and proceed to muster stations.

Master and Bridge party	Emergency and stand-by parties	Technical party
• Ensure muster check has been completed, all personnel accounted for and details of missing persons (if any) passed to lifeboat commanders. • Record events and collect log books. • Monitor preparation and launch of lifeboats. • Advice all ships by VHF CH16 DSC CH70 and activated GMDSS Distress Alarm • Advice by sat- phone / telex, etc. • Reduce way of the vessel as far as possible, time allowing. • Switch on deck floodlighting. • Time allowing, instruct Emergency and Stand-by parties to gather: extra blankets, water, provisions, torches, hand held radios, etc. • Put on lifejackets and proceed to boat embarkation points bringing to the boats EPIRB, SARTs, GMDSS radios extra pyrotechnics log books sextant, almanac, calculator, pens, paper.	• On hearing life raft station alarm proceeds to abandon ship stations • Carry out muster check and ensure lifejackets donned properly. • Advise the Master of missing persons (if any) and arrange search. • Prepare lifeboats-life rafts lower top embarkation deck and make ready for rapid boarding. • Time permitting, arrange for extra blankets, water, provisions, torches, etc. • Advise the Master that life rafts are prepared and crew ready for abandoning ship. • When master's order to abandon ship is received embark to life raft. • Lower rescue boat and life rafts • On hitting water, release from falls and stand-by to pick up Master and launch crew.	• Maintains power supplies for lighting. • Ensures manoeuvring of the Propulsion System whilst launching lifeboats/life rafts. • On instruction from the Master stops the Propulsion System, secures Engine Room and proceeds to assigned lifeboats stations.

Checklist No12	Hazardous Vapor Release

No	Action	Responsible	Done	When
1	Stop all bunkering operations if the ship is in a terminal	Chief Engineer		
2	Sound the emergency alarm	Chief Officer		
3	Check all watertight doors are closed	Chief Engineer/ Chief Officer		
4	Take soundings of all tanks and bilges	Chief Engineer/ Chief Officer		
5	Locate the source if any, of ingress of water	Chief Officer		
6	The owner / operator informed	Master / Officer on Duty		
7	Notify the nearest states authority	Master / Officer on Duty		
8	If possible head the ship so that she is free from the gas cloud	Master		
9	Make ready for an immediate use of breathing apparatus and fire fighting equipment	Chief Officer		
10	Stop the leak if possible	Chief Engineer/ Chief Officer		
11	Avoid smoking and all naked lights	Master		
12	Close all valves in the liquid line	Chief Engineer / Engineer on Duty		
13	Send radio warning to all ships present in the area	Master / Officer on Duty		

If the master realises that the situation is no more recoverable notwithstanding all attempts and it is no more safe for the crew to remain on board GIVES THE ORDER TO ABANDON THE SHIP

Personnel behaviour has to be as such as no risks may arise, endangering their own lives or the lives of any other crewmembers

The following emergency actions and duties have to be taken and followed:

Master	Duty Officer	Crew-members
• Assesses the situation and takes the decision to abandon the ship. • Gives the order to transmit the distress signal. • Gives verbal order to abandon the ship.	• Sounds the life-raft station alarms.	• Put on lifejackets, safety helmets and warm dresses and proceed to muster stations.

Master and Bridge party	Emergency and stand-by parties	Technical party
• Ensure muster check has been completed, all personnel accounted for and details of missing persons (if any) passed to lifeboat commanders. • Record events and collect log books. • Monitor preparation and launch of lifeboats. • Advice all ships by VHF CH16 DSC CH70 and activated GMDSS Distress Alarm • Advice by sat- phone / telex, etc. • Reduce way of the vessel as far as possible, time allowing. • Switch on deck floodlighting.	• On hearing life raft station alarm proceeds to abandon ship stations • Carry out muster check and ensure lifejackets donned properly. • Advise the Master of missing persons (if any) and arrange search. • Prepare lifeboats-life rafts lower top embarkation deck and make ready for rapid boarding. • Time permitting, arrange for extra blankets, water, provisions, torches, etc. • Advise the Master that life rafts are prepared and crew ready for abandoning ship.	• Maintains power supplies for lighting. • Ensures manoeuvring of the Propulsion System whilst launching lifeboats/life rafts. • On instruction from the Master stops the Propulsion System, secures Engine Room and proceeds to assigned lifeboats stations.

• Time allowing, instruct Emergency and Stand-by parties to gather: extra blankets, water, provisions, torches, hand held radios, etc. • Put on lifejackets and proceed to boat embarkation points bringing to the boats EPIRB, SARTs, GMDSS radios extra pyrotechnics log books sextant, almanac, calculator, pens, paper.	• When master's order to abandon ship is received embark to life raft. • Lower rescue boat and life rafts • On hitting water, release from falls and stand-by to pick up Master and launch crew.	

Section 4: National and Local Coordination

Quick efficient co-ordination between the ship and Coastal States or other parties involved becomes vital in mitigating the effects of an oil pollution incident.

As the identities and roles of various national and local Authorities involved vary widely from state to state and even from port to port, the Master should take note of these particularities, as far as possible. In this context the Master should call upon the owner's representatives in the state/ port of question to receive the relevant information.

In several countries it is accepted that an oil spill can be tackled most effectively from the shore and there is normally no requirement on the part of the shipowner or the ship's crew to organise the clean-up response in respect of oil spilled overboard. Operational spills usually occur in port at an oil or bunkering facility and tend to be cleaned up by the facility operator.

In the case of casualties, the responsibility for organizing and controlling the clean-up response is usually assumed by an agency of government. In both cases the spiller would be expected to co-operate fully, and pay the reasonable costs of clean-up and any damages caused, up to a specified limit of liability based on the tonnage of the ship.

Most countries recognize that is unreasonable and impractical to expect a shipowner or crew to respond to a spill from their ship and therefore a government agency or port authority will normally be in charge and demand the costs afterwards. In a relatively few countries, for example USA, shipowners will be required to organize the clean-up of a spill from their ships and this will usually necessitate employing a local oil spill clean-up contractor or oil industry clean-up cooperative. A number of developing nations lack both specialized resources and contingency plans and may rely on help from a variety of sources outside the country to assist in clean-up operations. In such cases it may be in the owner's best interest to offer an active involvement in the spill response operation. However, it should be recognized that the actual response adopted by a country to a particular incident will depend upon a number of factors such as the exact location, the type and quantity of oil involved and the owner of the ship.

Prior to undertaking mitigation actions – especially in cases of an actual discharge of oil due to casualties in the territorial waters of a Coastal State – the Master should contact the Coastal State for authorization of his action.

The Master should co-ordinate all his activities with the Coastal State.

The Master should call the Coastal State for allowance to use chemical agents for response to oil pollution on the sea. Without authorization of the Authorities of the appropriate Coastal State no chemical agents should be used.

Where no responsibility for discharge response by a Coastal State is noticed the Master should take all the necessary steps as deemed appropriate to minimize the escape of oil.

With respect of the accident happened the Master should take measures as stated in Section 2 and Section 3 of this Plan.

Section 5: Non-Mandatory Information (Voluntary Part)

In addition to the mandatory provisions required by Reg. 37, Annex I, MARPOL 73/78 which are mentioned in Sections 1 to 4 of this Plan, local requirements, insurance company or owner/ operator policies etc. may dictate the provisions of additional guidance.

Such additional information material, including diagrams and/ or drawings, reference material etc., may be of help for the Master when responding to an oil pollution incident or an emergency situation as well as may be required by local Authorities in ports visited by the individual ship.

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Appendix 1 - Initial Notification

Extract from section 2 reporting requirements.

Label	Function	Explanation
A	Ship	Name, call sign and nationality
B	Date and time (UTC) of event	A 6-digit group giving day of month (first two digits), hours & minutes (last four digits)
C (OR)	Position	A 4-digit group giving latitude in degrees and minutes suffixed with N or S, and a 5-digit group giving longitude in degrees and minutes suffixed with E or W
D	Position	True bearing (first 3 digits) and distance (state distance) in nautical miles from clearly identified landmark (state landmark)
E	True course	A 3-digit group
F	Speed at time of incident	In knots and tenths of knots as a 3-digit group
L	Route information	Details of intended track
M	Radio communications	Full details of radio stations (names) and frequencies being guarded
N	Time (UTC) of next report	A 6-digit group as under BB above
O	Ship's draught	
P	Cargo on board: can be included in „RR„ as relevant	Type(s) and quantity(ies) of cargo/ bunker on board and brief details of any dangerous cargoes as well as harmful substances and gases that could endanger persons or the environment
Q	Defects or damage or deficiencies or other limitations	Brief details of conditions of the ship as relevant; ability to transfer cargo/ ballast/ bunker fuel
R	Description of pollution or possible overboard discharge	Brief details of pollution; this should include the type(s) of fuel oil, an estimate of the quantity discharged, whether the discharge is continuing, the cause of the discharge and, if possible, an estimate of the movement and area of slick
S	Weather conditions	Brief details of weather and sea conditions prevailing including wind force and direction and relevant swell details
T	Ship's representative and/ or owner	Name, address, telex and telephone number of the ship's owner and representative (charterer, manager or operator of the ship or their agents)
U	Ship's size and type	Details of length, breadth and type of ship as well as capacity (tonnage)
X	Miscellaneous and additional information	Any other information including relevant details such as brief details of incident, need for outside assistance, action being taken to limit further discharge; details of any personnel injuries sustained, details of P & I Club and local correspondent.

INITIAL NOTIFICATION – EXAMPLE

The following format provides an example as to how Initial Notification information shall be presented:

A	*MV „X„, Call Sign D..., German Flag*
B	*01 12 36*
C	*2528N 05740E*
E	*179*
F	*186*
L	*Bound Singapore from Muscat*
M	*Bahrain Radio 500 KHz, VHF 16, INMARSAT No. 888 888*
N	*As required*
O	*Draught 7m*
P	*650 TEU/ NO IMDG CARGO/ BUNKERS 580 IFO/ 75 MDO*
Q	*Collision with cargo ship ..., HFO-Service tank starboard breached, no fire and all essential shipboard systems operational*
R	*Quantity of fuel oil lost from breached tank about 10 tonnes; tank now empty* *Slick moving SE away from land and out of Gulf of Oman*
S	*Weather fine, wind NNW, 3 Bft, sea state slight to moderate, no swell*
T	*Owner Blue Horizon Co., Vorsetzen 12, 20459 Hamburg, Tel. +40 123 45, Telex 876 54* *Fax +40 876 543*
U	*Length 169 m, breadth 25 m, tonnage 23.000 tdw, type container ship*
X	*No personnel injuries sustained; no clean-up operations possible from ship; Ship safe P and I Club advised; local correspondent is Miller on Tel. Dubai 54 444. Proceding to Dubai for survey/ repairs.*

MASTER

Note: The alphabetical reference letters in the above format are from 'General principles for ship reporting systems and ship reporting requirements, including guidelines for reporting incidents involving dangerous goods, harmful substances and/ or marine pollutants' adopted by the International Maritime Organization by resolution A.851(20). The letters do not follow the complete alphabetical sequence as certain letters are used to designate information required for other standard reporting formats, e.g., those used to transmit route information.

A blank form is provided in the following pages.

INITIAL NOTIFICATION – BLANK FORM

A	
B	
C	
D	
E	
F	
L	
M	
N	
O	
P	
Q	
R	
S	
T	
U	
X	

MASTER

Note: The alphabetical reference letters in the above format are from 'General principles for ship reporting systems and ship reporting requirements, including guidelines for reporting incidents involving dangerous goods, harmful substances and/ or marine pollutants' adopted by the International Maritime Organization by resolution A.851(20). The letters do not follow the complete alphabetical sequence as certain letters are used to designate information required for other standard reporting formats, e.g., those used to transmit route information.

Appendix 2 - Coastal State Contacts (Focal Points)

The most updated version of the Circular shall be included here in the Plan.

Appendix 3 - Port Contacts

The following table provides an example as to how port contacts information could be presented:

Name of Port Contact	Address	Means of contact	Remarks
Port Authority (Harbour Master etc.)	.....	Phone... Fax... VHF-Channel...	...
Terminal Officials	...	...	...
Company´s Local Agent	...	...	...
...	...	...	...
	...	...	...
	...	...	...
	...	...	...

Appendix 4 – Ship Interest Contacts

Institution / person	Address	Telephone	Facsimile	E-mail
Ship Owning Company				
Asso Ariadne Navigation Company Limited	Sotiri Michailidi 5 & 28 Oktovriou, 1st Floor, Flat / Office 101, 3035, Limassol, Cyprus	T: +357 25370810	+357 25379577	marine@assogroup.com
Ship Managing Company				
Asso Marine Shipping Company (Main Switchboard)	Thesi Kalympaki Elefsina, GR19200, Greece	T: +30 211 8885130	+30 211 8885053	marine@assogroup.com operations@assogroup.com
Ioannis TOGIAS (Marine Division Director)		T: +30 211 8885180		itogias@assogroup.com
Ioannis STASINOPOULOS (DPA/CSO/CMLCO)		T: +30 211 8885231 M: +30 6955062241		istasinopoulos@assogroup.com
Christos KASTANOS (Ops & Crew Manager)		T: +30 211 8885110 M: +30 6951952017		ckastanos@assogroup.com
Diamantis APESSOS (Superintendent Eng.)		T: +30 211 8885105 M: +30 6951978055		dapessos@assogroup.com
Iro STYLIANOU (Administrative Assistant)		T: +30 211 8885130		marine@assogroup.com
Other Contacts				
American Bureau of Shipping - ABS (Classification Society)	1, Sachtouri Str. & Posidonos Ave. GR176 74 Kallithea, Greece	T: +30 210 441000 24/7: +30 6932588891	+30 210 4293659	ABSPiraeus@eagle.org
RRDA (ABS)		24h Emergency Numbers Primary: +1 281 872 6161 Alternate: +1 713 935 2886	+1 281 877 5964	rrda@eagle.org
Bureau Veritas – BV (RO – RSO)	23 Etolikou str., Piraeus,GR1 8545, Greece	T: + 30 210 4063000 +30 210 4063136 M: +30 6944868398 +30 6940771552	+30 210 4063063	grc_ism@gr.bureauveritas.com
Triton Marine SA **Mr. N. Gkiouzelakis** (H&M Insurance broker)	99, Akti Miaouli, Piraeus 185 38, Greece	T: +30 210 429 0467 M: +30 6944335506		info@tritonmarine.gr

Institution / person	Address	Telephone	Facsimile	E-mail
Costa Brokers **Mr. Andrea Costa** (P&I Insurance Broker)	C.so Andrea Podestà 1 16128 Genova, Italy	D: +39 010 57 14 602 T: +39 010 570 5566 M: +39 335 609 5515		andrea.costa@cambiasorisso.com
SKULD (P&I Club)	Contact is made through Insurance Broker			
Dim. Papadimitriou & Associates (Technical Advisor)	92 Kolokotroni str., GR18535, Piraeus, Greece	T: +30 210 4175660 +30 210 4175655 M: +30 6936697090	+30 210 4220060	dpb@otenet.gr
AqualisBraemar LOC (inc. The Salvage Association)	5-7 Filellinon str., Piraeus, GR18536, Greece	T: +30 210 4292690 M: +30 6943210535		piraeus@abl-group.com

Appendix 5 – Stability and Strength Assessment Notification Forms

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STABILITY AND STRENGTH ASSESSMENT NOTIFICATION – FORM 1

CLV ARIADNE (IMO 9413535)	
TRIP:	From.....To.....
Date:	Departure.....Arrival (estimate).....

Drafts after incident	
FWD	P. .....(m) S. .....(m)
AFT	P. .....(m) S. .....(m)
MID-SHIP	P. .....(m) S. .....(m)
TRIM	P. .....(cm) S. .....(cm)
LIST	P. .....(dg)(◦) S. .....(dg)(◦)
WATER GRAVITY	.....(t/m³)

Advice required for the following actions	1 ..... 2 ..... 3 ..... 4.....

Damage Description	Damage location and extension are to be sketched on form 3

STABILITY AND STRENGTH ASSESSMENT NOTIFICATION – FORM 2

CLV ARIADNE (IMO 9413535)	
TRIP:	From……To……
Date:	Departure……Arrival (estimate)……

Tank / Space Description §		100% Volume (m^3)	Quantity Departure check (t)	Quantity After Accident (t)	Cargo Gravity (t/m^3)	Damaged (Y/N)
T1	FORE PEAK TK.	503.3				
T4	DB/WING TK. PS	178.9				
T5	DB/WING TK. SB	171.7				
T6	STAB.TANK 1	235.7				
T7	DB/WING TK. PS	208.8				
T8	DB/WING TK. SB	205.1				
T9	DB/WING TK. PS	63.5				
T10	DB/WING TK. SB	63.5				
T11	DB/WING TK. PS	68.1				
T12	DB/WING TK. SB	68.1				
T13	DB/WING TK. PS	83.9				
T14	DB/WING TK. SB	79.7				
T17	HEELING TK.1 PS	207.5				
T18	HEELING TK.1 SB	207.5				
T22	CENTER TK.	203.9				
T151	HEELING TK.2 PS	197.7				
T151	HEELING TK.2 SB	197.7				
T153	CENTER TK.	192.3				
T154	CENTER TK.	219.6				
T155	STAB.TANK 2	314.0				
T159	HEELING TK.3 PS	221.0				
T160	HEELING TK.3 SB	222.3				
T169	DB/WING TK. PS	216.3				
T170	DB/WING TK. SB	216.5				
T171	DB/CENTRE TK.	215.4				
T177	DB/WING TK. PS	209.6				
T178	DB/WING TK. SB	209.6				
T182	DB/CENTER TK	83.2				
T185	WING TK. PS	181.4				
T186	WING TK. SB	181.4				
T187	STAB.TANK 3	369.3				
T188	WING TK. PS	105.9				

Tank / Space Description §		100% Volume (m^3)	Quantity Departure check (t)	Quantity After Accident (t)	Cargo Gravity (t/m^3)	Damaged (Y/N)
T189	WING TK. SB	105.9				
T190	CENTER TK.	119.6				
T191	AFT PEAK/ STAB.TK.	350.5				
T192	STAB.TANK 4	372.3				
T193	DB/CENTER TK.	221.9				
T9U	WB WING TK PS	51.1				
T10U	WB WING TK SB	127.0				
T11U	WB WING TK PS	106.3				
T12U	WB WING TK SB	106.3				
T13U	WB WING TK PS	105.9				
T14U	WB WING TK SB	105.9				
T2	FW PS	259.5				
T3	FW SB	259.5				
T183	WING TK. PS	235.8				
T184	WING TK. SB	219.6				
T15	FUEL OIL TK. PS	152.1				
T16	FUEL OIL TK. SB	152.1				
T19	FUEL OIL TK. PS	207.3				
T20	CENTER TK.	182.5				
T21	FUEL OIL TK. SB	207.3				
T156	FUEL OIL TK. PS	222.4				
T157	FUEL OIL TK. CENTRE	255.5				
T158	FUEL OIL TK. SB	222.0				
T180	FUEL OIL TK. PS	142.3				
T181	FUEL OIL TK. SB	142.3				
T71	FO SETTLING TK.1 PS	25.7				
T72	FO SETTLING TK.2 SB	25.7				
T73	FO SERVICE TK.1 PS	29.4				
T74	FO SERVICE TK. SB (No1)	29.4				
T75	FO DRAIN TK.	11.2				
T77	OVERFLOW TK.1	54.8				
T78	OVERFLOW TK.2 SB	65.4				
T79	FO.TK. EM.GEN.ROOM	4.0				
T52	SEWAGE TK. PS	89.2				
T97	LO DRAIN TK.	15.5				
T80	BILGE WATER TK. PS	15.2				
T81	BILGE WATER SETTLING TK.1 PS	7.8				
T82	BILGE WATER SETTLING TK.2 SB	7.8				
T83	SLUDGE TK.	19.8				

Tank / Space Description §		100% Volume (m^3)	Quantity ⍰ Departure check (t)	Quantity ⍰ After Accident (t)	Cargo Gravity ⍰ (t/m^3)	Damaged ⍰ (Y/N)
T88	BILGE WATER TK. SB	15.2				
T110	CHAIN LOCKER PS	25.0				
T111	CHAIN LOCKER SB	25.0				
T56	UREA	46.4				
T63	HP. HYDR. OIL STORE TK. PS	5.5				
T65	HYDR. OIL STORE TK. PS	11.9				
T66	HYDR. OIL STORE TK. SB	5.7				
T90	LO SPARE STORE TK. GEAR	5.5				
T93	LO STORE TK. MAIN ENG.	5.5				
T95	LO STORE TK. MAIN ENG.	18.6				
T96	LO SPARE STORE TK. SB	11.9				
T98	LO SPARE STORE TK. SB	5.7				
T112	VOID SKEG	35.2				
T114	COFFERDAM AROUND MOONPOOL	37.0				
T115	VOID AROUND AZIPULL PS	42.5				
T116	VOID AROUND AZIPULL SB	42.5				
T118	VOID ABOVE FO.TANKS	28.8				
T123	COFFERDAM BELOW TANKTOP	44.9				
T125	VOID BELOW TANKTOP	5.8				
T194	VOID WING DECK PS	26.8				
T195	VOID WING DECK BS	26.8				

⍰ This Column Shall Be Filled By the Master Before Each Voyage When Loading Operations Are Complete.
§ See The Sketches In Form 3 And Form 4.

STABILITY AND STRENGTH ASSESSMENT NOTIFICATION – FORM 3

CLV ARIADNE (IMO 9413535)	
TRIP:	From……To…….
Date:	Departure……Arrival (estimate)……

Note For The Master	When transmitting this present Form insert in this page the sketches of the ship as they are reported in the Capacity Plan.

FOLLOW–UP NOTIFICATION – FORM 4

CLV ARIADNE (IMO 9413535)	
TRIP:	From……To…….
Date:	Departure……Arrival (estimate)……

Additional Information Concerning Stability and Hull Strength Assessment	
Reported Damage	Please detail extent and location of structural damage. Please attach sketches. Also indicate damaged compartments, bulkheads, frame Nos and dimensions where possible.

Proposed Actions And Requirements	Any Other Relevant Information, Details Of Actions Being Undertaken Or Proposed, Salvage Operations etc.

Please List The Technical Information You Urgently Require	Y / N
1. Residual Stability	
2. Residual Strength	
3. Lightering Proposal	
4. Cargo Transfer Proposal	
5. Other Remedial Actions	
6.	
7.	

Appendix 6 - National & Local Coordination Form

CLV ARIADNE (IMO 9413535)
TRIP: From……To…….
Date: Departure……Arrival (estimate)…….
Responsible on board coordinator:…….
Responsible coastal states:…….
Coastal state: 1. …….
Does the local authority of the next port of call take charge of response activities? (Y / N) ……
If the answer is Y , indicate the procedure to be followed to activate and co-ordinate the response resources: …… …….
Is responsibility for initiating response placed on the ship owner? (Y / N) …….
If the answer is N, indicate the procedure to be followed to activate and co-ordinate the response resources: …… …….
Coastal state: 2. …….
Does the local authority of the next port of call take charge of response activities? (Y / N) …….
If the answer is Y , indicate the procedure to be followed to activate and co-ordinate the response resources: 1…… 2…….
Is responsibility for initiating response placed on the ship owner? (Y / N) …….
If the answer is N, indicate the procedure to be followed to activate and co-ordinate the response resources: 1…… 2…….
Coastal state: 3. …….
Does the local authority of the next port of call take charge of response activities? (Y / N) …….

- continues on next page -

National & Local Coordination Form (Cont.)

If the answer is Y , indicate the procedure to be followed to activate and co-ordinate the response resources: 1…… 2……
Is responsibility for initiating response placed on the ship owner? (Y / N) ……
If the answer is N, indicate the procedure to be followed to activate and co-ordinate the response resources: 1…… 2……
Coastal state: 4. ……
Does the local authority of the next port of call take charge of response activities? (Y / N) ……
If the answer is Y , indicate the procedure to be followed to activate and co-ordinate the response resources: 1…… 2……
Is responsibility for initiating response placed on the ship owner? (Y / N) ……
If the answer is N, indicate the procedure to be followed to activate and co-ordinate the response resources: 1…… 2……

- END -

Appendix 7 - List of Oil Spill Response Equipment Carried On board

ITEM	LOCATION	USE	NUMBER / QUANTITY
ΑΠΟΡΡΟΦΗΤΙΚΟ ΡΟΛΛΟ (OIL ABSORBENT ROLL)	Main Deck (PS) / Prov. Handling Room (SOPEP Locker)	For OIL SPILL Control / Prevention	1/2 (44mtrs x 97 cm)
ΑΠΟΡΡΟΦΗΤΙΚΟ ΜΑΞΙΛΑΡΙ (OIL ABSORBENT PILLOW)	"	For OIL SPILL Control / Prevention	40 pcs
OIL ABSORBENT BOOMS S10 5D' x 10'L	"	For OIL SPILL Control / Prevention	14 pcs
OIL ABSORBENT BOOMS (BIG) 3m	"	For OIL SPILL Control / Prevention	5 pcs
OIL ABSORBENT PADS (ΑΠΟΡΡΟΦΗΤΙΚΑ ΕΠΙΘΕΜΑΤΑ)	"	For OIL SPILL Control / Prevention	6 packs (6 x 100 pcs & 1 open)
ΦΤΥΑΡΙ (SHOVEL)	"	For OIL SPILL Control / Prevention	4 pcs
ENVIRON PACK COMPACTORS (ΣΑΚΟΙ ΑΠΟΒΛΗΤΩΝ)	"	For OIL SPILL Control / Prevention	13 bags
PAIRS OF BOOTS (ΛΑΣΤΙΧΕΝΙΕΣ ΜΠΟΤΕΣ)	"	For OIL SPILL Control / Prevention	3 x 44 size 2 x 45 size
RUBBER GLOVES (ΛΑΣΤΙΧΕΝΙΑ ΓΑΝΤΙΑ)	"	For OIL SPILL Control / Prevention	6 pairs
BROOMS (ΣΚΟΥΠΕΣ)	"	For OIL SPILL Control / Prevention	3 pcs
CLEANING WIPERS (ΥΑΛΟΚΑΘΑΡΙΣΤΗΡΕΣ)	"	For OIL SPILL Control / Prevention	3 pcs
ΠΛΑΣΤΙΚΕΣ ΣΑΚΟΥΛΕΣ (PLASTIC BAGS)	"	For OIL SPILL Control / Prevention	2 rolls
BUCKETS (ΚΟΥΒΑΔΕΣ)	"	For OIL SPILL Control / Prevention	4 pcs
RED RUBBER COVERALLS TRELLCHEM SPLASH XL (ΝΙΤΣΕΡΑΔΕΣ XL)	Main Deck (PS) / Fire Locker	For OIL SPILL Control / Prevention	4 pcs
BLUE LONG RUBBER HELMETS (ΜΠΛΕ ΛΑΣΤΙΧΕΝΙΕΣ ΜΑΣΚΕΣ)	"	For OIL SPILL Control / Prevention	3 pcs
WHITE COVERS L (ΑΣΠΡΕΣ ΣΤΟΛΕΣ ΠΡΟΣΤΑΣΙΑΣ L)	Main Deck (PS) / Prov. Handling Room (SOPEP Locker)	For OIL SPILL Control / Prevention	29 x Large
WHITE COVERS KLEENGUARD A 40 (ΑΣΠΡΕΣ ΣΤΟΛΕΣ ΠΡΟΣΤΑΣΙΑΣ XXL)	"	For OIL SPILL Control / Prevention	3 x XXLarge
PLASTIC GOGGLES (ΠΛΑΣΤΙΚΑ ΓΥΑΛΙΑ ΠΡΟΣΤΑΣΙΑΣ)	"	For OIL SPILL Control / Prevention	6 pcs
DRAIN COVERS (ΤΑΠΕΣ ΓΙΑ ΤΑ ΜΠΟΥΝΙΑ)	"	For OIL SPILL Control / Prevention	65 pcs
BOOM STICKS (ΣΚΟΥΠΟΞΥΛΑ)	"	For OIL SPILL Control / Prevention	39 pcs
FIRE RETARDANT CLOTH (ΠΥΡΙΜΑΧΟ ΠΑΝΙ)	"	For OIL SPILL Control / Prevention	2 pcs

ITEM	LOCATION	USE	NUMBER / QUANTITY
SURFACE NYLON COVERS (ΜΟΥΣΑΜΑΣ)	Main Deck (PS) / Prov. Handling Room (SOPEP Locker)	For OIL SPILL Control / Prevention	1 pcs
DUST FACE MASK 3M (ΜΑΣΚΑ ΣΚΟΝΗΣ)	"	For OIL SPILL Control / Prevention	3 pcs
MARICHEM OIL SPILL DISPERSANT	"	For OIL SPILL Control / Prevention	1 x 30 Ltrs 1 x 26 Ltrs
NALCO NALSPERSE (ECOLAB DISPERSANT)	"	For OIL SPILL Control / Prevention	5 x 20 Ltrs
ORANGE QUICK RESPONSE BAG (SOPEP)			
BOX WITH NAILS (VARIOUS SIZES)	Main Deck (PS) / Prov. Handling Room	For OIL SPILL Control / Prevention	1 pack
METAL SAW	"	For OIL SPILL Control / Prevention	1 pcs
SAW BLADE	"	For OIL SPILL Control / Prevention	1 pcs
WOODEN WEDGES	"	For OIL SPILL Control / Prevention	1 pcs
ADZE	"	For OIL SPILL Control / Prevention	1 pcs
WRENCH	"	For OIL SPILL Control / Prevention	1 pcs
CROWBAR	"	For OIL SPILL Control / Prevention	1 pcs
RUBBER MAT	"	For OIL SPILL Control / Prevention	1 pcs
OIL SPILL KIT FOR BUNKERING			
YELLOW BAGS	Main Deck / Bunkering Station	For OIL SPILL Control / Prevention	3 pcs
MANUAL OF RESPONSE (GUIDEBOOK)	"	For OIL SPILL Control / Prevention	1 pcs
BLUE GLOVES	"	For OIL SPILL Control / Prevention	1 pair
PACK OF PROSORBENTS 40'' x 50''	"	For OIL SPILL Control / Prevention	3 packs (3 x 100 each)
GRAY BAG OF ABSORBING MATERIAL	"	For OIL SPILL Control / Prevention	1 bag
ABSORBENT CLOTHS	"	For OIL SPILL Control / Prevention	½ bag
BAG WITH RAGS	"	For OIL SPILL Control / Prevention	1 bag
OIL ABSORBENT BOOMS	"	For OIL SPILL Control / Prevention	3 pcs

ITEM	LOCATION	USE	NUMBER / QUANTITY
OIL ABSORBENT PILLOW	Main Deck / Bunkering Station	For OIL SPILL Control / Prevention	1 pcs
MARICHEM OIL SPILL DISPERANT	"	For OIL SPILL Control / Prevention	4 ltrs
SHAWDUST	"	For OIL SPILL Control / Prevention	1 pcs
GRACO HUSKY 2150 PUMP	"	For OIL SPILL Control / Prevention	1 pcs
PACKS OF PROSORBENTS 40'' x 50''	"	For OIL SPILL Control / Prevention	½ pack
YELLOW ABSORBING WIPES	"	For OIL SPILL Control / Prevention	1 pack
OIL SPILL KIT No 1 (Main Deck)			
CEMENT	Main Deck / Bunkering Station	For OIL SPILL Control / Prevention	1 pcs
ABSORBENT CLOTHS	"	For OIL SPILL Control / Prevention	1 pcs
OIL ABSORBENT BOOMS	"	For OIL SPILL Control / Prevention	1 pcs
BUCKET	"	For OIL SPILL Control / Prevention	1 pcs
DUSTPAN	"	For OIL SPILL Control / Prevention	1 pcs
SAWDUST	"	For OIL SPILL Control / Prevention	1 pcs
BROOMS	"	For OIL SPILL Control / Prevention	1 pcs
RAGS	"	For OIL SPILL Control / Prevention	1 pcs
OIL SPILL KIT No 2 (Main Deck)			
CEMENT	Main Deck / Bunkering Station	For OIL SPILL Control / Prevention	1 pcs
SAWDUST	"	For OIL SPILL Control / Prevention	1 pcs
RAGS	"	For OIL SPILL Control / Prevention	1 pcs
BUCKET	"	For OIL SPILL Control / Prevention	1 pcs
DUSTPAN	"	For OIL SPILL Control / Prevention	1 pcs
HELIDECK OIL SPILL KIT			
ΑΠΟΡΡΟΦΗΤΙΚΟ ΡΟΛΛΟ (OIL ABSORBENT ROLL)	Wheelhouse Roof / Helideck	For OIL SPILL Control / Prevention	100 pcs

ITEM	LOCATION	USE	NUMBER / QUANTITY
ΑΠΟΡΡΟΦΗΤΙΚΟ ΜΑΞΙΛΑΡΙ (OIL ABSORBENT PILLOW)	Wheelhouse Roof / Helideck	For OIL SPILL Control / Prevention	32 pcs
SHOULDER SPRAYER PLASTIC (ΨΕΚΑΣΤΗΡΑΣ ΠΛΑΤΗΣ ΠΛΑΣΤΙΚΟΣ)	"	For OIL SPILL Control / Prevention	1 pcs
ENVIRON PACK COMPACTORS (ΣΑΚΟΙ ΑΠΟΒΛΗΤΩΝ)	"	For OIL SPILL Control / Prevention	1 pack
ΦΤΥΑΡΙ (SHOVEL)	"	For OIL SPILL Control / Prevention	1 pcs
PAIRS OF BOOTS (ΛΑΣΤΙΧΕΝΙΕΣ ΜΠΟΤΕΣ)	"	For OIL SPILL Control / Prevention	2 x 43 size
RUBBER GLOVES (ΛΑΣΤΙΧΕΝΙΑ ΓΑΝΤΙΑ)	"	For OIL SPILL Control / Prevention	2 pairs
BROOM (ΣΚΟΥΠΑ)	"	For OIL SPILL Control / Prevention	1 pcs
RUBBER COVERALLS TRELLCHEM SPLASH L (ΝΙΤΣΕΡΑΔΕΣ L)	"	For OIL SPILL Control / Prevention	2 pcs
COIR DECK BRUSH (ΒΟΥΡΤΣΑ ΚΑΤΑΣΤΡΩΜΑΤΟΣ)	"	For OIL SPILL Control / Prevention	1 pcs
PLASTIC GOGGLES (ΠΛΑΣΤΙΚΑ ΓΥΑΛΙΑ ΠΡΟΣΤΑΣΙΑΣ)	"	For OIL SPILL Control / Prevention	1 pcs
DUSTPAN (ΦΑΡΑΣΙ)	"	For OIL SPILL Control / Prevention	1 pcs
CHEMICAL PVC (ΠΟΔΙΑ ΧΗΜΙΚΩΝ)	"	For OIL SPILL Control / Prevention	1 pcs
BOOM STICKS (ΣΚΟΥΠΟΞΥΛΑ)	"	For OIL SPILL Control / Prevention	3 pcs
SCRAPPER (ΞΥΣΤΡΕΣ ΠΛΑΣΤΙΚΕΣ)	"	For OIL SPILL Control / Prevention	2 pcs
MOP	"	For OIL SPILL Control / Prevention	1 pcs

Note: The Chief Officer ensures that the equipment is well stocked, in good operating condition and in the prescribed location.

Appendix 8 - Ship's Plans and Drawings

(Located in the vessel's office)

No	Name	Rev. No
PRJ-19297-104-43101-001 - 04	General Arrangement Plan	04
PRJ-19297-104-43203-001 - 01	Capacity Plan	01
281_700-600-01	Fuel Oil System	00
281_700-600-02	Fuel Oil System	00
PRJ-19297-102-43523-002 - 02	Fuel Oil Overflow System	02
PRJ-19297-102-43531-001 - 03	MDO Transfer System	03
281_710-600-01	Lubricating Oil System	00
PRJ-19297-102-43511-001 - 04	Bilge System	04
PRJ-19297-102-43528-001 - 02	Waste / Sludge Oil System	02

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Document Type: Plan
Document ID: SMM-M07.40 (Atalanti)

Shipboard Oil Pollution Emergency Plan (SOPEP)

Atalanti (IMO 8661616, ABSCN 08203752)

This plan has been developed in accordance with Regulation 37 of Annex I of MARPOL 73/78.

Rev. No.	Date	Issue Description	Prepared by	Reviewed by	Approved by	Customer Approval
0	01/04/2020	First issue of the document for RO review and approval	DPA	SEng.	GM	-

Our certifications

Revision Summary			
Revision No	Revised Chapters	Revision Description	Reason for Revision
0	-	First issue of the document (all previous revisions / updates / amendments have been incorporated in the current document)	For RO review and approval

NOTE 1: Changes to Section 5 and the Appendices are not required to be approved by the Administration. The appendices should be maintained up to date by the owners, operators and managers.

Record of changes					
Change No.	Pages	Approved by (Name – Signature)	Date of Approval	Description of Change	Approval by Administration / RO

Approval of Changes by Administration			
Revision No	Date	Approved By	Official stamp

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Vessel's Main Data

ABS-Number	08203752
Name of Ship	ATALANTI
Call Sign / MMSI	5BYY2 / 212279000
IMO-Number	8661616
Type of Ship	Cable Laying Barge
Country / Port of Registry	Cyprus / Limassol
Year of Build	2008
Owner	Asso Atalanti Navigation Company Limited (IMO Reg. Owner ID 5740338)
Operator	Asso Marine Shipping Company (IMO Comp. ID 6004472)
Length OA	96.99m
Length B.P	91.354m
Breadth mld	31.46m
Depth (Main Deck)	5.50m
Deadweight	5,971.429MT
GT	5,897
NT	1,769
Draught (max.)	4.256m
Aux. Engines	3 x Caterpillar C18 – 425kWe each 2 x Caterpillar C-32 – 910 kWe each
Emerg. Generator	Caterpillar C4.4, 95 kWe
Bow Thrusters	1 x Thrustmaster TH1000RN (Azimuthing) – 1000BHP (center) 2 x Thrustmaster TH1000RT (combined Tunnel & Azimuthing) – 1000BHP each
Stern Thrusters	1 x Voith Schneider – 2400BHP 2 x Trhustmaster TH1000N (Azimuthing) – 1000BHP
Thruster Prime Movers	5 x Cat 3508B – 820 kW each 1 x Cat C280-6 – 1,850 kW
Voyages	International

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Vessel's Tank Capacities

WATER BALLAST TANKS			
Tank ID	Side	Position (Frame No)	Capacity (m^3)
No1A WATER BALLAST TK	P	46 ~ 50	210.62
No1A WATER BALLAST TK	S	46 ~ 50	210.62
No1B WATER BALLAST TK	P	41 ~ 44	47.65
No1B WATER BALLAST TK	S	41 ~ 44	47.65
No2 WATER BALLAST TK	P	23 ~ 31	553.95
No2 WATER BALLAST TK	S	23 ~ 31	553.95
No3 WATER BALLAST TK	P	15 ~ 23	308.68
No3 WATER BALLAST TK	S	15 ~ 23	308.68
No3A WATER BALLAST TK	P	19 ~ 23	342.32
No3A WATER BALLAST TK	S	19 ~ 23	318.69
No3B WATER BALLAST TK	P	15 ~ 19	342.32
No3B WATER BALLAST TK	S	15 ~ 19	318.69
No4 WATER BALLAST TK	P	-2 ~ 7	194.74
TOTAL			3758.56

FRESH WATER TANKS			
Tank ID	Side	Position (Frame No)	Capacity (m^3)
FRESH WATER TK	P	37 ~ 39	115.33
FRESH WATER TK	S	37 ~ 39	115.33
TOTAL			230.66

DUAL PURPOSE TANK			
Tank ID	Side	Position (Frame No)	Capacity (m^3)
No4 FW / WATER BALLAST TK	S	-2 ~ 7	205.59

DIESEL OIL TANKS			
Tank ID	Side	Position (Frame No)	Capacity (m^3)
DIESEL OIL SETTLING TANK	P	45 ~ 46	5.04
EM'CY GEN. D.O. TK	P	41 ~ 42	0.65
INCINERATOR D.O. TK	S	40 ~ 41	0.50
FWD D.O. DAILY TK	P	45 ~ 46	10.07
FWD D.O. DAILY TK	C	45 ~ 46	10.07
FWD D.O. DAILY TK	S	45 ~ 46	10.07
FWD DIESEL OIL TANK	P	31 ~ 36	191.99
FWD DIESEL OIL TANK	S	31 ~ 36	191.99
AFT DIESEL OIL TANK	P	15 ~ 19	215.03
AFT DIESEL OIL TANK	S	15 ~ 19	201.59
AFT DO SETTLING TK	S	14 ~ 15	7.03
AFT D.O. DAILY TK	P	14 ~ 15	8.50
AFT D.O. DAILY TK	S	14 ~ 15	8.50
DO SERVICE VSP TK	S	15 ~16	10.39
TOTAL			871.42

LUB OIL TANKS			
Tank ID	Side	Position (Frame No)	Capacity (m^3)
FWD LO TK	S	45 ~ 46	10.50
AUX. HYD/LUB OIL TK	P/I	39 ~ 40	1.87
AUX. HYD/LUB OIL TK	P/O	39 ~ 40	1.87
AUX. HYD/LUB OIL TK	S/I	39 ~ 40	1.87
AUX. HYD/LUB OIL TK	S/O	39 ~ 40	1.87
HYDRAULIC LO TK	S	38 ~ 39	13.80
AFT LO TK	S	7 ~ 8	4.88
AFT HYDRAULIC LO TK	S	7 ~ 8	4.88
HYDR. L.O. TK FOR TURNTABLE	P	8 ~ 9	7.50
HYDR. L.O. TK FOR TURNTABLE	P	7 ~ 8	0.65
LO TANK FOR VSP (PROPELLER)	P	2 ~ 3	4.38
LO TANK FOR VSP (ENGINE)	P	$1^{1/3}$ ~ 2	1.78
TOTAL			55.85

MISCELLANEOUS TANKS			
Tank ID	Side	Position (Frame No)	Capacity (m^3)
FWD USED OIL TK	P	45 ~ 46	5.04
MARPOL TANK	S	45 ~ 46	7.00
SLUDGE TK No1	C	45 ~ 46	4.62
SLUDGE TK No2	S	7 ~ 8	5.73
SLUDGE TK No3	C	11 ~ 12	2.83
AFT USED LO TK	S	7 ~ 8	9.76
SEWAGE HOLDING TANK	P	31 ~ 34	59.18
AFT SEA DUCT for Cooling	C	15 ~ 17	30.97
FWD SEA DUCT for Cooling	C	38 ~ 39	30.97
TOTAL			156.10

Introduction

1. This Shipboard Oil Pollution Emergency Plan (hereafter referred to as the 'Plan') is written in accordance with the requirements of regulation 37 of Annex I of the International Convention for the Prevention of Pollution from Ships, 1973 as modified by the Protocol of 1978 relating there to (MARPOL 73/78).

2. The purpose of the Plan is to provide guidance to the Master and officers on board the ship with respect to the steps to be taken when an oil pollution incident has occurred or is likely to occur.

3. The Plan contains all information and operational instructions as required by the 'Guidelines for the development of the Shipboard Oil Pollution Emergency Plan' developed by IMO and published under resolution MEPC.54(32) adopted on the 6th of March 1992, as amended by Resolution MEPC.86(44) adopted on the 13th of March 2000 .

   The appendices contain names, telephone, telex numbers, etc., of all contacts referenced in the Plan, as well as other reference material.

4. The Plan has been approved by ABS on behalf of the Administration and, except as provided below, no alteration or revision shall be made to any part of it without the prior approval of the Administration.

5. Changes to Section 5 and the appendices will not be required to be approved by the Administration. The appendices should be maintained up to date by the owners, operators and managers.

6. This plan will be regularly reviewed and updated. Revisions, other than those referred to in 5 above will be submitted to the Administration for approval. Revision will be the responsibility of the managers and will be carried out at intervals not exceeding 12 months.

7. Following an incident in which the plan has been activated, there will be a thorough review of its effectiveness.

Section 1: Preamble

1.1. This Plan is available to assist the ship's personnel in dealing with an unexpected discharge of oil. Its primary purpose is to set in motion the necessary actions to stop or minimize the discharge of oil and to mitigate its effects.

1.2. Effective planning ensures that the necessary actions are taken in a structured, logical, safe and timely manner.

1.3. The primary objectives of this Plan are to:

- prevent oil pollution;
- stop or minimize oil outflow when damage to the ship or its requirements occurs;
- stop or minimize oil outflow when an operational spill occurs in excess of the quantity or instantaneous rate permitted under the present Convention.

1.4. Further, the purpose of the Plan is to provide the Master, officers and certain crew members with a practical guide to the prevention of oil spills and in carrying out the responsibilities associated with regulation 37 of Annex I to MARPOL 73/78

- procedures to report an oil pollution incident
- Coastal State contacts (Focal Points) and Port Contact Lists to be contacted in the Event of an oil pollution incident
- response actions to reduce or control the discharge of oil following an incident
- co-ordination with national and local Authorities in combating oil pollution

1.5. In summary, the Plan will serve to promote a practised response when the ship's personnel is faced with an oil spill.

1.6. Although the Plan is designed as a ship-specific tool it must also be considered as an additional instrument and as a link to shore-based plans. With this the Plans allow an efficient co-ordination between the ship and shore-based Authorities/ Organizations in mitigating the effects of an oil pollution incident.

1.7. The Plan includes a summary flowchart (see page 9) to guide the Master through reporting and acting procedures required during an oil pollution incident response.

1.8. The Plan is a document used on board by the Master and the Officers of the Ship. It is therefore written in English, which is the working language understood by the Master and Officers. A change in Master and Officers that brings about an attendant change on their working language or languages understood would require the issuance of the Plan in the new languages.

1.9. Without interfering with ship-owner's liability, some coastal States consider that it is their responsibility to define techniques and means to be taken against oil pollution incidents and approve such operations that might cause further pollution, i.e. lightening. States are in general entitled to do so under the International Convention relating to Intervention on the High Seas in Cases of Oil Pollution Casualties, 1969 (Intervention Convention).

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SHIPBOARD OIL POLLUTION EMERGENCY PLAN – SUMMARY FLOWCHART

This flow diagram is an outline of the course of action that shipboard personnel should follow in responding to an oil pollution emergency based on the guidelines published by the Organization. This diagram is not exhaustive and should not be used as a sole reference in response. Consideration should be given for inclusion of specific reference to the Plan. The steps are designed to assist ship personnel in action to stop or minimize the discharge of oil and mitigate its effects. These steps fall into two main categories – reporting and action.

DISCHARGE OF OIL – PROBABLE OR ACTUAL

⇩

ASSESSMENT OF THE NATURE OF INCIDENT

⇩

ACTIONS REQUIRED

- Alert crew members
- Identity spill source
- Personnel protection
- Spill assessment
- Vapor monitoring
- Evacuation

REPORTING

By Master and/ or designated crew member

When to report

All probable and actual spills

How to report

- By quickest means to coastal radio station
- Designated ship movement reporting station or
- Rescue Co-ordination Centre (at sea)
- By quickest available means to local authorities

Who to report

- Nearest Coastal State Harbour and terminal operators (in port)
- Ship-owners manager; P & I insurer
- Head Charterer; Cargo owner
- Refer to contact lists

What to report

- Initial report (Res. A.851(20), as amended by MEPC.138(53))
- Follow-up reports
- Characteristics of oil spilled
- Cargo/ ballast/ bunker dispositions
- Weather and sea conditions
- Slick movement
- Assistance required
  - Salvage
  - Lightening capacity
  - Mechanical equipment
  - External response team
  - Chemical dispersant/ degreasing

ACTION TO CONTROL DISCHARGE

Measures to minimize the escape of oil and threat to the marine environment

NAVIGATION MEASURES

- Alter course/ position and/ or speed
- Change of list and/ or trim
- Anchoring
- Setting aground
- Initiate towage
- Assess safe haven requirements
- Weather/ tide/ swell forecasting
- Slick monitoring
- Record of events and communications taken

SEAMANSHIP MEASURES

- Safety assessment and pre-caution
- Advice on priority countermeasures/ preventive measures
- Damage stability and stress consideration
- Ballasting/de-ballasting
- Internal bunkers transfer operations
- Emergency ship-to-ship transfers of bunkers
- Set up shipboard response for:
  - Leak sealing
  - Fire fighting
  - Handling of ship-board response equipment (if available)
  - Etc.

STEPS TO INITIATE EXTERNAL RESPONSE

- Refer to Costal Port State listings for local assistance
- Refer to ship interest contact list
- External clean-up resources required
- Continued monitoring of activities

Section 2: Reporting Requirements

2.1. General

The reporting requirements of this section comply with those of regulation 37 of MARPOL 73/78, Annex I. When the ship is involved in an incident which results in the discharge (or probable discharge) of oil, the Master is obliged under the terms of MARPOL 73/78 to report details of the incident, without delay, to the nearest Coastal State by means of the fastest telecommunication channels available.

The intent of these requirements are to ensure that Coastal States are informed, without delay, of any incident giving rise to oil pollution, or threat of oil pollution, of the marine environment, as well as of assistance and salvage measures, so that appropriate action may be taken.

Without interfering with ship-owners' liability, some coastal states consider that it is their responsibility to define techniques and means to be taken against an oil pollution incident and approve such operations which might cause further pollution, i.e. lightening. States are in general entitled to do so under the International Convention relating to Intervention on the High Seas in Cases of Oil Pollution Casualties, 1969.

2.2. Reporting Procedures

For easy reference the reporting requirements in the context of this Plan are divided in the following information blocks:

2.2.1. When to report

Taking the summary flowchart as shown on page 9 as a basic guide into consideration reports are necessary in the following cases:

2.2.1.1. Actual Discharge

A report is required whenever there is:

- a discharge of oil above the permitted level for whatever reason, including those for the purpose of securing the safety of the ship or saving life at sea.
- a discharge during the operation of the ship of oil in excess of the quantity or instantaneous rate permitted under the present Convention (i.e. MARPOL 73/78).

Therefore, the Master is obliged to report to the nearest Coastal State whenever there is a discharge of oil resulting:

- from damage to the ship
- from damage to the ship's equipment
- for the purpose of securing the safety of a ship or saving life at sea
- during the operation of the ship in excess of the quantity or instantaneous rate permitted under the present Convention.

Reports to Coastal States should be in the style given in section 2.2.2.

2.2.1.2. Probable Discharge

The Master is obliged to report even when no actual discharge of oil has occurred but there is a probability that one could. However, as it is not practical to lay down precise definitions of all types of situations involving probable discharge of oil which would warrant an obligation to report the Master is obliged to judge by him-self whether there is such a probability and whether a report should be made.

Therefore, it is recommended that, at least, the following events:

- Damage, failure or breakdown which affects the safety of the ship, other ships or the protection of the marine environment (e.g. collision, grounding, fire, explosion, structural failure, flooding, cargo, cargo shifting etc.). OR
- failure or breakdown of machinery or equipment which results in impairment of the safety of navigation (e.g. failure or breakdown of steering gear, propulsion, electrical generating system, essential ship borne navigation aids etc.).

In judging whether there is a probability for oil discharge and whether a report should be made, the Master should take into account the nature of the damage failure or break- down of the ship, machinery or equipment as well as the ship's location, proximity to land, weather, state of the sea and traffic density – as cases in which a probable discharge of oil is most likely. If in doubt, the Master should always make a report in cases aforementioned.

In all cases Authorities should be kept informed by the Master as how the situation progresses and be advised when all threat of pollution passes.

2.2.2. Information Required

As required in article 8 and Protocol I of MARPOL 73/78 Convention the Master or other persons having charge of the ship should report the particulars of any pollution incident. In this context the International Maritime Organization (IMO), in 1997, adopted Resolution A. 851 (20) 'General Principles for Ship Reporting Systems and Ship Reporting Requirements, including Guidelines for Reporting Incidents involving Dangerous Goods, Harmful Substances and/ or Marine Pollutants', as amended by IMO Resolution MEPC.138(53).

The intent of the Resolution aforementioned is to enable Coastal States and other interested parties to be informed, without delay, of any incident giving rise to oil pollution, or threat of oil pollution, of the marine environment, as well as of assistance and salvage measures, so that appropriate action may be taken.

Nothing in this chapter relieves the Master in using sound judgement to make sure that any incident or probable discharge of oil is reported as quickly as possible in the prevailing situation.

When transmitting initial reports to the authorities of the nearest Coastal State the Master or other persons dealing with such a transmission should take note of Resolution A. 851 (20), as amended by IMO Resolution MEPC.138(53).

A. INITIAL REPORTS

Especially, the format of the initial report as well as supplementary of follow-up reports should conform to the guidance contained in Res.A.851(20). All reporting whether initial or follow-up, should follow IMO´s reporting format as outlined below and should contain the following information:

LABEL	FUNCTION	EXPLANATION
A	Ship	Name, call sign and nationality
B	Date and time (UTC) of event	A 6-digit group giving day of month (first two digits), hours & minutes (last four digits)
C (OR)	Position	A 4-digit group giving latitude in degrees and minutes suffixed with N or S, and a 5-digit group giving longitude in degrees and minutes suffixed with E or W
D	Position	True bearing (first 3 digits) and distance (state distance) in nautical miles from clearly identified landmark (state landmark)
E	True course	A 3-digit group
F	Speed at time of incident	In knots and tenths of knots as a 3-digit group
L	Route information	Details of intended track
M	Radio communications	Full details of radio stations (names) and frequencies being guarded
N	Time (UTC) of next report	A 6-digit group as under BB above
O	Ship's draught	
P	Cargo on board: can be included in „RR„ as relevant	Type(s) and quantity(ies) of cargo/ bunker on board and brief details of any dangerous cargoes as well as harmful substances and gases that could endanger persons or the environment
Q	Defects or damage or deficiencies or other limitations	Brief details of conditions of the ship as relevant; ability to transfer cargo/ ballast/ bunker fuel
R	Description of pollution or possible overboard discharge	Brief details of pollution; this should include the type(s) of fuel oil, an estimate of the quantity discharged, whether the discharge is continuing, the cause of the discharge and, if possible, an estimate of the movement and area of slick
S	Weather conditions	Brief details of weather and sea conditions prevailing including wind force and direction and relevant swell details
T	Ship's representative and/ or owner	Name, address, telex and telephone number of the ship's owner and representative (charterer, manager or operator of the ship or their agents)
U	Ship's size and type	Details of length, breadth and type of ship as well as capacity (tonnage)
X	Miscellaneous and additional information	Any other information including relevant details such as brief details of incident, need for outside assistance, action being taken to limit further discharge; details of any personnel injuries sustained, details of P & I Club and local correspondent.

A sample format for initial notification and a detailed example of an initial report is shown within the appendices under Appendix 1. All follow-up reports by the Master should include information relevant to the Coastal State Authorities to keep them informed as the incident develops.

B. FOLLOW-UP REPORTS

Once the ship has transmitted the initial report to the shore authorities, further reports should be regularly sent to the Authorities and the ship owner or operator so as to keep them informed of how the incident develops.

Follow-up reports should include information on any significant changes in the ship's condition, the rate of release and spread of oil, weather and sea conditions and clean-up activities underway.

In this context details of bunker disposition, condition of any empty tanks and nature of any ballast carried are information needed by those involved in order to assess the threat posed by an actual or probable discharge of oil from the damaged ship.

2.2.3. Who to Contact

The Master is responsible for reporting any incident involving an actual or probable discharge of oil. Taking into consideration the summary flowchart shown on page 10 the Master of the ship involved in any kind of an actual or probable discharge of oil, cases of which are defined under SECTION 2 (sub-paragraph 2.2.1.1 and 2.2.1.2) of this Plan should report details on the incident immediately (see Appendix1)

Nothing in this chapter relieves the Master from using sound judgement to make sure that any incident is reported as quickly as possible in the prevailing situation.

2.2.3.1. Coastal State Contacts

In order to expedite response and minimize damage from an oil pollution incident at sea, it is essential that appropriate Coastal States be notified without delay.

In this context the use of the list of agencies or officials of Administrations responsible for receiving and processing reports (so called "Focal Points") as developed by the Organization (IMO) in conformity with article 8 of the Convention is recommended. Such a list is shown under Appendix 2.

An updated list of existing "Focal Points" is available from the Internet pages of IMO under address:

http://www.imo.org/ >> National Contacts >>> MEPC.6/Circ. Xx

In the absence of such a list or listed focal point for a single country/ Coastal State, the Master should contact by the quickest available means

- The nearest coastal radio station or
- The designated ship movement reporting station or
- The nearest Rescue Co-Ordination Centre (RCC).

2.2.3.2. Port Contacts

For the ship in port, notification of local agencies, combating teams or clean-up companies will speed up response. If an oil spill occurs during the ship's stay in port, whether operational or as a result of an incident, the Master should inform the appropriate local agencies (e.g. National Response Center, Terminal/ Port Authorities etc.) without undue delay.

If the ship is engaged in a regular service between ports/ terminals the Master or any other person aboard delegated by the Master should provide a list with the relevant Port Contact addresses for each port served regularly of Authorities/ persons and/ or terminals dealing with an oil spill. This list should be regularly updated. The 'Port Contact List' is shown in the Appendix 3.

If a change in the ship's range of trade or a change in the addresses of persons/ Authorities of the ports/ terminals served regularly takes place the Master or any other person aboard delegated by the Master is required to issue a new list.

Where ship's service makes it not feasible to prepare such a list the Master should seek guidance concerning such local Port Contacts and local reporting procedures upon arrival in port.

Addresses obtained in this way should be documented aboard in the form that the Master considers most effective and should be attached to the Plan.

2.2.3.3. Ship Interest Contacts

For Ship Interest Contacts it is necessary to have information at the Master's disposal in case of an oil spill for informing the home office of the ship's owner or operator, the local agent of the company, the appropriate P & I Club and correspondents, clean-up contractors etc.

This information should be provided in the form of a so-called 'Ship Interest Contact List'. The 'Ship Interest Contact List' is shown in the Appendix 4.

To avoid a duplication of reports and to co-ordinate the Plan and the company's shore side plan(s) refer to the overleaf 'Notification Flowchart' (paragraph 2.2.3.4) that indicates the person responsible for informing the various Ship Interested Contacts.

2.2.3.4. Notification Flowchart

Priority	Who	Action	Format	Who to inform	Where in SOPEP
1	Master	Send the initial notification	1 1 1 1	- Coastal state (ship at sea) - Port contact (ship at sea/port) - Owner/operator/qualified individual* - Technical advisor if applicable	Appendices 2,3 & 4
2	Master	Send the stability and strength assessment notification	2	- Technical advisor if applicable	Appendix 4
3	Master	Send follow up notifications	3	- Coastal state or port Contact - Owner/operator /qualified individual* - Technical advisor if applicable	Appendices 2,3 & 4
4	Owner / Operator	Activate clean up resources (if necessary)	1	- Oil spill removal Organisation and / or Salvage Association	
5	Owner / Operator	Send initial notification	1	- Insurer's Representative	
6	Owner / Operator	Send initial notification	1	- P & I representative	
7	Owner / Operator	Send the follow up notification	3	- Oil spill removal Organisation - Insurer representative - P & I club representative - Salvage Association - Classification Society	

*Qualified individual: The person responsible for mobilizing shoreside response personnel and equipment

2.2.3.5. Communication Flowchart

Communication method	Priority	Details
Primary	1	Written report transmitted by fax over the vessels satellite communication SATCOM (INMARSAT C)
Secondary	2	Verbal communication via SATCOM phone.
Secondary	3	Telex message via Satcom phone
Emergency	4	Verbal report via HF or VHF coast radio station

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Section 3: Steps to control discharge

Ship personnel will most probably be in the best position to take quick action to mitigate or control the discharge of oil from their ship.

Therefore, this Plan provides the Master with clear guidance on how to accomplish this mitigation for a variety of situations.

It is the Master's responsibility to initiate a response in the event of a discharge of oil or substantial threat of discharge of oil – actual or probable – into the waters.

In no case action should be taken that in any way could jeopardize the safety of personnel either on board or ashore.

The following enumeration specifies different kinds of possible operational oil spills with regard to reactions to be taken.

Spill Category	Checklist	Spill due to	SOPEP Page No
Operational	1	Transfer System Leakage (Pipe leakage)	28
Operational	2	Tank Overflow	29
Operational	3	Suspected Hull Leakage	30
Resulting from a casualty	4	Collision With a Fixed Or Moving Object	31
Resulting from a casualty	5	Grounding / Stranding	32
Resulting from a casualty	6	Fire / Explosion	33
Resulting from a casualty	7	Hull Failure	34
Resulting from a casualty	8	Excessive list	35
Resulting from a casualty	9	Containment System Failure	36
Resulting from a casualty	10	Submerged / Foundered	37
Resulting from a casualty	11	Wrecked /Stranded	38
Resulting from a casualty	12	Hazardous Vapour Release	39

3.1. Operational Spills (Refer to Checklists in Subsection 3.7.2)

3.1.1. Operational Spill Prevention

- Crew members shall maintain a close watch for the escape of oil during bunker operations.
- Prior to bunker transfer the competent crew members should mobilize the oil spill equipment, as far as available on board, and place it close to the planned operation, e.g. along the railing on the side at which bunker operation takes place.
- Before bunker handling commences, all deck scuppers and open drains must be effectively plugged. Accumulations of water should be drained periodically and scupper plugs replaced immediately after the water has run off. Any free floating oil or oil droplets should be removed prior to draining.
- Bunker tanks which have been topped up should be checked frequently during the remaining bunker operations to avoid an overflow.
- Unless there are permanent means for retention of any slight leakage at ship/ shore connections for bunker transfer, it is essential that a drip tray is in place to catch any leaking oil.
- The removed bunker oil and the used clean-up material should be retained on board in proper containment units until it can be discharged to a reception facility.

3.1.2. Pipeline Leakage

- If a leakage occurs from a pipeline, valve, hose or metal arm, operations through that connection should be stopped immediately until the cause has been ascertained and the defect remedied.
- Defective pipe sections should be isolated. Affected sections should be drained down to an available empty or slack tank.
- If a leakage occurs from a hydraulic pipeline, operations should be stopped immediately.
- Initiate clean-up procedures.
- The removed bunker oil and the used clean-up material should be retained on board in proper containment units until it can be discharged to a reception facility.
- Inform in line with Section 2 all parties interested about Pipeline Leakage and the actions taken so far.

3.1.3. Tank Overflow

- If there is a tank overflow all bunker operations should be stopped immediately and should not be restarted until the fault has been rectified and all hazards from the released oil have been eliminated.
- If there is any possibility of the released oil or oil vapours entering engine room and accommodation intakes appropriate preventive steps must be taken quickly.
- Promptly shift bunker oil from the tank overflowed to an available empty or slack tank or prepare pump(s) or transfer the excess ashore.
- Initiate clean-up procedures.
- The removed bunker oil and the used clean-up material should be retained on board in proper containment units until it can be discharged to a reception facility.
- Inform in line with Section 2 all parties interested about Tank Overflow and actions taken so far.

3.1.4. Hull Leakage

- Identify leaking tank; consider diver if necessary and possible.
- Reduce level in tank in question well below sea level.
- If it is not possible to identify the leaking tank, reduce level in all tanks in vicinity. In this case give careful consideration to hull stress and stability.
- If there is a spillage due to suspected hull leakage reduce the head of bunker and promptly transfer the bunker oil to an available empty or slack tank or, if berthed, discharge ashore in suitable barges/ tanks.
- Inform in line with SECTION 2 all parties interested about Hull Leakage and the actions taken so far.

3.1.5. Spills caused by Equipment in Machinery Spaces

- If operational oil spills are caused by a failure of equipment in machinery spaces any further operations of this equipment should be stopped immediately or measures are to be taken to avoid an oil spill.
- Such equipment may be:
    - Oily-water separating equipment or oil filtering equipment to de-oil bilge water from the engine room bilges;
    - Valves in pipes connecting ballast/ bilge systems;
    - Cooling pipes in oil cooler systems;
    - Gearing of bow thrusters;
    - Stern tubes.
- The removed bunker oil and the used clean-up material should be retained on board in proper containment units until it can be discharged to a reception facility.

3.2. Spills Resulting From Casualties (Refer to Checklists in Subsection 3.7.2)

In the event of a casualty the Master's first priority is to ensure the safety of the ship's personnel, and to initiate actions which may prevent escalation of the incident and marine pollution.

3.2.1. Ship grounded / stranded

- The Master's priority should be to ensure that he as soon as possible receives detailed information about the damage that the ship has been sustained, in order to determine remedial action to be taken for ensuring the safety of the ship and its crew.
- Furthermore, the Master should also consider
    - Danger to the ship's complement if the ship should slide off grounding site
    - Danger of ship being shattered by heavy seas or swell
    - Health hazards to the ship's crew and surrounding population due to release of oil or other hazardous substances in dangerous concentrations
    - That fires may start due to released flammable substances and uncontrolled ignition sources
    - Should the damage which the ship has sustained be of such an extent that the stability cannot be computed on board, the Master should seek assistance according to sub-paragraph 3.6
- Also, the ship´s Master shall take into account the following considerations:
    - Is the vessel constantly being struck in the seaway?
    - Is the vessel exposed to torsion?
    - Is there a large difference in the tidal rangers at the grounding site?
    - Are there strong tidal currents in the grounding area?
    - May the vessel drift further up on shore due to high tides, wind and waves?

3.2.1.1. Prevention of Fire and Explosion

If the ship is aground and therefore cannot manoeuvre, all possible sources of ignition should be eliminated and action taken to prevent flammable vapours from entering the machinery spaces or the accommodation.

3.2.1.2. Extension of Hull Damage / Containment System Failure

- First, a visual inspection should be carried out.
- Check for visible oil along hull or in wake of the ship during day time. At night a stick with white cloth (or sheet of sorbent) around it may be lowered into the water alongside the ship to check for oil leakages.
- All ballast/ bunker tanks to be sounded (ullage),
- All other compartments which may have contact with the sea should be sounded to ensure that they are intact.
- Soundings of ballast tanks/ bunkers tanks are to be compared with last soundings to check for possible leaks.
- Sounding to be taken around the ship establish the ship's position on the grounding area.
- When the ship is aground, due regards should be given to the indiscriminate opening of ullage plugs, sighting ports etc. as loss of buoyancy could be the result of such actions.
- Any list of the ship shall be noted and included in the report for assistance.

3.2.1.3. Procedures to Reduce or Stop Outflow of Oil

- The Master should assess the possibility of damage to the environment and whatever action can be taken to reduce further damage from an oil release, such as:
    - Transfer of bunkers internally provided shipboard piping system is in an operational condition
    - If the damage is fairly limited and restricted, i.e. to one or two tanks, consideration should be given to transfer of bunkers internally from the damaged tank(s) to intact tanks, taking into account the impact on the ship's overall stress and stability

- Isolate damaged/ penetrated bunker tank(s) hermetically to ensure that hydrostatic pressure in tanks remains intact during tidal changes
- Evaluate possibility of pumping water into a damaged tank in order to form a water bottom stopping the outflow of oil
- Evaluate the necessity of transferring bunkers to barges or other ships and request such assistance accordingly
- Evaluate the possibility of additional release of oil.

- In case of large differences between the tide levels, the Master should try to isolate the damaged tank(s) to reduce additional loss of bunker oil.

3.2.1.4. Re-floating by own Means

The Master should also evaluate the question of re-floating the vessel by own means. Before such an attempt is made, it must be determined:

- whether the ship is damaged in such a way that it may sink, break up or capsize after getting off
- whether the ship after getting off may have manoeuvring problems upon leaving the dangerous area by own means
- whether machinery, rudder or propeller are damaged due to grounding or may be damaged by trying to get off ground by own means
- whether the ship may be trimmed or lightened sufficiently to avoid damage to other tanks in order to reduce additional pollution from oil/ bunker spillage
- Weather evaluation: whether there is time/ reason to await improvements in weather or tide.

3.2.1.5. Securing the Ship

If the risk of further damage to the ship is greater in an attempt to re-float the ship by own means, than in remaining aground until professional assistance has been obtained, the ship's Master should try to secure the ship as much as possible by:

- Trying to prevent the ship from moving from its present position
- By dropping anchors (adequate water depth and anchor ground provided) and using vessel's DP system
- By taking ballast into empty tanks, if possible
- Trying to reduce longitudinal strain on hull by transferring ballast or bunkers internally
- Reducing fire risk by removing all sources of ignition.

Inform in line with Section 2 all parties interested about the Grounding and the actions taken so far.

3.2.2. Fire/ Explosion

- Should an explosion and a fire occur on board, sound the GENERAL ALARM immediately
- Further actions should be initiated in accordance with the ship's Muster List.
- In case of fire and explosion the following priorities exist:
  - Rescuing lives
  - Limiting the damage/ danger to the ship and cargo
  - Preventing environmental pollution
- Steps to control the discharge of oil will depend largely on the damage to ship and cargo.
- Special information thereto is contained in subparagraphs 3.2.4, 3.2.5 and 3.2.6.
- Inform in line with Section 2 all parties interested about the Fire/ Explosion and the actions taken so far.

3.2.3. Collision (with fixed or moving objects)

- Should the ship be involved in a collision with another ship, the Master should as soon as possible identify the extent of damage to his own vessel.
- When a collision occurs, the GENERAL ALARM should be sounded immediately for the personnel to muster at their designated Muster Stations.
- The following check list should assist the Master in assessing the situation:
    - Are any tanks penetrated above or below the waterline?
    - If ships are dead in the water and interlocked, what is most prudent, to stay interlocked or separate?
    - Is there any oil spill at present – small or large? Will a separation of the interlocked ships create a larger oil spill than if the ships stay interlocked?
    - If there is an oil spill, will the separation of the ships cause sparks that can ignite the spilled oil or other flammable substances leaked out from the ships?
    - Are the ships creating a greater danger to other traffic in the area if they are interlocked than if separated?
    - Is there a danger to either ship of sinking after being separated?
- If separation of the ships takes place, alter course to bring the own ship windward of any oil slick, if possible.
- Shut down all none essential air intakes.
- Isolate damaged/ penetrated tank(s) by hermetically closing the tank(s), if possible.
- When it is possible to manoeuvre (with the assistance of tug boats), the Master, in conjunction with the appropriate shore authorities, should consider moving his ship to a more suitable location in order to facilitate emergency repair work or lightening operations, or to reduce the threat posed to any sensitive shoreline areas.
- Inform in line with Section 2 all parties interested about the collision and the actions taken so far.

3.2.4. Hull Failure

- Should the ship lose one or more shell platings, develop major cracks, or suffer severe damage to the hull, the Master should immediately sound the GENERAL ALARM to call the crew members to their Muster Stations, and inform them of the situation, and prepare lifeboats for launching if necessary.
- The Master should then assess the situation, and confer with his senior officers.
- The Master should obtain the latest weather forecast and asses its impact on the present situation.
- Furthermore, the following questions should be considered and should be asked: Is the ship in any immediate danger of sinking or capsizing?

  If YES:
    - Send distress message
    - Immediately abandon the ship

  If NO, initiate damage control measures as found necessary by considering the following points:
    - Can the vessel manoeuvre?
    - Has the ship lost buoyancy?
    - If the ship has a list due to loss of ballast, cargo/ bunker or buoyancy, is it necessary and possible to rearrange the bunker or ballast by internal transfer operation in order to bring the ship to an even keel?
    - Is it necessary to dump cargo in order to maintain stability without changing the stress situation?
    - Can this operation wait till another ship/ barge can receive that cargo?
    - Is there any abnormal change in the ship's stability and stress situation?
    - Can the change in the ship's stability and stress situation be monitored and calculated on board? If not, the Master should seek assistance according to subparagraph 3.6.

- Might it be prudent to salve part of the crew members in case the situation should worsen, or is it necessary to abandon the ship totally?

Inform in line with Section 2 all parties interested about the Hull Failure and the actions taken so far.

3.2.5. Excessive List

- Should the ship for some reasons suddenly start to list excessively during discharging/ loading operations, or bunkering, all ongoing operations should be stopped immediately until the cause has been determined.
- The Officer on Duty should inform the Master and/or Chief Officer without delay and the General Emergency Alarm should be sounded.
- The Master should try to determine the reason for the excessive list, and take steps to rectify the situation and to stabilize the ship's condition:
  - Check reason(s) for list
  - Soundings/ ullage to be taken in all tanks
  - Bunker/ ballast pumps to be made ready
  - Consider measures to minimize list in transferring liquid from one compartment to another
  - Ensure water tightness of empty spaces
  - Close all openings
  - Secure vent pipes to avoid ingress of water
  - If bunkering: Change to corrective tanks for rectifying the situation
  - If ballasting/ de-ballasting: Change to corrective tanks to rectify the situation
  - If there is reason to believe that the list may cause an oil spill, notify as per Section2
  - If the ship's crew is in jeopardy, prepare lifeboats for launching, and notify as per Section 2
- If the situation is brought under control, inform all parties interested.

3.2.6. Ship submerged / foundered / wrecked

If the ship is wrecked to the extent that it or parts of it are submerged

- ring the General Alarm;
- take all measures to evacuate all persons on board;
- avoid contact with any spilled oil;
- alert other ships and/or the nearest coastal state for assistance in rescuing lives and the ship as far as possible;
- exhibit NUC lights/shapes and use sound signals;
- notify the appropriate parties, as per section 2.

3.2.7. Hazardous Vapour release

- In case of any vapour release out of the containment system precautions have to taken to protect the persons on board against contamination.
- The ship should be brought with the accommodation upwind ot the spill area as far as possible.
- The crew should be evacuated from any area of risk.
- All possible sources of ignition should be eliminated and non-essential air intakes shut down to prevent intake of vapour into accommodation and engine spaces.
- If unavoidable work has to be carried out within risk areas, the involved persons have to wear protective closing and breathing apparatus.

3.2.8. Containment System Failure

(Drip trays, bunkering stations and D.O & L.O vents on Main Deck)

- First, a visual inspection should be carried out.
- The General Alarm should be sounded and all operations in progress (e.g. bunkering, dry cargo loading, etc.) should be suspended.
- A check for visible oil along hull or in wake of the ship during daytime should be made. At night a stick with white cloth (or sheet of sorbent) around it may be lowered into the water alongside the ship to check for oil leakages.
- All ballast/ bunker tanks should be sounded (ullage). All other compartments, which may have contact with the sea, should also be sounded to ensure that they are intact.
- Soundings of ballast tanks/ bunkers tanks are to be compared with last soundings to check for possible leaks.
- If necessary, drip trays are to be placed under bunker manifolds and round vents of fuel/lub oil tanks.
- Sounding should be taken around the ship to establish the ship's position on the grounding area.
- When the ship is aground, due regard should be given to the indiscriminate opening of ullage plugs, sighting ports etc. as loss of buoyancy could be the result of such actions.
- Any list of the ship shall be noted and included in the report for assistance.
- The Master should assess the possibility of damage to the environment and whatever action can be taken to reduce further damage from an oil release, such as:
    - Initiate clean-up procedures in case of oil spillage onboard
    - Transfer of bunkers internally provided shipboard piping system is in an operational condition
    - If the damage is fairly limited and restricted, i.e. to one or two tanks, consideration should be given to transfer of bunkers internally from the damaged tank(s) to intact tanks, taking into account the impact on the ship's overall stress and stability
    - Isolate damaged/ penetrated bunker tank(s) hermetically to ensure that hydrostatic pressure in tanks remains intact during tidal changes
    - Evaluate possibility of pumping water into a damaged tank in order to form a water bottom stopping the outflow of oil
    - Evaluate the necessity of transferring bunkers to barges or other ships and request such assistance accordingly
    - Evaluate the possibility of additional release of oil
    - In case of oil spillage overboard, notify the appropriate parties, as per Section 2.
    - In case of large differences between the tide levels, the Master should try to isolate the damaged tank(s) to reduce additional loss of bunker oil.
    - Consider and follow (if applicable) the procedures specified in cases of subsections 3.1.1 and 3.1.2 (pipe leakage and tank overflow).

3.3. Priority Actions

Top priority shall in all cases of casualty be put on the safety of the persons onboard and to take actions to prevent escalation of the incident. Immediate consideration should be given to protective measures against fire, explosions and personnel exposure to toxic vapour.

Detailed information about the damage sustained to the ship and its containment system has to be obtained. On the basis of the information the Master can decide next actions for the protection of lives, the ship, the cargo and the environment.

The Master should take into account the following when he is determining whether salvage assistance will be needed or not:

- Nearest land or hazard to navigation

- Vessel's set and drift
- Estimated time of casualty repair
- Determination of nearest capable assistance and its response time.

In case of necessary internal transfer of fuel/ballast, careful consideration is to be given to hull strength and stability.

Plans/tables about the location and specification of the current cargo as well as bunkers and ballast have to be readily available.

3.4. Mitigating Activities

When the safety of the vessel and the personnel onboard has been successfully addressed, the following aspects are to be further considered:

Assessment and monitoring requirements
Emergency situations should be monitored and assessed to identify possibilities for the situation to escalate. These situations should be monitored through the frequent sounding of tanks, monitoring of flammable toxic vapours by using portable / fixed instruments, monitoring of the surrounding situations including any changes of weather and, if the vessel is aground, monitoring of soundings around the ship. Sampling should be employed where considered necessary, which could indicate the broaching of fuel or lub oil containment.

Personnel protection issues
Marine Safety Data Sheets (MSDS) should be consulted for all bunkers and applicable safety precautions should be taken. MSDS can be obtained for chemical cargoes through the USCG Chemical Hazards Response Information System (CHRIS) Manual, and Liquid Natural Gas through the ICS Tanker Safety Guide, Liquefied Gas Manual. MSDS for bunkers are issued to vessels. MSDS give details of emergency procedures and health physical data for particular grades. Protective clothing should be issued and worn in accordance with the advice in the MSDS. With the information from the aforementioned manuals available, all possible threats to the health and safety of the involved personnel are to be evaluated before any actions taken. Only persons with suitable personnel protection (such as breathing apparatus, masks, glows, leggings, aprons, sleeve protections etc.) and knowledge of its use are to be engaged in dangerous operations even if this will reduce the activity.

Isolation procedure
All possible consideration should be given to isolate bunker spaces that have been breached in order to mitigate the quantity discharged. Consideration should also be given to transferring bunkers from any breached compartment to sound compartment(s).

Decontamination of personnel
Protective clothing should be worn in accordance with the particular grade of bunkers which personnel are likely to come in contact with. On completion of operations all protective clothing should be cleaned and stored for further use. On no account should contaminated clothing be allowed within the accommodation areas. Personnel should ensure that all contaminants are cleaned from their bodies.

Disposal of Removed Oil and Cleaned – Up Materials
Disposal of all recovered oil and contaminated clean up materials should always be in accordance with Marpol 73/78 and the Vessel's Garbage Management Plan.

3.5. Transfer of Bunker/ Lightening

If the ship has sustained extensive structural damage, it may be necessary to transfer all or part of the bunkers to another ship.

In Ship-to-Ship-transfer operations involving a specialized service ship, the Master of that ship will normally be in overall charge.

In the case of non-specialized ships the Master or other person in overall charge of the operation should be mutually agreed and clearly established by the Masters concerned prior to the start of operations.

The actual bunker transfer should be carried out in accordance with the requirements of the receiving ship.

In all cases each Master remains responsible for the safety of his own ship, its crew, and cargo/ bunker and equipment and should not permit their safety to be jeopardized by the action of the other Master, his owner, regulatory officials or others.

The Ship-to-Ship-transfer operations should be coordinated with the appropriate responsible local Authority.

When selecting the area of operation the Master(s) should consider the following points

- The need to notify and obtain the agreement of any responsible authority
- The destinations of the ships concerned
- The shelter provided, particularly from sea and swell
- The sea area and depth of water, which should be sufficient for manoeuvring during mooring, unmooring and transfer operations and allow a safe anchorage if operations have to be undertaken at anchor
- The traffic density
- The weather conditions and the weather forecasts

Further, before commencing Ship-to-Ship transfer operations each ship should carry out, as far as possible, appropriate preparations like

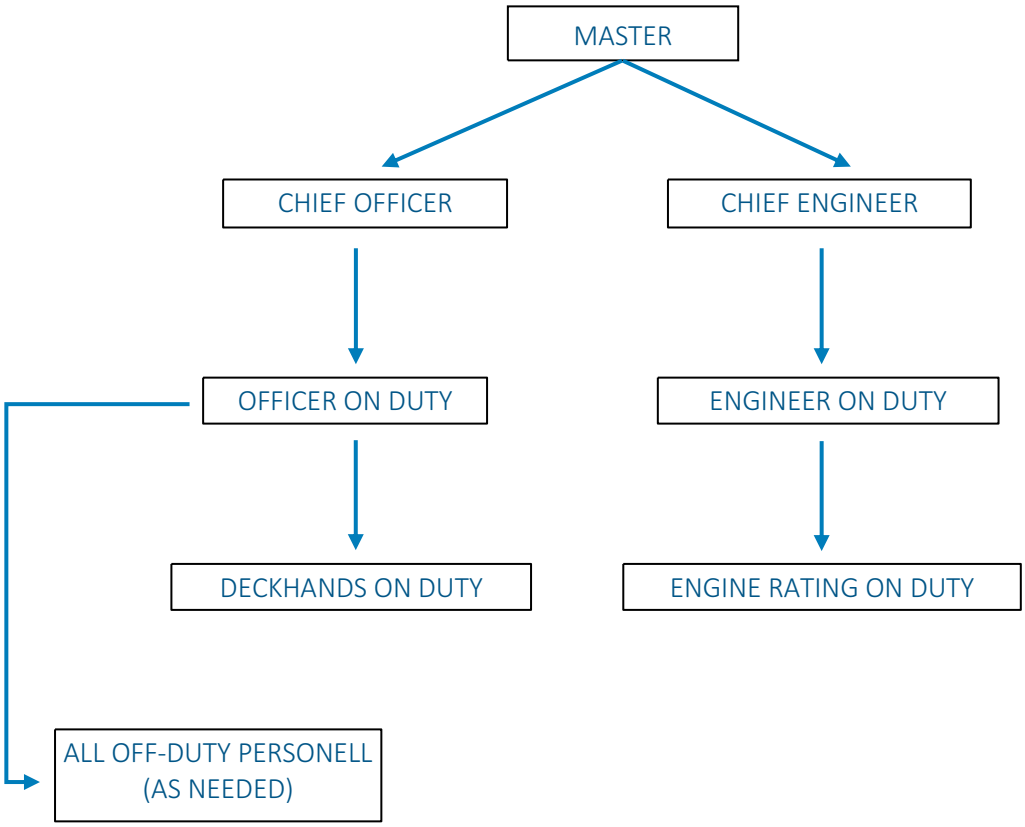
- Pre-mooring preparations of the ships (use of DP system)
- Positioning of fenders if such equipment is available on board
- Mooring equipment arrangements
- Checking the communication channels between the two ships

3.6. Damage Stability and Hull Stress Calculation

It should be noted that, in an emergency, the best course of action required to save the ships, crew and protect the environment may not be obvious. Water ingress and oil outflow resulting from incidents such as collision, grounding, fire, explosion or hull failure can be made worse if the wrong decision is taken. In such a situation, a full appreciation of the vessels stability and longitudinal strength is essential. If these calculations are beyond the ships resources, assistance must be sought from the shore. The Master must complete and transmit the Casualty Report Forms (Appendix 5) to the technical department of the company in order that the relevant analysis can be made. The technical department can be assisted, depending on the situation, by the following technical bureau.

DIM.PAPADIMITRIOU & ASSOCIATES
92 KOLOKOTRONI STR., GR18535
PIRAEUS – GREECE
TEL:+30 210-4175660
TEL:+30 210-4175655
FAX:+30 210-4220060
E-MAIL: dpb@otenet.gr

3.7. General Responsibilities of the Master and designated Officers / Crew Members



3.7.1. General Responsibilities

The following crew members are in charge in the event of an oil spill – actual or probable – to bring the accident under control, limit outflows, organize on board clean-up procedures and determine the additional manpower needed. Arrangements shall be made that in case of sudden unavailability of superior ranks other available ranks are prepared to take over.

Ranking	Duties
Master	Overall in charge of operation on board dealing with an oil spill; responsible for all steps to be taken especially for the two main categories – reporting and action. Keeps log off all events and progress of actions.
Chief Officer	In charge of deck operation; Should keep the Master informed and updated on the situation and the results from action taken to stop or minimize an oil outflow.
Chief Engineer	In charge of bunker operation; Should keep the Master informed and updated on the situation and the results from action taken to limit oil outflow.
Deck Duty Officer	Tank overflow (bunkering): Alert and inform Chief Officer/ Chief Engineer on situation; Mobilize off duty crew as necessary
Duty Engineer	Assist Chief Engineer; Prepare for firefighting; Ensure sufficient power and water to deck; Organize on board clean-up equipment
Duty Rating(s)	If an oil leakage is detected alert immediately by all possible means; Inform Officers(s) on Duty immediately; Position sorbet material/ clean-up material to prevent any escaped oil from reaching the railing; Commence clean-up by using, as far as available on board, the clean-up equipment

3.7.2. Checklists

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Checklist No1	Transfer System Leak

No	Action	Responsible	Done	When
1	Secure all transfer pumps and close all valves in order to stop the flow of product	Chief Engineer		
2	Notify shore terminal	Chief Engineer		
3	Notify Master	Chief Engineer		
4	Activate the on board response team	Master		
5	Complete initial notification (format 1)	Master		
6	Send format 1 according to the notification flow chart in section 2.2.3.4	Master		
7	Individuate the pipe stretch where leakage has occurred	On board Response Team		
8	Operate the containment dispersion and recovery of polluted oil	On board Response Team		
9	Take appropriate steps to prevent petroleum gas from entering in the engine room intake	Chief Engineer		
10	Complete this checklist	Chief Engineer		
11	Send supplementary and / or follow–up format 1 information	Master		

Checklist No2	Tank Overflow

No	Action	Responsible	Done	When
1	Secure all transfer pumps and close all valves in order to stop the flow of product	Chief Engineer		
2	Notify shore terminal	Chief Engineer		
3	Notify Master	Chief Engineer		
4	Activate the on board response team	Master		
5	Complete format 1 initial notification as per section 2	Master		
6	Send format 1 according the notification flowchart given in the section 2.2.3.4	Master		
7	Transfer the bunkers from the affected zone to an available empty or slack tank(s)	Chief Engineer		
8	Operate the containment dispersion and recovery of polluted oil	On board Response Team		
9	Take appropriate steps to prevent petroleum gas from entering in the engine room / accommodation intakes	Chief Engineer		
10	Complete this checklist	Chief Engineer		
11	Send supplementary and / or follow–up format 1 information	Master		

Checklist No3	Suspected Hull Leakage

No	Action	Responsible	Done	When
1	Notify Master	Chief Officer / Chief Engineer		
2	Activate the on board response team	Chief Officer / Chief Engineer		
3	Complete format 1 initial notification as per section 2	Master		
4	Send format 1 according the notification flowchart given in the section 2.2.3.4	Master		
5	Individuate the specific tank from which leakage is occurring	On board Response Team		
6	In the event the source of the leakage cannot be located from onboard, employ a diver to investigate possible bottom leakage	On board Response Team		
7	Carry out appropriate actions taking into account the effect corrective actions may have on hull stress and stability	Master		
8	Reduce the head of oil in the tank involved by draining bunkers into an available empty slack tank(s)	Chief Engineer		
9	Repair the leak if possible	Oil Spill Response Team		
10	Operate the containment, dispersion and recovery of polluted oil	Oil Spill Response Team		
11	Complete this checklist	Chief Officer / Chief Engineer		
12	Send supplementary and / or follow –up format 1 information	Master		

Checklist No4	Collision with a Fixed or Moving Object

No	Action	Responsible	Done	When
1	Activate the on board response team / Ring the General Alarm	Master		
2	Obtain detailed information on the damaged sustained by the ship	Master		
3	Complete format 1 initial notification	Master		
4	Send format 1 according the notification flowchart given in the section 2.2.3.4	Master		
5	Sound all bunker tanks and other compartments which are of or close to the damaged area	Chief Oficer / Chief Engineer		
6	Compile the format 2 stability and strength assessment notification	Master		
7	Send format 2 according the notification flowchart given in the section 2.2.3.4	Master		
8	Avoid indiscriminate opening of ullage plugs or sighting ports	Oil Spill Response Team		
9	Take appropriate steps to prevent petroleum gas from entering in the engine room / accommodation intakes	Chief Officer		
10	Complete this checklist	Master		
11	Send supplementary and / or follow –up format 1 and format 2 information	Master		
12	Isolate damaged / penetrated bunker tanks	Chief Engineer / Chief Officer		
13	With the assistance of tug boats, move the ship to a more suitable location for emergency repairs and / or lightening	Master		

Checklist No5	Grounding / Stranding

No	Action	Responsible	Done	When
1	Activate the on board response team	Master		
2	Obtain detailed information on the damaged sustained by the ship	Master		
3	Complete format 1 initial notification	Master		
4	Send format 1 according the notification flowchart given in the section 2.2.3.4	Master		
5	In the event the source of the leakage cannot be located from on board, employ a diver to investigate possible bottom leakage	Oil Spill Response Team		
6	Sound all bunker tanks and other compartments which are of or close to the damaged area	Chief Officer / Chief Engineer		
7	Direct the sounding around the vessels to establish the vessels position on bottom	Chief Officer		
8	Compile the format 2 stability and strength assessment notification	Master		
9	Send format 2 according the notification flowchart given in the section 2.2.3.4	Master		
10	Reduce the risk by removing all ignition sources	Chief Officer		
11	Evaluate the necessity of transferring cargo to barge or internally	Master		
12	Complete this checklist	Master		
13	Send supplementary and / or follow –up format 1 and format 2 information	Master		
14	Isolate damaged / penetrated bunker tanks	Chief Engineer / Chief Officer		

Checklist No6	Fire / Explosion

No	Action	Responsible	Done	When
1	Find out immediately where the fire / explosion has taken place	Chief Officer / Chief Engineer		
2	Sound the fire alarm	Deck Duty Officer		
3	Activate the fire – fighting team	Master		
4	Activate the on board response team	Master		
5	Obtain detailed information on the damaged sustained by the ship	Master		
6	Compile the format 1 initial notification and format 2 stability and strength assessment notification	Master		
7	Send format 1 and 2 according the notification flowchart given in the section 2.2.3.4	Master		
8	Deploy the members of the vessels damage control team to the positions deemed best for fighting the fire	Chief Officer		
9	Use all available means to fight the fire	Chief Officer		
10	Try to contain the fire and prevent it from spreading to the other part of the ship	Chief Officer		
11	Complete this checklist	Master		
12	Send supplementary and / or follow –up format 1 and format 2 information	Master		
13	Consider response actions of Checklists 7, 8, 10 or 11	Master		

Checklist No7	Hull Failure

In case of immediate danger of sinking or capsizing

No	Action	Responsible	Done	When
1	Prepare for immediate evacuation of the vessel	Master		
2	Send distress signal	Master / Officer on Duty		
3	Complete format 1 initial notification as per section 2 if possible	Master		
4	Send format 1 according the notification flowchart given in the section 2.2.3.4	Master		

In case of no immediate danger of sinking or capsizing

No	Action	Responsible	Done	When
1	Determine the extent of damage	Master		
2	Activate the on board response team	Master		
3	Complete format 1 initial notification as per section 2	Master		
4	Send format 1 according the notification flowchart given in the section 2.2.3.4	Master		
5	Direct sounding on all tanks to determine the extent of all flooding and number of tanks breached	Chief Officer / Chief Engineer		
6	Compile the format 2 stability and strength assessment notification	Master		
7	Send format 2 according the notification flowchart given in the section 2.2.3.4	Master		
8	Complete this checklist	Master		
9	Send supplementary and / or follow –up format 1 and format 2 information	Master		
10	Consider internal transfer of bunkers or water ballast in case of excessive list	Master		

Checklist No8	Excessive List

No	Action	Responsible	Done	When
1	Notify Master	Chief Officer		
2	Determine the reason for excessive list	Master		
3	Compile format 1 initial notification	Master		
4	Send format 1 according the notification flowchart given in the section 2.2.3.4	Master		
5	Change to corrective tanks to rectify the situation if in bunkering / ballasting operation	Master / Chief Officer / Chief Engineer		
6	Activate the on board response team	Master		
7	Consider corrective actions	Master		
8	Compile the format 2 stability and strength assessment notification	Master		
9	Send format 2 according the notification flowchart given in the section 2.2.3.4	Master		
10	Complete this checklist	Master		
11	Send supplementary and / or follow –up format 1 and format 2 information	Master		
12	Close all openings and watertight doors, secure vent pipes	Chief Officer / Chief Engineer		

Checklist No9	Containment System Failure

No	Action	Responsible	Done	When
1	Carry out visual inspection	Chief Officer		
2	Sound General Alarm – Suspend all operations in progress	Officer on Duty / Engineer on Duty		
3	Muster personnel mustered and brief them on the situation and potential dangers.	Master		
4	Activate the on board response team	Master		
5	Check for visible oil along hull or in wake of the ship during daytime. At night lower a stick with white cloth (or sheet of sorbent) around it into the water alongside the ship to check for oil leakages.	Chief Officer		
6	Sound all ballast / bunker tanks. Soundings should be compared with last soundings to check for possible leaks.	Chief Officer Chief Engineer / Engineer on Duty		
7	Sound all other compartments that may have contact with the sea to ensure they are intact.	Chief Officer / Chief Engineer		
8	If necessary, drip trays are to be placed under bunker manifolds and round vents of fuel/ lube oil tanks.	Chief Officer / Chief Engineer		
9	Sounding should be taken around the ship to establish ship's position on the grounding area	Chief Officer / Officer on Duty		
10	The owner / operator informed	Master / Officer on Duty		
11	Notify the nearest states authority	Master/ Officer on Duty		
12	When the ship is aground, due regard should be given to the indiscriminate opening of ullage plugs, sighting ports etc. as loss of buoyancy could be the result of such actions.	Master / Chief Officer		
13	Any list of the ship shall be noted and included in the report for assistance.	Master		

Personnel behaviour has to be as such as no risks may arise, endangering their own lives or the lives of any other crewmembers

The Master should assess the possibility of damage to the environment and whatever action can be taken to reduce further damage from an oil release, such as:
- Initiate clean-up procedures in case of oil spillage onboard
- Transfer of bunkers internally provided shipboard piping system is in an operational condition
- If the damage is fairly limited and restricted, i.e. to one or two tanks, he should consider transferring of bunkers internally from the damaged tank(s) to intact tanks, taking into account the impact on the ship's overall stress and stability
- Isolate damaged/ penetrated bunker tank(s) hermetically to ensure that hydrostatic pressure in tanks remains intact during tidal changes
- Evaluate possibility of pumping water into a damaged tank in order to form a water bottom stopping the outflow of oil
- Evaluate the necessity of transferring bunkers to barges or other ships and request such assistance accordingly
- Evaluate the possibility of additional release of oil
- In case of oil spillage overboard, notify the appropriate parties, as per Section 2.
- In case of large differences between the tide levels, the Master should try to isolate the damaged tank(s) to reduce additional loss of bunker oil.
- Consider and follow (if applicable) the procedures specified in cases of subsections 3.1.1 and 3.1.2 (pipe leakage and tank overflow).

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Checklist No10	Submerged / Foundered

No	Action	Responsible	Done	When
1	Activate General Alarm	Master		
2	Exhibit NUC lights / shapes and use sound signals	Officer on Duty		
3	Check all watertight doors are closed	Chief Engineer / Chief Officer		
4	Take soundings of all tanks and bilges	Chief Engineer / Chief Officer		
5	Locate the source if any, of ingress of water	Chief Officer		
6	The owner / operator informed	Master / Officer on Duty		
7	Notify the nearest states authority	Master/ Officer on Duty		

If the master realises that the situation is no more recoverable notwithstanding all attempts and it is no more safe for the crew to remain on board GIVES THE ORDER TO ABANDON THE SHIP

Personnel behaviour has to be as such as no risks may arise, endangering their own lives or the lives of any other crewmembers

The following emergency actions and duties have to be taken and followed:

Master	Duty Officer	Crew-members
• Assesses the situation and takes the decision to abandon the ship. • Gives the order to transmit the distress signal. • Gives verbal order to abandon the ship.	• Sound the life boat station alarms.	• Put on lifejackets, safety helmets and warm dresses and proceed to muster stations.

Master and Bridge party	Emergency and stand-by parties	Technical party
• Ensure muster check has been completed, all personnel accounted for and details of missing persons (if any) passed to lifeboat commanders. • Record events and collect log books. • Monitor preparation and launch of lifeboats. • Advice all ships by VHF CH16 DSC CH70 and activated GMDSS Distress Alarm • Advice by sat-phone / telex, etc. • Reduce way of the vessel as far as possible, time allowing. • Switch on deck floodlighting. • Time allowing, instruct Emergency and Stand-by parties to gather: extra blankets, water, provisions, torches, hand held radios, etc. • Put on lifejackets and proceed to boat embarkation points bringing to the boats EPIRB, SARTs, GMDSS radios extra pyrotechnics log books sextant, almanac, calculator, pens, paper.	• On hearing life raft station alarm proceeds to abandon ship stations • Carry out muster check and ensure lifejackets donned properly. • Advise the Master of missing persons (if any) and arrange search. • Prepare lifeboats-life rafts lower top embarkation deck and make ready for rapid boarding. • Time permitting, arrange for extra blankets, water, provisions, torches, etc. • Advise the Master that lifeboats are prepared and crew ready for abandoning ship. • When master's order to abandon ship is received embark to life raft. • Lower rescue boat and life rafts • On hitting water, release from falls and stand-by to pick up Master and launch crew	• Maintains power supplies for lighting. • Ensures manoeuvring of the Propulsion System whilst launching lifeboats/life rafts. • On instruction from the Master stops the Propulsion System, secures Engine Room and proceeds to assigned lifeboats stations.

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Checklist No11	Wrecked / Stranded

No	Action	Responsible	Done	When
1	Activate General Alarm	Master		
2	Exhibit NUC lights / shapes and use sound signals	Officer on Duty		
3	Check all watertight doors are closed	Chief Engineer / Chief Officer		
4	Take soundings of all tanks and bilges	Chief Engineer / Chief Officer		
5	Locate the source if any, of ingress of water	Chief Officer		
6	The owner / operator informed	Master / Officer on Duty		
7	Notify the nearest states authority	Master/ Officer on Duty		

If the master realises that the situation is no more recoverable notwithstanding all attempts and it is no more safe for the crew to remain on board GIVES THE ORDER TO ABANDON THE SHIP

Personnel behaviour has to be as such as no risks may arise, endangering their own lives or the lives of any other crewmembers

The following emergency actions and duties have to be taken and followed:

Master	Duty Officer	Crew-members
• Assesses the situation and takes the decision to abandon the ship. • Gives the order to transmit the distress signal. • Gives verbal order to abandon the ship.	• Sounds the life-raft station alarms.	• Put on lifejackets, safety helmets and warm dresses and proceed to muster stations.

Master and Bridge party	Emergency and stand-by parties	Technical party
• Ensure muster check has been completed, all personnel accounted for and details of missing persons (if any) passed to lifeboat commanders. • Record events and collect log books. • Monitor preparation and launch of lifeboats. • Advice all ships by VHF CH16 DSC CH70 and activated GMDSS Distress Alarm • Advice by sat- phone / telex, etc. • Reduce way of the vessel as far as possible, time allowing. • Switch on deck floodlighting. • Time allowing, instruct Emergency and Stand-by parties to gather: extra blankets, water, provisions, torches, hand held radios, etc. • Put on lifejackets and proceed to boat embarkation points bringing to the boats EPIRB, SARTs, GMDSS radios extra pyrotechnics log books sextant, almanac, calculator, pens, paper.	• On hearing life raft station alarm proceeds to abandon ship stations • Carry out muster check and ensure lifejackets donned properly. • Advise the Master of missing persons (if any) and arrange search. • Prepare lifeboats-life rafts lower top embarkation deck and make ready for rapid boarding. • Time permitting, arrange for extra blankets, water, provisions, torches, etc. • Advise the Master that life rafts are prepared and crew ready for abandoning ship. • When master's order to abandon ship is received embark to life raft. • Lower rescue boat and life rafts • On hitting water, release from falls and stand-by to pick up Master and launch crew.	• Maintains power supplies for lighting. • Ensures manoeuvring of the Propulsion System whilst launching lifeboats/life rafts. • On instruction from the Master stops the Propulsion System, secures Engine Room and proceeds to assigned lifeboats stations.

Checklist No12	Hazardous Vapor Release

No	Action	Responsible	Done	When
1	Stop all bunkering operations if the ship is in a terminal	Chief Engineer		
2	Sound the emergency alarm	Chief Officer		
3	Check all watertight doors are closed	Chief Engineer/ Chief Officer		
4	Take soundings of all tanks and bilges	Chief Engineer/ Chief Officer		
5	Locate the source if any, of ingress of water	Chief Officer		
6	The owner / operator informed	Master / Officer on Duty		
7	Notify the nearest states authority	Master / Officer on Duty		
8	If possible head the ship so that she is free from the gas cloud	Master		
9	Make ready for an immediate use of breathing apparatus and fire fighting equipment	Chief Officer		
10	Stop the leak if possible	Chief Engineer/ Chief Officer		
11	Avoid smoking and all naked lights	Master		
12	Close all valves in the liquid line	Chief Engineer / Engineer on Duty		
13	Send radio warning to all ships present in the area	Master / Officer on Duty		

If the master realises that the situation is no more recoverable notwithstanding all attempts and it is no more safe for the crew to remain on board GIVES THE ORDER TO ABANDON THE SHIP

Personnel behaviour has to be as such as no risks may arise, endangering their own lives or the lives of any other crewmembers

The following emergency actions and duties have to be taken and followed:

Master	Duty Officer	Crew-members
• Assesses the situation and takes the decision to abandon the ship. • Gives the order to transmit the distress signal. • Gives verbal order to abandon the ship.	• Sounds the life-raft station alarms.	• Put on lifejackets, safety helmets and warm dresses and proceed to muster stations.

Master and Bridge party	Emergency and stand-by parties	Technical party
• Ensure muster check has been completed, all personnel accounted for and details of missing persons (if any) passed to lifeboat commanders. • Record events and collect log books. • Monitor preparation and launch of lifeboats. • Advice all ships by VHF CH16 DSC CH70 and activated GMDSS Distress Alarm • Advice by sat- phone / telex, etc. • Reduce way of the vessel as far as possible, time allowing. • Switch on deck floodlighting.	• On hearing life raft station alarm proceeds to abandon ship stations • Carry out muster check and ensure lifejackets donned properly. • Advise the Master of missing persons (if any) and arrange search. • Prepare lifeboats-life rafts lower top embarkation deck and make ready for rapid boarding. • Time permitting, arrange for extra blankets, water, provisions, torches, etc. • Advise the Master that life rafts are prepared and crew ready for abandoning ship.	• Maintains power supplies for lighting. • Ensures manoeuvring of the Propulsion System whilst launching lifeboats/life rafts. • On instruction from the Master stops the Propulsion System, secures Engine Room and proceeds to assigned lifeboats stations.

• Time allowing, instruct Emergency and Stand-by parties to gather: extra blankets, water, provisions, torches, hand held radios, etc. • Put on lifejackets and proceed to boat embarkation points bringing to the boats EPIRB, SARTs, GMDSS radios extra pyrotechnics log books sextant, almanac, calculator, pens, paper.	• When master's order to abandon ship is received embark to life raft. • Lower rescue boat and life rafts • On hitting water, release from falls and stand-by to pick up Master and launch crew.	

Section 4: National and Local Coordination

Quick efficient co-ordination between the ship and Coastal States or other parties involved becomes vital in mitigating the effects of an oil pollution incident.

As the identities and roles of various national and local Authorities involved vary widely from state to state and even from port to port, the Master should take note of these particularities, as far as possible. In this context the Master should call upon the owner's representatives in the state/ port of question to receive the relevant information.

In several countries it is accepted that an oil spill can be tackled most effectively from the shore and there is normally no requirement on the part of the shipowner or the ship's crew to organise the clean-up response in respect of oil spilled overboard. Operational spills usually occur in port at an oil or bunkering facility and tend to be cleaned up by the facility operator.

In the case of casualties, the responsibility for organizing and controlling the clean-up response is usually assumed by an agency of government. In both cases the spiller would be expected to co-operate fully, and pay the reasonable costs of clean-up and any damages caused, up to a specified limit of liability based on the tonnage of the ship.

Most countries recognize that is unreasonable and impractical to expect a shipowner or crew to respond to a spill from their ship and therefore a government agency or port authority will normally be in charge and demand the costs afterwards. In a relatively few countries, for example USA, shipowners will be required to organize the clean-up of a spill from their ships and this will usually necessitate employing a local oil spill clean-up contractor or oil industry clean-up cooperative. A number of developing nations lack both specialized resources and contingency plans and may rely on help from a variety of sources outside the country to assist in clean-up operations. In such cases it may be in the owner's best interest to offer an active involvement in the spill response operation. However, it should be recognized that the actual response adopted by a country to a particular incident will depend upon a number of factors such as the exact location, the type and quantity of oil involved and the owner of the ship.

Prior to undertaking mitigation actions – especially in cases of an actual discharge of oil due to casualties in the territorial waters of a Coastal State – the Master should contact the Coastal State for authorization of his action.

The Master should co-ordinate all his activities with the Coastal State.

The Master should call the Coastal State for allowance to use chemical agents for response to oil pollution on the sea. Without authorization of the Authorities of the appropriate Coastal State no chemical agents should be used.

Where no responsibility for discharge response by a Coastal State is noticed the Master should take all the necessary steps as deemed appropriate to minimize the escape of oil.

With respect of the accident happened the Master should take measures as stated in Section 2 and Section 3 of this Plan.

Section 5: Non-Mandatory Information (Voluntary Part)

In addition to the mandatory provisions required by Reg. 37, Annex I, MARPOL 73/78 which are mentioned in Sections 1 to 4 of this Plan, local requirements, insurance company or owner/ operator policies etc. may dictate the provisions of additional guidance.

Such additional information material, including diagrams and/ or drawings, reference material etc., may be of help for the Master when responding to an oil pollution incident or an emergency situation as well as may be required by local Authorities in ports visited by the individual ship.

List of Appendices

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Appendix 1 - Initial Notification

Extract from section 2 reporting requirements.

Label	Function	Explanation
A	Ship	Name, call sign and nationality
B	Date and time (UTC) of event	A 6-digit group giving day of month (first two digits), hours & minutes (last four digits)
C (OR)	Position	A 4-digit group giving latitude in degrees and minutes suffixed with N or S, and a 5-digit group giving longitude in degrees and minutes suffixed with E or W
D	Position	True bearing (first 3 digits) and distance (state distance) in nautical miles from clearly identified landmark (state landmark)
E	True course	A 3-digit group
F	Speed at time of incident	In knots and tenths of knots as a 3-digit group
L	Route information	Details of intended track
M	Radio communications	Full details of radio stations (names) and frequencies being guarded
N	Time (UTC) of next report	A 6-digit group as under BB above
O	Ship's draught	
P	Cargo on board: can be included in „RR„ as relevant	Type(s) and quantity(ies) of cargo/ bunker on board and brief details of any dangerous cargoes as well as harmful substances and gases that could endanger persons or the environment
Q	Defects or damage or deficiencies or other limitations	Brief details of conditions of the ship as relevant; ability to transfer cargo/ ballast/ bunker fuel
R	Description of pollution or possible overboard discharge	Brief details of pollution; this should include the type(s) of fuel oil, an estimate of the quantity discharged, whether the discharge is continuing, the cause of the discharge and, if possible, an estimate of the movement and area of slick
S	Weather conditions	Brief details of weather and sea conditions prevailing including wind force and direction and relevant swell details
T	Ship's representative and/ or owner	Name, address, telex and telephone number of the ship's owner and representative (charterer, manager or operator of the ship or their agents)
U	Ship's size and type	Details of length, breadth and type of ship as well as capacity (tonnage)
X	Miscellaneous and additional information	Any other information including relevant details such as brief details of incident, need for outside assistance, action being taken to limit further discharge; details of any personnel injuries sustained, details of P & I Club and local correspondent.

INITIAL NOTIFICATION – EXAMPLE

The following format provides an example as to how Initial Notification information shall be presented:

A	*MV „X„, Call Sign D..., German Flag*
B	*01 12 36*
C	*2528N 05740E*
E	*179*
F	*186*
L	*Bound Singapore from Muscat*
M	*Bahrain Radio 500 KHz, VHF 16, INMARSAT No. 888 888*
N	*As required*
O	*Draught 7m*
P	*650 TEU/ NO IMDG CARGO/ BUNKERS 580 IFO/ 75 MDO*
Q	*Collision with cargo ship ..., HFO-Service tank starboard breached, no fire and all essential shipboard systems operational*
R	*Quantity of fuel oil lost from breached tank about 10 tonnes; tank now empty* *Slick moving SE away from land and out of Gulf of Oman*
S	*Weather fine, wind NNW, 3 Bft, sea state slight to moderate, no swell*
T	*Owner Blue Horizon Co., Vorsetzen 12, 20459 Hamburg, Tel. +40 123 45, Telex 876 54* *Fax +40 876 543*
U	*Length 169 m, breadth 25 m, tonnage 23.000 tdw, type container ship*
X	*No personnel injuries sustained; no clean-up operations possible from ship; Ship safe P and I Club advised; local correspondent is Miller on Tel. Dubai 54 444. Proceding to Dubai for survey/ repairs.*

MASTER

Note: The alphabetical reference letters in the above format are from 'General principles for ship reporting systems and ship reporting requirements, including guidelines for reporting incidents involving dangerous goods, harmful substances and/ or marine pollutants' adopted by the International Maritime Organization by resolution A.851(20). The letters do not follow the complete alphabetical sequence as certain letters are used to designate information required for other standard reporting formats, e.g., those used to transmit route information.

A blank form is provided in the following pages.

INITIAL NOTIFICATION – BLANK FORM

A	
B	
C	
D	
E	
F	
L	
M	
N	
O	
P	
Q	
R	
S	
T	
U	
X	

MASTER

Note: The alphabetical reference letters in the above format are from 'General principles for ship reporting systems and ship reporting requirements, including guidelines for reporting incidents involving dangerous goods, harmful substances and/ or marine pollutants' adopted by the International Maritime Organization by resolution A.851(20). The letters do not follow the complete alphabetical sequence as certain letters are used to designate information required for other standard reporting formats, e.g., those used to transmit route information.

Appendix 2 - Coastal State Contacts (Focal Points)

The most updated version of the Circular shall be included here in the Plan.

Appendix 3 - Port Contacts

The following table provides an example as to how port contacts information could be presented:

Name of Port Contact	Address	Means of contact	Remarks
Port Authority (Harbour Master etc.)	.....	Phone... Fax... VHF-Channel...	...
Terminal Officials	...	...	...
Company´s Local Agent	...	...	...
...	...	...	...
	...	...	...
	...	...	...
	...	...	...

Appendix 4 – Ship Interest Contacts

Institution / person	Address	Telephone	Facsimile	E-mail
Ship Owning Company				
Asso Atalanti Navigation Company Limited	Sotiri Michailidi 5 & 28 Oktovriou, 1st Floor, Flat / Office 101, 3035, Limassol, Cyprus	T: +357 25370810	+357 25379577	marine@assogroup.com
Ship Managing Company				
Asso Marine Shipping Company (Main Switchboard)	Thesi Kalympaki Elefsina, GR19200, Greece	T: +30 211 8885130	+30 211 8885070	marine@assogroup.com operations@assogroup.com
Ioannis TOGIAS (Marine Division Director)		T: +30 211 8885180		itogias@assogroup.com
Ioannis STASINOPOULOS (DPA/CSO/CMLCO)		T: +30 211 8885231 M: +30 6955062241		istasinopoulos@assogroup.com
Christos KASTANOS (Ops & Crew Manager)		T: +30 211 8885110 M: +30 6951952017		ckastanos@assogroup.com
Diamantis APESSOS (Superintendent Eng.)		T: +30 211 8885105 M: +30 6951978055		dapessos@assogroup.com
Iro STYLIANOU (Administrative Assistant)		T: +30 211 8885130		marine@assogroup.com
Other Contacts				
American Bureau of Shipping - ABS (Classification Society)	1, Sachtouri Str. & Posidonos Ave. GR176 74 Kallithea, Greece	T: +30 210 441000 24/7: +30 6932588891	+30 210 4293659	ABSPiraeus@eagle.org
Bureau Veritas – BV (RO – RSO)	23 Etolikou str., Piraeus,GR18545 , Greece	T: + 30 210 4063000 +30 210 4063136 M: +30 6944868398 +30 6940771552	+30 210 4063063	grc_ism@gr.bureauveritas.com
Arion Enterprises Inc. Mr. N. Gkiouzelakis (Insurance broker)	44 Hatzikiriakou Avenue, Piraeus, GR18538, Greece	T: +30 210 4290525 M: +30 6944335506	+30 210 4290526	arion@arioninsurance.com
SKULD (P&I Club)	Contact is made through Insurance Broker			
Dim. Papadimitriou & Associates (Technical Advisor)	92 Kolokotroni str., GR18535, Piraeus, Greece	T: +30 210 4175660 +30 210 4175655 M: +30 6936697090	+30 210 4220060	dpb@otenet.gr
AqualisBraemar (inc. The Salvage Association)	5-7 Filellinon str., Piraeus, GR18536, Greece	T: +30 210 4292690 M: +30 6943210535		piraeus@aqualisbraemar.com

Appendix 5 – Stability and Strength Assessment Notification Forms

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STABILITY AND STRENGTH ASSESSMENT NOTIFICATION – FORM 1

CLB ATALANTI (IMO 8661616)	
TRIP:	From……To……
Date:	Departure……Arrival (estimate)……

Drafts after incident	
FWD	P. ……(m) S. ……(m)
AFT	P. ……(m) S. ……(m)
MID-SHIP	P. ……(m) S. ……(m)
TRIM	P. ……(cm) S. ……(cm)
LIST	P. ……(dg)(◦) S. ……(dg)(◦)
WATER GRAVITY	……(t/m³)

Advice required for the following actions	1 …… 2 …… 3 …… 4 ……

Damage Description	Damage location and extension are to be sketched on form 3

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STABILITY AND STRENGTH ASSESSMENT NOTIFICATION – FORM 2

CLB ATALANTI (IMO 8661616)	
TRIP:	From……To…….
Date:	Departure……Arrival (estimate)…….

Tank / Space Description §		100% Volume (m^3)	Quantity ⍰ Departure check (t)	Quantity ⍰ After Accident (t)	Cargo Gravity ⍰ (t/m^3)	Damaged ⍰ (Y/N)
1	No1A WATER BALLAST TK	210.62				
2	No1A WATER BALLAST TK	210.62				
3	No1B WATER BALLAST TK	47.65				
4	No1B WATER BALLAST TK	47.65				
5	No2 WATER BALLAST TK	553.95				
6	No2 WATER BALLAST TK	553.95				
7	No3 WATER BALLAST TK	308.68				
8	No3 WATER BALLAST TK	308.68				
9	No3A WATER BALLAST TK	342.32				
10	No3A WATER BALLAST TK	318.69				
11	No3B WATER BALLAST TK	342.32				
12	No3B WATER BALLAST TK	318.69				
13	No4 WATER BALLAST TK	194.74				
14	FRESH WATER TK	115.33				
15	FRESH WATER TK	115.33				
16	No4 FW / WATER BALLAST TK	205.59				
17	DIESEL OIL SETTLING TANK	5.04				
18	EM'CY GEN. D.O. TK	0.65				
19	INCINERATOR D.O. TK	0.50				
20	FWD D.O. DAILY TK	10.07				
21	FWD D.O. DAILY TK	10.07				
22	FWD D.O. DAILY TK	10.07				
23	FWD DIESEL OIL TANK	191.99				
24	FWD DIESEL OIL TANK	191.99				
25	AFT DIESEL OIL TANK	215.03				
26	AFT DIESEL OIL TANK	201.59				
27	AFT DO SETTLING TK	7.03				
28	AFT D.O. DAILY TK	8.50				
29	AFT D.O. DAILY TK	8.50				
30	DO SERVICE VSP TK	10.39				
31	FWD LO TK	10.50				

⍰ This Column Shall Be Filled By the Master Before Each Voyage When Loading Operations Are Complete.
§ See The Sketches In Form 3 And Form 4.

STABILITY AND STRENGTH ASSESSMENT NOTIFICATION – FORM 2 (CONT.)

Tank / Space Description §		100% Volume (m^3)	Quantity ⍰ Departure check (t)	Quantity ⍰ After Accident (t)	Cargo Gravity ⍰ (t/m^3)	Damaged ⍰ (Y/N)
32	AUX. HYD/LUB OIL TK	1.87				
33	AUX. HYD/LUB OIL TK	1.87				
34	AUX. HYD/LUB OIL TK	1.87				
35	AUX. HYD/LUB OIL TK	1.87				
36	HYDRAULIC LO TK	13.80				
37	AFT LO TK	4.88				
38	AFT HYDRAULIC LO TK	4.88				
39	HYDR. L.O. TK FOR TURNTABLE	7.50				
40	HYDR. L.O. TK FOR TURNTABLE	0.65				
41	LO TANK FOR VSP (PROPELLER)	4.38				
42	LO TANK FOR VSP (ENGINE)	1.78				
43	FWD USED OIL TK	5.04				
44	MARPOL TANK	7.00				
45	SLUDGE TK No1	4.62				
46	SLUDGE TK No2	5.73				
47	SLUDGE TK No3	2.83				
48	AFT USED LO TK	9.76				
49	SEWAGE HOLDING TANK	59.18				
50	AFT SEA DUCT for Cooling	30.97				
51	FWD SEA DUCT for Cooling	30.97				

⍰ This Column Shall Be Filled By the Master Before Each Voyage When Loading Operations Are Complete.
§ See The Sketches In Form 3 And Form 4.

STABILITY AND STRENGTH ASSESSMENT NOTIFICATION – FORM 3

CLB ATALANTI (IMO 8661616)	
TRIP:	From……To…….
Date:	Departure……Arrival (estimate)…….

Note For The Master	When transmitting this present Form insert in this page the sketches of the ship as they are reported in the Capacity Plan.

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FOLLOW–UP NOTIFICATION – FORM 4

CLB ATALANTI (IMO 8661616)	
TRIP:	From……To…….
Date:	Departure……Arrival (estimate)…….

Additional Information Concerning Stability and Hull Strength Assessment	
Reported Damage	Please detail extent and location of structural damage. Please attach sketches. Also indicate damaged compartments, bulkheads, frame Nos and dimensions where possible.

Proposed Actions And Requirements	Any Other Relevant Information, Details Of Actions Being Undertaken Or Proposed, Salvage Operations etc.

Please List The Technical Information You Urgently Require	Y / N
1. Residual Stability	
2. Residual Strength	
3. Lightering Proposal	
4. Cargo Transfer Proposal	
5. Other Remedial Actions	
6.	
7.	

Appendix 6 - National & Local Coordination Form

CLB ATALANTI (IMO 8661616)
TRIP: From……To…….
Date: Departure……Arrival (estimate)…….
Responsible on board coordinator:……
Responsible coastal states:……
Coastal state: 1. ……
Does the local authority of the next port of call take charge of response activities? (Y / N) ……
If the answer is Y , indicate the procedure to be followed to activate and co-ordinate the response resources: …… …….
Is responsibility for initiating response placed on the ship owner? (Y / N) ……
If the answer is N, indicate the procedure to be followed to activate and co-ordinate the response resources: …… …….
Coastal state: 2. ……
Does the local authority of the next port of call take charge of response activities? (Y / N) ……
If the answer is Y , indicate the procedure to be followed to activate and co-ordinate the response resources: 1…… 2…….
Is responsibility for initiating response placed on the ship owner? (Y / N) ……
If the answer is N, indicate the procedure to be followed to activate and co-ordinate the response resources: 1…… 2…….
Coastal state: 3. ……
Does the local authority of the next port of call take charge of response activities? (Y / N) ……

- continues on next page -

National & Local Coordination Form (Cont.)

If the answer is Y , indicate the procedure to be followed to activate and co-ordinate the response resources: 1…… 2……
Is responsibility for initiating response placed on the ship owner? (Y / N) ……..
If the answer is N, indicate the procedure to be followed to activate and co-ordinate the response resources: 1…… 2……
Coastal state: 4. ……
Does the local authority of the next port of call take charge of response activities? (Y / N) ……..
If the answer is Y , indicate the procedure to be followed to activate and co-ordinate the response resources: 1…… 2……
Is responsibility for initiating response placed on the ship owner? (Y / N) ……..
If the answer is N, indicate the procedure to be followed to activate and co-ordinate the response resources: 1…… 2……

- END -

Appendix 7 - List of Oil Spill Response Equipment Carried On board

ITEM	LOCATION	USE	NUMBER / QUANTITY

Note: The Chief Officer ensures that the equipment is well stocked, in good operating condition and in the prescribed location.

Appendix 8 - Ship's Plans and Drawings

(Located in the vessel's office)

No	Name
02-ZA	General Arrangement Plan
08Q	Capacity Plan
12-F	Diesel Oil Piping
14-G	Air Vent & Sounding Pipes
84-B	Hydraulic & Lubrication Oil Transfer System
10-D	Bilge System
15-F	MARPOL Diagram

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Document Type: Plan
Document ID: SMM-M07.40 (Astrea)

Shipboard Oil Pollution Emergency Plan (SOPEP)

Astrea (IMO 8520771, ABSCN 87223103)

This plan has been developed in accordance with Regulation 37 of Annex I of MARPOL 73/78.

Rev. No.	Date	Issue Description	Prepared by	Reviewed by	Approved by	Customer Approval
0	01/04/2020	First issue of the document for RO review and approval	DPA	SEng.	GM	-

Our certifications

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Revision Summary			
Revision No	Revised Chapters	Revision Description	Reason for Revision
0	-	First issue of the document (all previous revisions / updates / amendments have been incorporated in the current document)	For RO review and approval

NOTE 1: Changes to Section 5 and the Appendices are not required to be approved by the Administration. The appendices should be maintained up to date by the owners, operators and managers.

Record of changes					
Change No.	Pages	Approved by (Name – Signature)	Date of Approval	Description of Change	Approval by Administration / RO

Approval of Changes by Administration			
Revision No	Date	Approved By	Official stamp

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Vessel's Main Data

ABS-Number	87223103
Name of Ship	ASTREA
Call Sign / MMSI	SYBE / 240691000
IMO-Number	8520771
Type of Ship	Special Purpose Ship
Country / Port of Registry	Greece / Piraeus
Year of Build	1987
Owner	Astrea Shipping Company (IMO Reg. Owner ID 5403691)
Operator	Asso Marine Shipping Company (IMO Comp. ID 6004472)
Length OA	71.30m
Length B.P	65.50m
Breadth mld	17.50m
Depth (Main Deck)	7.30m
Deadweight	2,851.23MT
GT	2,590
NT	777
Draught (max.)	6.10m
Main Engines	2 x Wartsila Vasa 6R32 – 2250kW each
Aux. Engines	2 x Caterpillar C18 - 430 kVA each 1 x Volvo Penta D12-AMG – 440 kVA
Emerg. Generator	Mercedes Benz OM-407 – 183kVA
Bow Thrusters	2 x Tunnel (LIAAEN TT60/47-1790 – 590kW each)
Stern Thruster	2 x Tunnel (LIAAEN TT60/47-1790 – 590kW each)
Voyages	International

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Vessel's Tank Capacities

WATER BALLAST TANKS			
Tank ID	Side	Position (Frame No)	Capacity (m^3)
FORE PEAK TK	-	100 ~ FWD	142.697
No2 D.B. WATER BALLAST TK	C	87 ~ 100	43.521
No3 DEEP WATER BALLAST	P	76 ~ 87	230.780
No3 DEEP WATER BALLAST	S	76 ~ 87	230.778
No9 WATER BALLAST TK	P	42 ~ 54	27.746
No9 WATER BALLAST TK	S	52 ~ 54	27.746
No11 WING WATER BALLAST TK	P	30 ~ 42	38.769
No11 WING WATER BALLAST TK	S	30 ~ 42	35.621
No12 WATER BALLAST TK	P	30 ~ 42	88.555
No12 WATER BALLAST TK	S	30 ~ 42	88.555
No13 WING WATER BALLAST TK	P	18 ~ 30	161.048
No13 WING WATER BALLAST TK	S	18 ~ 30	148.770
No14 A.P. WATER BALLAST TK	P	12 ~ 18	95.605
No14 A.P. WATER BALLAST TK	S	12 ~ 18	91.471
No16 A.P. WATER BALLAST TK	P	2 ~ 11	62.747
No16 A.P. WATER BALLAST TK	S	2 ~ 11	62.747
No18 A.P. WATER BALLAST TK	P	AFT ~ 2	37.836
No18 A.P. WATER BALLAST TK	S	AFT ~ 2	31.587
TOTAL			1646.579

FRESH WATER TANKS			
Tank ID	Side	Position (Frame No)	Capacity (m^3)
No2 FRESH WATER TK	P	87 ~ 100	137.666
No2 FRESH WATER TK	S	87 ~ 100	137.666
No17 A.P. FRESH WATER TK	P	2 ~ 11	66.760
No17 A.P. FRESH WATER TK	S	2 ~ 11	66.760
TOTAL			408.852

DIESEL OIL TANKS			
Tank ID	Side	Position (Frame No)	Capacity (m^3)
No4 WING DIESEL OIL TK	P	56 ~ 75	115.867
No4 WING DIESEL OIL TK	S	56 ~ 75	128.697
No5 D.B. DIESEL OIL TK	P	56 ~ 75	65.217
No5 D.B. DIESEL OIL TK	S	56 ~ 75	65.217
No6 D.B. DIESEL OIL TK	C	36 ~ 56	101.822
No6 D.B. DIESEL OIL TK	P	42 ~ 56	46.600
No6 D.B. DIESEL OIL TK	S	42 ~ 56	46.600
No7 D.B. DIESEL OIL TK	P	30 ~ 42	32.423
No7 D.B. DIESEL OIL TK	S	30 ~ 42	32.423
No8 D.B. DIESEL OIL TK	C	18 ~ 36	75.579
No8 D.B. DIESEL OIL TK	P	23 ~ 30	17.827
No8 D.B. DIESEL OIL TK	S	21 ~ 30	20.552
No10 D.B. DIESEL OIL TK	P	42 ~ 54	80.121
No10 D.B. DIESEL OIL TK	S	42 ~ 54	80.121
No14 DIESEL OIL TK	C	12 ~ 17	99.449
No19 DIESEL OIL SERV. TK	S	56 ~ 61	24.335
No20 DIESEL OIL SETTL TK	S	54 ~ 56	35.845
No21 DIESEL OIL SERV. TK	P	54 ~ 56	35.845

No32 D.O. TK FOR EMER. GEN.		89 ~ 90	0.900
TOTAL			1105.440

LUB OIL TANKS			
Tank ID	Side	Position (Frame No)	Capacity (m^3)
No25 LUB OIL USED TK	C	64 ~ 66	8.466
No27 LUB OIL SYST. TK	P	58 ~ 66	5.999
No27 LUB OIL SYST. TK	S	58 ~ 66	5.999
No28 LUB OIL STORE TK	C	84 ~ 87	8.800
No29 HYDRAULIC OIL TK	S	39 ~ 41	2.564
No30 HYDRAULIC OIL TK	S	39 ~ 41	2.564
No31 HYDRAULIC OIL TK	S	39 ~ 41	2.138
TOTAL			36.530

MISCELLANEOUS TANKS			
Tank ID	Side	Position (Frame No)	Capacity (m^3)
BILGE TK	C	56 ~ 60	16.933
SLUDGE TK	C	60 ~ 64	16.933
SEWAGE TK	P	72 ~ 75	12.829
FO DRAIN TK	C	66 ~ 67	4.233
TOTAL			50.928

Introduction

1. This Shipboard Oil Pollution Emergency Plan (hereafter referred to as the 'Plan') is written in accordance with the requirements of regulation 37 of Annex I of the International Convention for the Prevention of Pollution from Ships, 1973 as modified by the Protocol of 1978 relating there to (MARPOL 73/78).

2. The purpose of the Plan is to provide guidance to the Master and officers on board the ship with respect to the steps to be taken when an oil pollution incident has occurred or is likely to occur.

3. The Plan contains all information and operational instructions as required by the 'Guidelines for the development of the Shipboard Oil Pollution Emergency Plan' developed by IMO and published under resolution MEPC.54(32) adopted on the 6th of March 1992, as amended by Resolution MEPC.86(44) adopted on the 13th of March 2000.

   The appendices contain names, telephone, telex numbers, etc., of all contacts referenced in the Plan, as well as other reference material.

4. The Plan has been approved by ABS on behalf of the Administration and, except as provided below, no alteration or revision shall be made to any part of it without the prior approval of the Administration.

5. Changes to Section 5 and the appendices will not be required to be approved by the Administration. The appendices should be maintained up to date by the owners, operators and managers.

6. This plan will be regularly reviewed and updated. Revisions, other than those referred to in 5 above will be submitted to the Administration for approval. Revision will be the responsibility of the managers and will be carried out at intervals not exceeding 12 months.

7. Following an incident in which the plan has been activated, there will be a thorough review of its effectiveness.

Section 1: Preamble

1.1. This Plan is available to assist the ship's personnel in dealing with an unexpected discharge of oil. Its primary purpose is to set in motion the necessary actions to stop or minimize the discharge of oil and to mitigate its effects.

1.2. Effective planning ensures that the necessary actions are taken in a structured, logical, safe and timely manner.

1.3. The primary objectives of this Plan are to:

- prevent oil pollution;
- stop or minimize oil outflow when damage to the ship or its requirements occurs;
- stop or minimize oil outflow when an operational spill occurs in excess of the quantity or instantaneous rate permitted under the present Convention.

1.4. Further, the purpose of the Plan is to provide the Master, officers and certain crew members with a practical guide to the prevention of oil spills and in carrying out the responsibilities associated with regulation 37 of Annex I to MARPOL 73/78

- procedures to report an oil pollution incident
- Coastal State contacts (Focal Points) and Port Contact Lists to be contacted in the Event of an oil pollution incident
- response actions to reduce or control the discharge of oil following an incident
- co-ordination with national and local Authorities in combating oil pollution

1.5. In summary, the Plan will serve to promote a practised response when the ship's personnel is faced with an oil spill.

1.6. Although the Plan is designed as a ship-specific tool it must also be considered as an additional instrument and as a link to shore-based plans. With this the Plans allow an efficient co-ordination between the ship and shore-based Authorities/ Organizations in mitigating the effects of an oil pollution incident.

1.7. The Plan includes a summary flowchart (see page 9) to guide the Master through reporting and acting procedures required during an oil pollution incident response.

1.8. The Plan is a document used on board by the Master and the Officers of the Ship. It is therefore written in English, which is the working language understood by the Master and Officers. A change in Master and Officers that brings about an attendant change on their working language or languages understood would require the issuance of the Plan in the new languages.

1.9. Without interfering with ship-owner's liability, some coastal States consider that it is their responsibility to define techniques and means to be taken against oil pollution incidents and approve such operations that might cause further pollution, i.e. lightening. States are in general entitled to do so under the International Convention relating to Intervention on the High Seas in Cases of Oil Pollution Casualties, 1969 (Intervention Convention).

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SHIPBOARD OIL POLLUTION EMERGENCY PLAN – SUMMARY FLOWCHART

This flow diagram is an outline of the course of action that shipboard personnel should follow in responding to an oil pollution emergency based on the guidelines published by the Organization. This diagram is not exhaustive and should not be used as a sole reference in response. Consideration should be given for inclusion of specific reference to the Plan. The steps are designed to assist ship personnel in action to stop or minimize the discharge of oil and mitigate its effects. These steps fall into two main categories – reporting and action.

DISCHARGE OF OIL – PROBABLE OR ACTUAL

⇩

ASSESSMENT OF THE NATURE OF INCIDENT

⇩

ACTIONS REQUIRED

- Alert crew members
- Identity spill source
- Personnel protection
- Spill assessment
- Vapor monitoring
- Evacuation

REPORTING

By Master and/ or designated crew member

When to report

All probable and actual spills

How to report

- By quickest means to coastal radio station
- Designated ship movement reporting station or
- Rescue Co-ordination Centre (at sea)
- By quickest available means to local authorities

Who to report

- Nearest Coastal State Harbour and terminal operators (in port)
- Ship-owners manager; P & I insurer
- Head Charterer; Cargo owner
- Refer to contact lists

What to report

- Initial report (Res. A.851(20), as amended by MEPC.138(53))
- Follow-up reports
- Characteristics of oil spilled
- Cargo/ ballast/ bunker dispositions
- Weather and sea conditions
- Slick movement
- Assistance required
  - Salvage
  - Lightening capacity
  - Mechanical equipment
  - External response team
  - Chemical dispersant/ degreasing

ACTION TO CONTROL DISCHARGE

Measures to minimize the escape of oil and threat to the marine environment

NAVIGATION MEASURES

- Alter course/ position and/ or speed
- Change of list and/ or trim
- Anchoring
- Setting aground
- Initiate towage
- Assess safe haven requirements
- Weather/ tide/ swell forecasting
- Slick monitoring
- Record of events and communications taken

SEAMANSHIP MEASURES

- Safety assessment and pre-caution
- Advice on priority countermeasures/ preventive measures
- Damage stability and stress consideration
- Ballasting/de-ballasting
- Internal bunkers transfer operations
- Emergency ship-to-ship transfers of bunkers
- Set up shipboard response for:
  - Leak sealing
  - Fire fighting
  - Handling of ship-board response equipment (if available)
  - Etc.

STEPS TO INITIATE EXTERNAL RESPONSE

- Refer to Costal Port State listings for local assistance
- Refer to ship interest contact list
- External clean-up resources required
- Continued monitoring of activities

Section 2: Reporting Requirements

2.1. General

The reporting requirements of this section comply with those of regulation 37 of MARPOL 73/78, Annex I. When the ship is involved in an incident which results in the discharge (or probable discharge) of oil, the Master is obliged under the terms of MARPOL 73/78 to report details of the incident, without delay, to the nearest Coastal State by means of the fastest telecommunication channels available.

The intent of these requirements are to ensure that Coastal States are informed, without delay, of any incident giving rise to oil pollution, or threat of oil pollution, of the marine environment, as well as of assistance and salvage measures, so that appropriate action may be taken.

Without interfering with ship-owners' liability, some coastal states consider that it is their responsibility to define techniques and means to be taken against an oil pollution incident and approve such operations which might cause further pollution, i.e. lightening. States are in general entitled to do so under the International Convention relating to Intervention on the High Seas in Cases of Oil Pollution Casualties, 1969.

2.2. Reporting Procedures

For easy reference the reporting requirements in the context of this Plan are divided in the following information blocks:

2.2.1. When to report

Taking the summary flowchart as shown on page 9 as a basic guide into consideration reports are necessary in the following cases:

2.2.1.1. Actual Discharge

A report is required whenever there is:

- a discharge of oil above the permitted level for whatever reason, including those for the purpose of securing the safety of the ship or saving life at sea.
- a discharge during the operation of the ship of oil in excess of the quantity or instantaneous rate permitted under the present Convention (i.e. MARPOL 73/78).

Therefore, the Master is obliged to report to the nearest Coastal State whenever there is a discharge of oil resulting:

- from damage to the ship
- from damage to the ship's equipment
- for the purpose of securing the safety of a ship or saving life at sea
- during the operation of the ship in excess of the quantity or instantaneous rate permitted under the present Convention.

Reports to Coastal States should be in the style given in section 2.2.2.

2.2.1.2. Probable Discharge

The Master is obliged to report even when no actual discharge of oil has occurred but there is a probability that one could. However, as it is not practical to lay down precise definitions of all types of situations involving probable discharge of oil which would warrant an obligation to report the Master is obliged to judge by him-self whether there is such a probability and whether a report should be made.

Therefore, it is recommended that, at least, the following events:

- Damage, failure or breakdown which affects the safety of the ship, other ships or the protection of the marine environment (e.g. collision, grounding, fire, explosion, structural failure, flooding, cargo, cargo shifting etc.). OR
- failure or breakdown of machinery or equipment which results in impairment of the safety of navigation (e.g. failure or breakdown of steering gear, propulsion, electrical generating system, essential ship borne navigation aids etc.).

In judging whether there is a probability for oil discharge and whether a report should be made, the Master should take into account the nature of the damage failure or break- down of the ship, machinery or equipment as well as the ship's location, proximity to land, weather, state of the sea and traffic density – as cases in which a probable discharge of oil is most likely. If in doubt, the Master should always make a report in cases aforementioned.

In all cases Authorities should be kept informed by the Master as how the situation progresses and be advised when all threat of pollution passes.

2.2.2. Information Required

As required in article 8 and Protocol I of MARPOL 73/78 Convention the Master or other persons having charge of the ship should report the particulars of any pollution incident. In this context the International Maritime Organization (IMO), in 1997, adopted Resolution A. 851 (20) 'General Principles for Ship Reporting Systems and Ship Reporting Requirements, including Guidelines for Reporting Incidents involving Dangerous Goods, Harmful Substances and/ or Marine Pollutants', as amended by IMO Resolution MEPC.138(53).

The intent of the Resolution aforementioned is to enable Coastal States and other interested parties to be informed, without delay, of any incident giving rise to oil pollution, or threat of oil pollution, of the marine environment, as well as of assistance and salvage measures, so that appropriate action may be taken.

Nothing in this chapter relieves the Master in using sound judgement to make sure that any incident or probable discharge of oil is reported as quickly as possible in the prevailing situation.

When transmitting initial reports to the authorities of the nearest Coastal State the Master or other persons dealing with such a transmission should take note of Resolution A. 851 (20), as amended by IMO Resolution MEPC.138(53).

A. INITIAL REPORTS

Especially, the format of the initial report as well as supplementary of follow-up reports should conform to the guidance contained in Res.A.851(20). All reporting whether initial or follow-up, should follow IMO´s reporting format as outlined below and should contain the following information:

LABEL	FUNCTION	EXPLANATION
A	Ship	Name, call sign and nationality
B	Date and time (UTC) of event	A 6-digit group giving day of month (first two digits), hours & minutes (last four digits)
C (OR)	Position	A 4-digit group giving latitude in degrees and minutes suffixed with N or S, and a 5-digit group giving longitude in degrees and minutes suffixed with E or W
D	Position	True bearing (first 3 digits) and distance (state distance) in nautical miles from clearly identified landmark (state landmark)
E	True course	A 3-digit group
F	Speed at time of incident	In knots and tenths of knots as a 3-digit group
L	Route information	Details of intended track
M	Radio communications	Full details of radio stations (names) and frequencies being guarded
N	Time (UTC) of next report	A 6-digit group as under BB above
O	Ship's draught	
P	Cargo on board: can be included in „RR„ as relevant	Type(s) and quantity(ies) of cargo/ bunker on board and brief details of any dangerous cargoes as well as harmful substances and gases that could endanger persons or the environment
Q	Defects or damage or deficiencies or other limitations	Brief details of conditions of the ship as relevant; ability to transfer cargo/ ballast/ bunker fuel
R	Description of pollution or possible overboard discharge	Brief details of pollution; this should include the type(s) of fuel oil, an estimate of the quantity discharged, whether the discharge is continuing, the cause of the discharge and, if possible, an estimate of the movement and area of slick
S	Weather conditions	Brief details of weather and sea conditions prevailing including wind force and direction and relevant swell details
T	Ship's representative and/ or owner	Name, address, telex and telephone number of the ship's owner and representative (charterer, manager or operator of the ship or their agents)
U	Ship's size and type	Details of length, breadth and type of ship as well as capacity (tonnage)
X	Miscellaneous and additional information	Any other information including relevant details such as brief details of incident, need for outside assistance, action being taken to limit further discharge; details of any personnel injuries sustained, details of P & I Club and local correspondent.

A sample format for initial notification and a detailed example of an initial report is shown within the appendices under Appendix 1. All follow-up reports by the Master should include information relevant to the Coastal State Authorities to keep them informed as the incident develops.

B. FOLLOW-UP REPORTS

Once the ship has transmitted the initial report to the shore authorities, further reports should be regularly sent to the Authorities and the ship owner or operator so as to keep them informed of how the incident develops.

Follow-up reports should include information on any significant changes in the ship's condition, the rate of release and spread of oil, weather and sea conditions and clean-up activities underway.

In this context details of bunker disposition, condition of any empty tanks and nature of any ballast carried are information needed by those involved in order to assess the threat posed by an actual or probable discharge of oil from the damaged ship.

2.2.3. Who to Contact

The Master is responsible for reporting any incident involving an actual or probable discharge of oil. Taking into consideration the summary flowchart shown on page 10 the Master of the ship involved in any kind of an actual or probable discharge of oil, cases of which are defined under SECTION 2 (sub-paragraph 2.2.1.1 and 2.2.1.2) of this Plan should report details on the incident immediately (see Appendix1)

Nothing in this chapter relieves the Master from using sound judgement to make sure that any incident is reported as quickly as possible in the prevailing situation.

2.2.3.1. Coastal State Contacts

In order to expedite response and minimize damage from an oil pollution incident at sea, it is essential that appropriate Coastal States be notified without delay.

In this context the use of the list of agencies or officials of Administrations responsible for receiving and processing reports (so called "Focal Points") as developed by the Organization (IMO) in conformity with article 8 of the Convention is recommended. Such a list is shown under Appendix 2.

An updated list of existing "Focal Points" is available from the Internet pages of IMO under address:

http://www.imo.org/ >> National Contacts >>> MEPC.6/Circ. Xx

In the absence of such a list or listed focal point for a single country/ Coastal State, the Master should contact by the quickest available means

- The nearest coastal radio station or
- The designated ship movement reporting station or
- The nearest Rescue Co-Ordination Centre (RCC).

2.2.3.2. Port Contacts

For the ship in port, notification of local agencies, combating teams or clean-up companies will speed up response. If an oil spill occurs during the ship's stay in port, whether operational or as a result of an incident, the Master should inform the appropriate local agencies (e.g. National Response Center, Terminal/ Port Authorities etc.) without undue delay.

If the ship is engaged in a regular service between ports/ terminals the Master or any other person aboard delegated by the Master should provide a list with the relevant Port Contact addresses for each port served regularly of Authorities/ persons and/ or terminals dealing with an oil spill. This list should be regularly updated. The 'Port Contact List' is shown in the Appendix 3.

If a change in the ship's range of trade or a change in the addresses of persons/ Authorities of the ports/ terminals served regularly takes place the Master or any other person aboard delegated by the Master is required to issue a new list.

Where ship's service makes it not feasible to prepare such a list the Master should seek guidance concerning such local Port Contacts and local reporting procedures upon arrival in port.

Addresses obtained in this way should be documented aboard in the form that the Master considers most effective and should be attached to the Plan.

2.2.3.3. Ship Interest Contacts

For Ship Interest Contacts it is necessary to have information at the Master's disposal in case of an oil spill for informing the home office of the ship's owner or operator, the local agent of the company, the appropriate P & I Club and correspondents, clean-up contractors etc.

This information should be provided in the form of a so-called 'Ship Interest Contact List'. The 'Ship Interest Contact List' is shown in the Appendix 4.

To avoid a duplication of reports and to co-ordinate the Plan and the company's shore side plan(s) refer to the overleaf 'Notification Flowchart' (paragraph 2.2.3.4) that indicates the person responsible for informing the various Ship Interested Contacts.

2.2.3.4. Notification Flowchart

Priority	Who	Action	Format	Who to inform	Where in SOPEP
1	Master	Send the initial notification	1 1 1 1	- Coastal state (ship at sea) - Port contact (ship at sea/port) - Owner/operator/qualified individual* - Technical advisor if applicable	Appendices 2,3 & 4
2	Master	Send the stability and strength assessment notification	2	- Technical advisor if applicable	Appendix 4
3	Master	Send follow up notifications	3	- Coastal state or port Contact - Owner/operator /qualified individual* - Technical advisor if applicable	Appendices 2,3 & 4
4	Owner / Operator	Activate clean up resources (if necessary)	1	- Oil spill removal Organisation and / or Salvage Association	
5	Owner / Operator	Send initial notification	1	- Insurer's Representative	
6	Owner / Operator	Send initial notification	1	- P & I representative	
7	Owner / Operator	Send the follow up notification	3	- Oil spill removal Organisation - Insurer representative - P & I club representative - Salvage Association - Classification Society	

*Qualified individual: The person responsible for mobilizing shoreside response personnel and equipment

2.2.3.5. Communication Flowchart

Communication method	Priority	Details
Primary	1	Written report transmitted by fax over the vessels satellite communication SATCOM (INMARSAT C)
Secondary	2	Verbal communication via SATCOM phone.
Secondary	3	Telex message via Satcom phone
Emergency	4	Verbal report via HF or VHF coast radio station

Section 3: Steps to control discharge

Ship personnel will most probably be in the best position to take quick action to mitigate or control the discharge of oil from their ship.

Therefore, this Plan provides the Master with clear guidance on how to accomplish this mitigation for a variety of situations.

It is the Master's responsibility to initiate a response in the event of a discharge of oil or substantial threat of discharge of oil – actual or probable – into the waters.

In no case action should be taken that in any way could jeopardize the safety of personnel either on board or ashore.

The following enumeration specifies different kinds of possible operational oil spills with regard to reactions to be taken.

Spill Category	Checklist	Spill due to	SOPEP Page No
Operational	1	Transfer System Leakage (Pipe leakage)	28
Operational	2	Tank Overflow	29
Operational	3	Suspected Hull Leakage	30
Resulting from a casualty	4	Collision With a Fixed Or Moving Object	31
Resulting from a casualty	5	Grounding / Stranding	32
Resulting from a casualty	6	Fire / Explosion	33
Resulting from a casualty	7	Hull Failure	34
Resulting from a casualty	8	Excessive list	35
Resulting from a casualty	9	Containment System Failure	36
Resulting from a casualty	10	Submerged / Foundered	37
Resulting from a casualty	11	Wrecked /Stranded	38
Resulting from a casualty	12	Hazardous Vapour Release	39

3.1. Operational Spills (Refer to Checklists in Subsection 3.7.2)

3.1.1. Operational Spill Prevention

- Crew members shall maintain a close watch for the escape of oil during bunker operations.
- Prior to bunker transfer the competent crew members should mobilize the oil spill equipment, as far as available on board, and place it close to the planned operation, e.g. along the railing on the side at which bunker operation takes place.
- Before bunker handling commences, all deck scuppers and open drains must be effectively plugged. Accumulations of water should be drained periodically and scupper plugs replaced immediately after the water has run off. Any free floating oil or oil droplets should be removed prior to draining.
- Bunker tanks which have been topped up should be checked frequently during the remaining bunker operations to avoid an overflow.
- Unless there are permanent means for retention of any slight leakage at ship/ shore connections for bunker transfer, it is essential that a drip tray is in place to catch any leaking oil.
- The removed bunker oil and the used clean-up material should be retained on board in proper containment units until it can be discharged to a reception facility.

3.1.2. Pipeline Leakage

- If a leakage occurs from a pipeline, valve, hose or metal arm, operations through that connection should be stopped immediately until the cause has been ascertained and the defect remedied.
- Defective pipe sections should be isolated. Affected sections should be drained down to an available empty or slack tank.
- If a leakage occurs from a hydraulic pipeline, operations should be stopped immediately.
- Initiate clean-up procedures.
- The removed bunker oil and the used clean-up material should be retained on board in proper containment units until it can be discharged to a reception facility.
- Inform in line with Section 2 all parties interested about Pipeline Leakage and the actions taken so far.

3.1.3. Tank Overflow

- If there is a tank overflow all bunker operations should be stopped immediately and should not be restarted until the fault has been rectified and all hazards from the released oil have been eliminated.
- If there is any possibility of the released oil or oil vapours entering engine room and accommodation intakes appropriate preventive steps must be taken quickly.
- Promptly shift bunker oil from the tank overflowed to an available empty or slack tank or prepare pump(s) or transfer the excess ashore.
- Initiate clean-up procedures.
- The removed bunker oil and the used clean-up material should be retained on board in proper containment units until it can be discharged to a reception facility.
- Inform in line with Section 2 all parties interested about Tank Overflow and actions taken so far.

3.1.4. Hull Leakage

- Identify leaking tank; consider diver if necessary and possible.
- Reduce level in tank in question well below sea level.
- If it is not possible to identify the leaking tank, reduce level in all tanks in vicinity. In this case give careful consideration to hull stress and stability.
- If there is a spillage due to suspected hull leakage reduce the head of bunker and promptly transfer the bunker oil to an available empty or slack tank or, if berthed, discharge ashore in suitable barges/ tanks.
- Inform in line with SECTION 2 all parties interested about Hull Leakage and the actions taken so far.

3.1.5. Spills caused by Equipment in Machinery Spaces

- If operational oil spills are caused by a failure of equipment in machinery spaces any further operations of this equipment should be stopped immediately or measures are to be taken to avoid an oil spill.
- Such equipment may be:
    - Oily-water separating equipment or oil filtering equipment to de-oil bilge water from the engine room bilges;
    - Valves in pipes connecting ballast/ bilge systems;
    - Cooling pipes in oil cooler systems;
    - Gearing of bow thrusters;
    - Stern tubes.
- The removed bunker oil and the used clean-up material should be retained on board in proper containment units until it can be discharged to a reception facility.

3.2. Spills Resulting From Casualties (Refer to Checklists in Subsection 3.7.2)

In the event of a casualty the Master's first priority is to ensure the safety of the ship's personnel, and to initiate actions which may prevent escalation of the incident and marine pollution.

3.2.1. Ship grounded / stranded

- The Master's priority should be to ensure that he as soon as possible receives detailed information about the damage that the ship has been sustained, in order to determine remedial action to be taken for ensuring the safety of the ship and its crew.
- Furthermore, the Master should also consider
    - Danger to the ship's complement if the ship should slide off grounding site
    - Danger of ship being shattered by heavy seas or swell
    - Health hazards to the ship's crew and surrounding population due to release of oil or other hazardous substances in dangerous concentrations
    - That fires may start due to released flammable substances and uncontrolled ignition sources
    - Should the damage which the ship has sustained be of such an extent that the stability cannot be computed on board, the Master should seek assistance according to sub-paragraph 3.6
- Also, the ship´s Master shall take into account the following considerations:
    - Is the vessel constantly being struck in the seaway?
    - Is the vessel exposed to torsion?
    - Is there a large difference in the tidal rangers at the grounding site?
    - Are there strong tidal currents in the grounding area?
    - May the vessel drift further up on shore due to high tides, wind and waves?

3.2.1.1. Prevention of Fire and Explosion

If the ship is aground and therefore cannot manoeuvre, all possible sources of ignition should be eliminated and action taken to prevent flammable vapours from entering the machinery spaces or the accommodation.

3.2.1.2. Extension of Hull Damage / Containment System Failure

- First, a visual inspection should be carried out.
- Check for visible oil along hull or in wake of the ship during day time. At night a stick with white cloth (or sheet of sorbent) around it may be lowered into the water alongside the ship to check for oil leakages.
- All ballast/ bunker tanks to be sounded (ullage),
- All other compartments which may have contact with the sea should be sounded to ensure that they are intact.
- Soundings of ballast tanks/ bunkers tanks are to be compared with last soundings to check for possible leaks.
- Sounding to be taken around the ship establish the ship's position on the grounding area.
- When the ship is aground, due regards should be given to the indiscriminate opening of ullage plugs, sighting ports etc. as loss of buoyancy could be the result of such actions.
- Any list of the ship shall be noted and included in the report for assistance.

3.2.1.3. Procedures to Reduce or Stop Outflow of Oil

- The Master should assess the possibility of damage to the environment and whatever action can be taken to reduce further damage from an oil release, such as:
    - Transfer of bunkers internally provided shipboard piping system is in an operational condition
    - If the damage is fairly limited and restricted, i.e. to one or two tanks, consideration should be given to transfer of bunkers internally from the damaged tank(s) to intact tanks, taking into account the impact on the ship's overall stress and stability

- Isolate damaged/ penetrated bunker tank(s) hermetically to ensure that hydrostatic pressure in tanks remains intact during tidal changes
- Evaluate possibility of pumping water into a damaged tank in order to form a water bottom stopping the outflow of oil
- Evaluate the necessity of transferring bunkers to barges or other ships and request such assistance accordingly
- Evaluate the possibility of additional release of oil.

- In case of large differences between the tide levels, the Master should try to isolate the damaged tank(s) to reduce additional loss of bunker oil.

3.2.1.4. Re-floating by own Means

The Master should also evaluate the question of re-floating the vessel by own means. Before such an attempt is made, it must be determined:

- whether the ship is damaged in such a way that it may sink, break up or capsize after getting off
- whether the ship after getting off may have manoeuvring problems upon leaving the dangerous area by own means
- whether machinery, rudder or propeller are damaged due to grounding or may be damaged by trying to get off ground by own means
- whether the ship may be trimmed or lightened sufficiently to avoid damage to other tanks in order to reduce additional pollution from oil/ bunker spillage
- Weather evaluation: whether there is time/ reason to await improvements in weather or tide.

3.2.1.5. Securing the Ship

If the risk of further damage to the ship is greater in an attempt to re-float the ship by own means, than in remaining aground until professional assistance has been obtained, the ship's Master should try to secure the ship as much as possible by:

- Trying to prevent the ship from moving from its present position
- By dropping anchors (adequate water depth and anchor ground provided) and using vessel's DP system
- By taking ballast into empty tanks, if possible
- Trying to reduce longitudinal strain on hull by transferring ballast or bunkers internally
- Reducing fire risk by removing all sources of ignition.

Inform in line with Section 2 all parties interested about the Grounding and the actions taken so far.

3.2.2. Fire/ Explosion

- Should an explosion and a fire occur on board, sound the GENERAL ALARM immediately
- Further actions should be initiated in accordance with the ship's Muster List.
- In case of fire and explosion the following priorities exist:
  - Rescuing lives
  - Limiting the damage/ danger to the ship and cargo
  - Preventing environmental pollution
- Steps to control the discharge of oil will depend largely on the damage to ship and cargo.
- Special information thereto is contained in subparagraphs 3.2.4, 3.2.5 and 3.2.6.
- Inform in line with Section 2 all parties interested about the Fire/ Explosion and the actions taken so far.

3.2.3. Collision (with fixed or moving objects)

- Should the ship be involved in a collision with another ship, the Master should as soon as possible identify the extent of damage to his own vessel.
- When a collision occurs, the GENERAL ALARM should be sounded immediately for the personnel to muster at their designated Muster Stations.
- The following check list should assist the Master in assessing the situation:
    - Are any tanks penetrated above or below the waterline?
    - If ships are dead in the water and interlocked, what is most prudent, to stay interlocked or separate?
    - Is there any oil spill at present – small or large? Will a separation of the interlocked ships create a larger oil spill than if the ships stay interlocked?
    - If there is an oil spill, will the separation of the ships cause sparks that can ignite the spilled oil or other flammable substances leaked out from the ships?
    - Are the ships creating a greater danger to other traffic in the area if they are interlocked than if separated?
    - Is there a danger to either ship of sinking after being separated?
- If separation of the ships takes place, alter course to bring the own ship windward of any oil slick, if possible.
- Shut down all none essential air intakes.
- Isolate damaged/ penetrated tank(s) by hermetically closing the tank(s), if possible.
- When it is possible to manoeuvre (with the assistance of tug boats), the Master, in conjunction with the appropriate shore authorities, should consider moving his ship to a more suitable location in order to facilitate emergency repair work or lightening operations, or to reduce the threat posed to any sensitive shoreline areas.
- Inform in line with Section 2 all parties interested about the collision and the actions taken so far.

3.2.4. Hull Failure

- Should the ship lose one or more shell platings, develop major cracks, or suffer severe damage to the hull, the Master should immediately sound the GENERAL ALARM to call the crew members to their Muster Stations, and inform them of the situation, and prepare lifeboats for launching if necessary.
- The Master should then assess the situation, and confer with his senior officers.
- The Master should obtain the latest weather forecast and asses its impact on the present situation.
- Furthermore, the following questions should be considered and should be asked: Is the ship in any immediate danger of sinking or capsizing?

  If YES:
    - Send distress message
    - Immediately abandon the ship

  If NO, initiate damage control measures as found necessary by considering the following points:
    - Can the vessel manoeuvre?
    - Has the ship lost buoyancy?
    - If the ship has a list due to loss of ballast, cargo/ bunker or buoyancy, is it necessary and possible to rearrange the bunker or ballast by internal transfer operation in order to bring the ship to an even keel?
    - Is it necessary to dump cargo in order to maintain stability without changing the stress situation?
    - Can this operation wait till another ship/ barge can receive that cargo?
    - Is there any abnormal change in the ship's stability and stress situation?
    - Can the change in the ship's stability and stress situation be monitored and calculated on board? If not, the Master should seek assistance according to subparagraph 3.6.

- Might it be prudent to salve part of the crew members in case the situation should worsen, or is it necessary to abandon the ship totally?

Inform in line with Section 2 all parties interested about the Hull Failure and the actions taken so far.

3.2.5. Excessive List

- Should the ship for some reasons suddenly start to list excessively during discharging/ loading operations, or bunkering, all ongoing operations should be stopped immediately until the cause has been determined.
- The Officer on Duty should inform the Master and/or Chief Officer without delay and the General Emergency Alarm should be sounded.
- The Master should try to determine the reason for the excessive list, and take steps to rectify the situation and to stabilize the ship's condition:
  - Check reason(s) for list
  - Soundings/ ullage to be taken in all tanks
  - Bunker/ ballast pumps to be made ready
  - Consider measures to minimize list in transferring liquid from one compartment to another
  - Ensure water tightness of empty spaces
  - Close all openings
  - Secure vent pipes to avoid ingress of water
  - If bunkering: Change to corrective tanks for rectifying the situation
  - If ballasting/ de-ballasting: Change to corrective tanks to rectify the situation
  - If there is reason to believe that the list may cause an oil spill, notify as per Section2
  - If the ship's crew is in jeopardy, prepare lifeboats for launching, and notify as per Section 2
- If the situation is brought under control, inform all parties interested.

3.2.6. Ship submerged / foundered / wrecked

If the ship is wrecked to the extent that it or parts of it are submerged

- ring the General Alarm;
- take all measures to evacuate all persons on board;
- avoid contact with any spilled oil;
- alert other ships and/or the nearest coastal state for assistance in rescuing lives and the ship as far as possible;
- exhibit NUC lights/shapes and use sound signals;
- notify the appropriate parties, as per section 2.

3.2.7. Hazardous Vapour release

- In case of any vapour release out of the containment system precautions have to taken to protect the persons on board against contamination.
- The ship should be brought with the accommodation upwind ot the spill area as far as possible.
- The crew should be evacuated from any area of risk.
- All possible sources of ignition should be eliminated and non-essential air intakes shut down to prevent intake of vapour into accommodation and engine spaces.
- If unavoidable work has to be carried out within risk areas, the involved persons have to wear protective closing and breathing apparatus.

3.2.8. Containment System Failure

(Drip trays, bunkering stations and D.O & L.O vents on Main Deck)

- First, a visual inspection should be carried out.
- The General Alarm should be sounded and all operations in progress (e.g. bunkering, dry cargo loading, etc.) should be suspended.
- A check for visible oil along hull or in wake of the ship during daytime should be made. At night a stick with white cloth (or sheet of sorbent) around it may be lowered into the water alongside the ship to check for oil leakages.
- All ballast/ bunker tanks should be sounded (ullage). All other compartments, which may have contact with the sea, should also be sounded to ensure that they are intact.
- Soundings of ballast tanks/ bunkers tanks are to be compared with last soundings to check for possible leaks.
- If necessary, drip trays are to be placed under bunker manifolds and round vents of fuel/lub oil tanks.
- Sounding should be taken around the ship to establish the ship's position on the grounding area.
- When the ship is aground, due regard should be given to the indiscriminate opening of ullage plugs, sighting ports etc. as loss of buoyancy could be the result of such actions.
- Any list of the ship shall be noted and included in the report for assistance.
- The Master should assess the possibility of damage to the environment and whatever action can be taken to reduce further damage from an oil release, such as:
    - Initiate clean-up procedures in case of oil spillage onboard
    - Transfer of bunkers internally provided shipboard piping system is in an operational condition
    - If the damage is fairly limited and restricted, i.e. to one or two tanks, consideration should be given to transfer of bunkers internally from the damaged tank(s) to intact tanks, taking into account the impact on the ship's overall stress and stability
    - Isolate damaged/ penetrated bunker tank(s) hermetically to ensure that hydrostatic pressure in tanks remains intact during tidal changes
    - Evaluate possibility of pumping water into a damaged tank in order to form a water bottom stopping the outflow of oil
    - Evaluate the necessity of transferring bunkers to barges or other ships and request such assistance accordingly
    - Evaluate the possibility of additional release of oil
    - In case of oil spillage overboard, notify the appropriate parties, as per Section 2.
    - In case of large differences between the tide levels, the Master should try to isolate the damaged tank(s) to reduce additional loss of bunker oil.
    - Consider and follow (if applicable) the procedures specified in cases of subsections 3.1.1 and 3.1.2 (pipe leakage and tank overflow).

3.3. Priority Actions

Top priority shall in all cases of casualty be put on the safety of the persons onboard and to take actions to prevent escalation of the incident. Immediate consideration should be given to protective measures against fire, explosions and personnel exposure to toxic vapour.

Detailed information about the damage sustained to the ship and its containment system has to be obtained. On the basis of the information the Master can decide next actions for the protection of lives, the ship, the cargo and the environment.

The Master should take into account the following when he is determining whether salvage assistance will be needed or not:

- Nearest land or hazard to navigation

- Vessel's set and drift
- Estimated time of casualty repair
- Determination of nearest capable assistance and its response time.

In case of necessary internal transfer of fuel/ballast, careful consideration is to be given to hull strength and stability.

Plans/tables about the location and specification of the current cargo as well as bunkers and ballast have to be readily available.

3.4. Mitigating Activities

When the safety of the vessel and the personnel onboard has been successfully addressed, the following aspects are to be further considered:

Assessment and monitoring requirements
Emergency situations should be monitored and assessed to identify possibilities for the situation to escalate. These situations should be monitored through the frequent sounding of tanks, monitoring of flammable toxic vapours by using portable / fixed instruments, monitoring of the surrounding situations including any changes of weather and, if the vessel is aground, monitoring of soundings around the ship. Sampling should be employed where considered necessary, which could indicate the broaching of fuel or lub oil containment.

Personnel protection issues
Marine Safety Data Sheets (MSDS) should be consulted for all bunkers and applicable safety precautions should be taken. MSDS can be obtained for chemical cargoes through the USCG Chemical Hazards Response Information System (CHRIS) Manual, and Liquid Natural Gas through the ICS Tanker Safety Guide, Liquefied Gas Manual. MSDS for bunkers are issued to vessels. MSDS give details of emergency procedures and health physical data for particular grades. Protective clothing should be issued and worn in accordance with the advice in the MSDS. With the information from the aforementioned manuals available, all possible threats to the health and safety of the involved personnel are to be evaluated before any actions taken. Only persons with suitable personnel protection (such as breathing apparatus, masks, glows, leggings, aprons, sleeve protections etc.) and knowledge of its use are to be engaged in dangerous operations even if this will reduce the activity.

Isolation procedure
All possible consideration should be given to isolate bunker spaces that have been breached in order to mitigate the quantity discharged. Consideration should also be given to transferring bunkers from any breached compartment to sound compartment(s).

Decontamination of personnel
Protective clothing should be worn in accordance with the particular grade of bunkers which personnel are likely to come in contact with. On completion of operations all protective clothing should be cleaned and stored for further use. On no account should contaminated clothing be allowed within the accommodation areas. Personnel should ensure that all contaminants are cleaned from their bodies.

Disposal of Removed Oil and Cleaned – Up Materials
Disposal of all recovered oil and contaminated clean up materials should always be in accordance with Marpol 73/78 and the Vessel's Garbage Management Plan.

3.5. Transfer of Bunker/ Lightening

If the ship has sustained extensive structural damage, it may be necessary to transfer all or part of the bunkers to another ship.

In Ship-to-Ship-transfer operations involving a specialized service ship, the Master of that ship will normally be in overall charge.

In the case of non-specialized ships the Master or other person in overall charge of the operation should be mutually agreed and clearly established by the Masters concerned prior to the start of operations.

The actual bunker transfer should be carried out in accordance with the requirements of the receiving ship.

In all cases each Master remains responsible for the safety of his own ship, its crew, and cargo/ bunker and equipment and should not permit their safety to be jeopardized by the action of the other Master, his owner, regulatory officials or others.

The Ship-to-Ship-transfer operations should be coordinated with the appropriate responsible local Authority.

When selecting the area of operation the Master(s) should consider the following points

- The need to notify and obtain the agreement of any responsible authority
- The destinations of the ships concerned
- The shelter provided, particularly from sea and swell
- The sea area and depth of water, which should be sufficient for manoeuvring during mooring, unmooring and transfer operations and allow a safe anchorage if operations have to be undertaken at anchor
- The traffic density
- The weather conditions and the weather forecasts

Further, before commencing Ship-to-Ship transfer operations each ship should carry out, as far as possible, appropriate preparations like

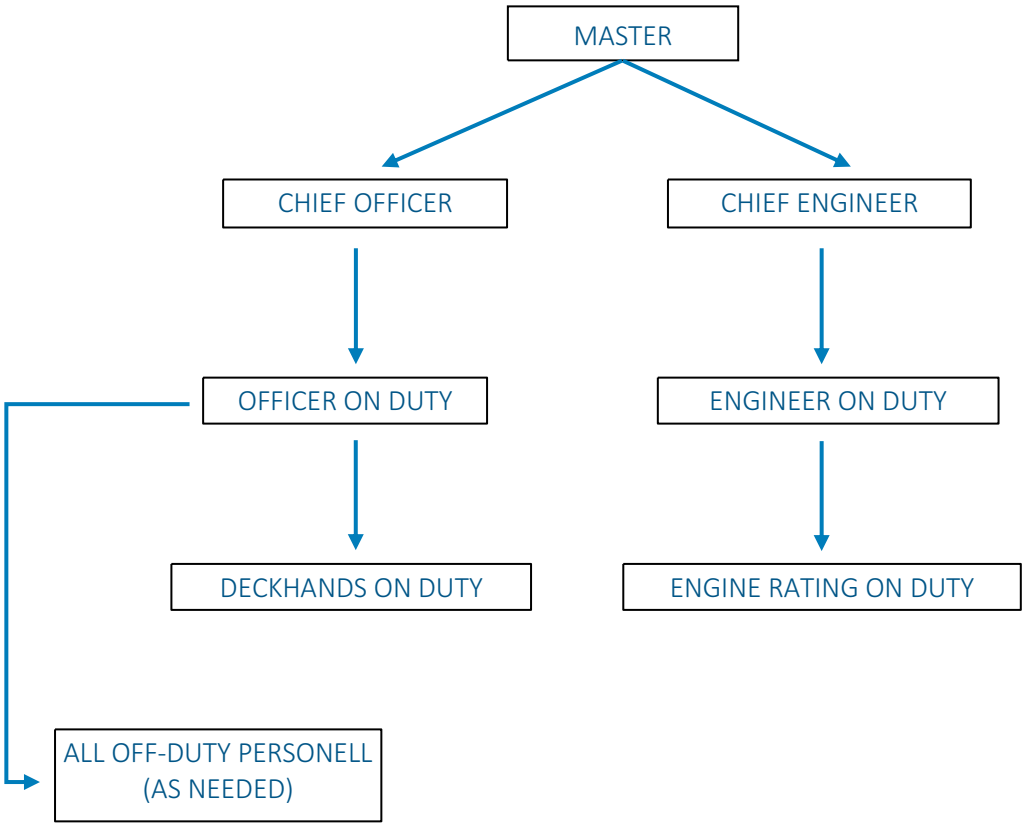
- Pre-mooring preparations of the ships (use of DP system)
- Positioning of fenders if such equipment is available on board
- Mooring equipment arrangements
- Checking the communication channels between the two ships

3.6. Damage Stability and Hull Stress Calculation

It should be noted that, in an emergency, the best course of action required to save the ships, crew and protect the environment may not be obvious. Water ingress and oil outflow resulting from incidents such as collision, grounding, fire, explosion or hull failure can be made worse if the wrong decision is taken. In such a situation, a full appreciation of the vessels stability and longitudinal strength is essential. If these calculations are beyond the ships resources, assistance must be sought from the shore. The Master must complete and transmit the Casualty Report Forms (Appendix 5) to the technical department of the company in order that the relevant analysis can be made. The technical department can be assisted, depending on the situation, by the following technical bureau.

DIM.PAPADIMITRIOU & ASSOCIATES
92 KOLOKOTRONI STR., GR18535
PIRAEUS – GREECE
TEL:+30 210-4175660
TEL:+30 210-4175655
FAX:+30 210-4220060
E-MAIL: dpb@otenet.gr

3.7. General Responsibilities of the Master and designated Officers / Crew Members



3.7.1. General Responsibilities

The following crew members are in charge in the event of an oil spill – actual or probable – to bring the accident under control, limit outflows, organize on board clean-up procedures and determine the additional manpower needed. Arrangements shall be made that in case of sudden unavailability of superior ranks other available ranks are prepared to take over.

Ranking	Duties
Master	Overall in charge of operation on board dealing with an oil spill; responsible for all steps to be taken especially for the two main categories – reporting and action. Keeps log off all events and progress of actions.
Chief Officer	In charge of deck operation; Should keep the Master informed and updated on the situation and the results from action taken to stop or minimize an oil outflow.
Chief Engineer	In charge of bunker operation; Should keep the Master informed and updated on the situation and the results from action taken to limit oil outflow.
Deck Duty Officer	Tank overflow (bunkering): Alert and inform Chief Officer/ Chief Engineer on situation; Mobilize off duty crew as necessary
Duty Engineer	Assist Chief Engineer; Prepare for firefighting; Ensure sufficient power and water to deck; Organize on board clean-up equipment
Duty Rating(s)	If an oil leakage is detected alert immediately by all possible means; Inform Officers(s) on Duty immediately; Position sorbet material/ clean-up material to prevent any escaped oil from reaching the railing; Commence clean-up by using, as far as available on board, the clean-up equipment

3.7.2. Checklists

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Checklist No1	Transfer System Leak

No	Action	Responsible	Done	When
1	Secure all transfer pumps and close all valves in order to stop the flow of product	Chief Engineer		
2	Notify shore terminal	Chief Engineer		
3	Notify Master	Chief Engineer		
4	Activate the on board response team	Master		
5	Complete initial notification (format 1)	Master		
6	Send format 1 according to the notification flow chart in section 2.2.3.4	Master		
7	Individuate the pipe stretch where leakage has occurred	On board Response Team		
8	Operate the containment dispersion and recovery of polluted oil	On board Response Team		
9	Take appropriate steps to prevent petroleum gas from entering in the engine room intake	Chief Engineer		
10	Complete this checklist	Chief Engineer		
11	Send supplementary and / or follow–up format 1 information	Master		

Checklist No2	Tank Overflow

No	Action	Responsible	Done	When
1	Secure all transfer pumps and close all valves in order to stop the flow of product	Chief Engineer		
2	Notify shore terminal	Chief Engineer		
3	Notify Master	Chief Engineer		
4	Activate the on board response team	Master		
5	Complete format 1 initial notification as per section 2	Master		
6	Send format 1 according the notification flowchart given in the section 2.2.3.4	Master		
7	Transfer the bunkers from the affected zone to an available empty or slack tank(s)	Chief Engineer		
8	Operate the containment dispersion and recovery of polluted oil	On board Response Team		
9	Take appropriate steps to prevent petroleum gas from entering in the engine room / accommodation intakes	Chief Engineer		
10	Complete this checklist	Chief Engineer		
11	Send supplementary and / or follow–up format 1 information	Master		

Checklist No3	Suspected Hull Leakage

No	Action	Responsible	Done	When
1	Notify Master	Chief Officer / Chief Engineer		
2	Activate the on board response team	Chief Officer / Chief Engineer		
3	Complete format 1 initial notification as per section 2	Master		
4	Send format 1 according the notification flowchart given in the section 2.2.3.4	Master		
5	Individuate the specific tank from which leakage is occurring	On board Response Team		
6	In the event the source of the leakage cannot be located from onboard, employ a diver to investigate possible bottom leakage	On board Response Team		
7	Carry out appropriate actions taking into account the effect corrective actions may have on hull stress and stability	Master		
8	Reduce the head of oil in the tank involved by draining bunkers into an available empty slack tank(s)	Chief Engineer		
9	Repair the leak if possible	Oil Spill Response Team		
10	Operate the containment, dispersion and recovery of polluted oil	Oil Spill Response Team		
11	Complete this checklist	Chief Officer / Chief Engineer		
12	Send supplementary and / or follow –up format 1 information	Master		

Checklist No4	Collision with a Fixed or Moving Object

No	Action	Responsible	Done	When
1	Activate the on board response team / Ring the General Alarm	Master		
2	Obtain detailed information on the damaged sustained by the ship	Master		
3	Complete format 1 initial notification	Master		
4	Send format 1 according the notification flowchart given in the section 2.2.3.4	Master		
5	Sound all bunker tanks and other compartments which are of or close to the damaged area	Chief Oficer / Chief Engineer		
6	Compile the format 2 stability and strength assessment notification	Master		
7	Send format 2 according the notification flowchart given in the section 2.2.3.4	Master		
8	Avoid indiscriminate opening of ullage plugs or sighting ports	Oil Spill Response Team		
9	Take appropriate steps to prevent petroleum gas from entering in the engine room / accommodation intakes	Chief Officer		
10	Complete this checklist	Master		
11	Send supplementary and / or follow –up format 1 and format 2 information	Master		
12	Isolate damaged / penetrated bunker tanks	Chief Engineer / Chief Officer		
13	With the assistance of tug boats, move the ship to a more suitable location for emergency repairs and / or lightening	Master		

Checklist No5	Grounding / Stranding

No	Action	Responsible	Done	When
1	Activate the on board response team	Master		
2	Obtain detailed information on the damaged sustained by the ship	Master		
3	Complete format 1 initial notification	Master		
4	Send format 1 according the notification flowchart given in the section 2.2.3.4	Master		
5	In the event the source of the leakage cannot be located from on board, employ a diver to investigate possible bottom leakage	Oil Spill Response Team		
6	Sound all bunker tanks and other compartments which are of or close to the damaged area	Chief Officer / Chief Engineer		
7	Direct the sounding around the vessels to establish the vessels position on bottom	Chief Officer		
8	Compile the format 2 stability and strength assessment notification	Master		
9	Send format 2 according the notification flowchart given in the section 2.2.3.4	Master		
10	Reduce the risk by removing all ignition sources	Chief Officer		
11	Evaluate the necessity of transferring cargo to barge or internally	Master		
12	Complete this checklist	Master		
13	Send supplementary and / or follow –up format 1 and format 2 information	Master		
14	Isolate damaged / penetrated bunker tanks	Chief Engineer / Chief Officer		

Checklist No6	Fire / Explosion

No	Action	Responsible	Done	When
1	Find out immediately where the fire / explosion has taken place	Chief Officer / Chief Engineer		
2	Sound the fire alarm	Deck Duty Officer		
3	Activate the fire – fighting team	Master		
4	Activate the on board response team	Master		
5	Obtain detailed information on the damaged sustained by the ship	Master		
6	Compile the format 1 initial notification and format 2 stability and strength assessment notification	Master		
7	Send format 1 and 2 according the notification flowchart given in the section 2.2.3.4	Master		
8	Deploy the members of the vessels damage control team to the positions deemed best for fighting the fire	Chief Officer		
9	Use all available means to fight the fire	Chief Officer		
10	Try to contain the fire and prevent it from spreading to the other part of the ship	Chief Officer		
11	Complete this checklist	Master		
12	Send supplementary and / or follow –up format 1 and format 2 information	Master		
13	Consider response actions of Checklists 7, 8, 10 or 11	Master		

Checklist No7	Hull Failure

In case of immediate danger of sinking or capsizing

No	Action	Responsible	Done	When
1	Prepare for immediate evacuation of the vessel	Master		
2	Send distress signal	Master / Officer on Duty		
3	Complete format 1 initial notification as per section 2 if possible	Master		
4	Send format 1 according the notification flowchart given in the section 2.2.3.4	Master		

In case of no immediate danger of sinking or capsizing

No	Action	Responsible	Done	When
1	Determine the extent of damage	Master		
2	Activate the on board response team	Master		
3	Complete format 1 initial notification as per section 2	Master		
4	Send format 1 according the notification flowchart given in the section 2.2.3.4	Master		
5	Direct sounding on all tanks to determine the extent of all flooding and number of tanks breached	Chief Officer / Chief Engineer		
6	Compile the format 2 stability and strength assessment notification	Master		
7	Send format 2 according the notification flowchart given in the section 2.2.3.4	Master		
8	Complete this checklist	Master		
9	Send supplementary and / or follow –up format 1 and format 2 information	Master		
10	Consider internal transfer of bunkers or water ballast in case of excessive list	Master		

Checklist No8	Excessive List

No	Action	Responsible	Done	When
1	Notify Master	Chief Officer		
2	Determine the reason for excessive list	Master		
3	Compile format 1 initial notification	Master		
4	Send format 1 according the notification flowchart given in the section 2.2.3.4	Master		
5	Change to corrective tanks to rectify the situation if in bunkering / ballasting operation	Master / Chief Officer / Chief Engineer		
6	Activate the on board response team	Master		
7	Consider corrective actions	Master		
8	Compile the format 2 stability and strength assessment notification	Master		
9	Send format 2 according the notification flowchart given in the section 2.2.3.4	Master		
10	Complete this checklist	Master		
11	Send supplementary and / or follow –up format 1 and format 2 information	Master		
12	Close all openings and watertight doors, secure vent pipes	Chief Officer / Chief Engineer		

Checklist No9	Containment System Failure

No	Action	Responsible	Done	When
1	Carry out visual inspection	Chief Officer		
2	Sound General Alarm – Suspend all operations in progress	Officer on Duty / Engineer on Duty		
3	Muster personnel mustered and brief them on the situation and potential dangers.	Master		
4	Activate the on board response team	Master		
5	Check for visible oil along hull or in wake of the ship during daytime. At night lower a stick with white cloth (or sheet of sorbent) around it into the water alongside the ship to check for oil leakages.	Chief Officer		
6	Sound all ballast / bunker tanks. Soundings should be compared with last soundings to check for possible leaks.	Chief Officer Chief Engineer / Engineer on Duty		
7	Sound all other compartments that may have contact with the sea to ensure they are intact.	Chief Officer / Chief Engineer		
8	If necessary, drip trays are to be placed under bunker manifolds and round vents of fuel/ lube oil tanks.	Chief Officer / Chief Engineer		
9	Sounding should be taken around the ship to establish ship's position on the grounding area	Chief Officer / Officer on Duty		
10	The owner / operator informed	Master / Officer on Duty		
11	Notify the nearest states authority	Master/ Officer on Duty		
12	When the ship is aground, due regard should be given to the indiscriminate opening of ullage plugs, sighting ports etc. as loss of buoyancy could be the result of such actions.	Master / Chief Officer		
13	Any list of the ship shall be noted and included in the report for assistance.	Master		

Personnel behaviour has to be as such as no risks may arise, endangering their own lives or the lives of any other crewmembers

The Master should assess the possibility of damage to the environment and whatever action can be taken to reduce further damage from an oil release, such as:
- Initiate clean-up procedures in case of oil spillage onboard
- Transfer of bunkers internally provided shipboard piping system is in an operational condition
- If the damage is fairly limited and restricted, i.e. to one or two tanks, he should consider transferring of bunkers internally from the damaged tank(s) to intact tanks, taking into account the impact on the ship's overall stress and stability
- Isolate damaged/ penetrated bunker tank(s) hermetically to ensure that hydrostatic pressure in tanks remains intact during tidal changes
- Evaluate possibility of pumping water into a damaged tank in order to form a water bottom stopping the outflow of oil
- Evaluate the necessity of transferring bunkers to barges or other ships and request such assistance accordingly
- Evaluate the possibility of additional release of oil
- In case of oil spillage overboard, notify the appropriate parties, as per Section 2.
- In case of large differences between the tide levels, the Master should try to isolate the damaged tank(s) to reduce additional loss of bunker oil.
- Consider and follow (if applicable) the procedures specified in cases of subsections 3.1.1 and 3.1.2 (pipe leakage and tank overflow).

Checklist No10	Submerged / Foundered

No	Action	Responsible	Done	When
1	Activate General Alarm	Master		
2	Exhibit NUC lights / shapes and use sound signals	Officer on Duty		
3	Check all watertight doors are closed	Chief Engineer / Chief Officer		
4	Take soundings of all tanks and bilges	Chief Engineer / Chief Officer		
5	Locate the source if any, of ingress of water	Chief Officer		
6	The owner / operator informed	Master / Officer on Duty		
7	Notify the nearest states authority	Master/ Officer on Duty		

If the master realises that the situation is no more recoverable notwithstanding all attempts and it is no more safe for the crew to remain on board GIVES THE ORDER TO ABANDON THE SHIP

Personnel behaviour has to be as such as no risks may arise, endangering their own lives or the lives of any other crewmembers

The following emergency actions and duties have to be taken and followed:

Master	Duty Officer	Crew-members
• Assesses the situation and takes the decision to abandon the ship. • Gives the order to transmit the distress signal. • Gives verbal order to abandon the ship.	• Sound the life boat station alarms.	• Put on lifejackets, safety helmets and warm dresses and proceed to muster stations.

Master and Bridge party	Emergency and stand-by parties	Technical party
• Ensure muster check has been completed, all personnel accounted for and details of missing persons (if any) passed to lifeboat commanders. • Record events and collect log books. • Monitor preparation and launch of lifeboats. • Advice all ships by VHF CH16 DSC CH70 and activated GMDSS Distress Alarm • Advice by sat-phone / telex, etc. • Reduce way of the vessel as far as possible, time allowing. • Switch on deck floodlighting. • Time allowing, instruct Emergency and Stand-by parties to gather: extra blankets, water, provisions, torches, hand held radios, etc. • Put on lifejackets and proceed to boat embarkation points bringing to the boats EPIRB, SARTs, GMDSS radios extra pyrotechnics log books sextant, almanac, calculator, pens, paper.	• On hearing life raft station alarm proceeds to abandon ship stations • Carry out muster check and ensure lifejackets donned properly. • Advise the Master of missing persons (if any) and arrange search. • Prepare lifeboats-life rafts lower top embarkation deck and make ready for rapid boarding. • Time permitting, arrange for extra blankets, water, provisions, torches, etc. • Advise the Master that lifeboats are prepared and crew ready for abandoning ship. • When master's order to abandon ship is received embark to life raft. • Lower rescue boat and life rafts • On hitting water, release from falls and stand-by to pick up Master and launch crew	• Maintains power supplies for lighting. • Ensures manoeuvring of the Propulsion System whilst launching lifeboats/life rafts. • On instruction from the Master stops the Propulsion System, secures Engine Room and proceeds to assigned lifeboats stations.

Checklist No11	Wrecked / Stranded

No	Action	Responsible	Done	When
1	Activate General Alarm	Master		
2	Exhibit NUC lights / shapes and use sound signals	Officer on Duty		
3	Check all watertight doors are closed	Chief Engineer / Chief Officer		
4	Take soundings of all tanks and bilges	Chief Engineer / Chief Officer		
5	Locate the source if any, of ingress of water	Chief Officer		
6	The owner / operator informed	Master / Officer on Duty		
7	Notify the nearest states authority	Master/ Officer on Duty		

If the master realises that the situation is no more recoverable notwithstanding all attempts and it is no more safe for the crew to remain on board GIVES THE ORDER TO ABANDON THE SHIP

Personnel behaviour has to be as such as no risks may arise, endangering their own lives or the lives of any other crewmembers

The following emergency actions and duties have to be taken and followed:

Master	Duty Officer	Crew-members
• Assesses the situation and takes the decision to abandon the ship. • Gives the order to transmit the distress signal. • Gives verbal order to abandon the ship.	• Sounds the life-raft station alarms.	• Put on lifejackets, safety helmets and warm dresses and proceed to muster stations.

Master and Bridge party	Emergency and stand-by parties	Technical party
• Ensure muster check has been completed, all personnel accounted for and details of missing persons (if any) passed to lifeboat commanders. • Record events and collect log books. • Monitor preparation and launch of lifeboats. • Advice all ships by VHF CH16 DSC CH70 and activated GMDSS Distress Alarm • Advice by sat- phone / telex, etc. • Reduce way of the vessel as far as possible, time allowing. • Switch on deck floodlighting. • Time allowing, instruct Emergency and Stand-by parties to gather: extra blankets, water, provisions, torches, hand held radios, etc. • Put on lifejackets and proceed to boat embarkation points bringing to the boats EPIRB, SARTs, GMDSS radios extra pyrotechnics log books sextant, almanac, calculator, pens, paper.	• On hearing life raft station alarm proceeds to abandon ship stations • Carry out muster check and ensure lifejackets donned properly. • Advise the Master of missing persons (if any) and arrange search. • Prepare lifeboats-life rafts lower top embarkation deck and make ready for rapid boarding. • Time permitting, arrange for extra blankets, water, provisions, torches, etc. • Advise the Master that life rafts are prepared and crew ready for abandoning ship. • When master's order to abandon ship is received embark to life raft. • Lower rescue boat and life rafts • On hitting water, release from falls and stand-by to pick up Master and launch crew.	• Maintains power supplies for lighting. • Ensures manoeuvring of the Propulsion System whilst launching lifeboats/life rafts. • On instruction from the Master stops the Propulsion System, secures Engine Room and proceeds to assigned lifeboats stations.

Checklist No12	Hazardous Vapor Release

No	Action	Responsible	Done	When
1	Stop all bunkering operations if the ship is in a terminal	Chief Engineer		
2	Sound the emergency alarm	Chief Officer		
3	Check all watertight doors are closed	Chief Engineer/ Chief Officer		
4	Take soundings of all tanks and bilges	Chief Engineer/ Chief Officer		
5	Locate the source if any, of ingress of water	Chief Officer		
6	The owner / operator informed	Master / Officer on Duty		
7	Notify the nearest states authority	Master / Officer on Duty		
8	If possible head the ship so that she is free from the gas cloud	Master		
9	Make ready for an immediate use of breathing apparatus and fire fighting equipment	Chief Officer		
10	Stop the leak if possible	Chief Engineer/ Chief Officer		
11	Avoid smoking and all naked lights	Master		
12	Close all valves in the liquid line	Chief Engineer / Engineer on Duty		
13	Send radio warning to all ships present in the area	Master / Officer on Duty		

If the master realises that the situation is no more recoverable notwithstanding all attempts and it is no more safe for the crew to remain on board GIVES THE ORDER TO ABANDON THE SHIP

Personnel behaviour has to be as such as no risks may arise, endangering their own lives or the lives of any other crewmembers

The following emergency actions and duties have to be taken and followed:

Master	Duty Officer	Crew-members
• Assesses the situation and takes the decision to abandon the ship. • Gives the order to transmit the distress signal. • Gives verbal order to abandon the ship.	• Sounds the life-raft station alarms.	• Put on lifejackets, safety helmets and warm dresses and proceed to muster stations.

Master and Bridge party	Emergency and stand-by parties	Technical party
• Ensure muster check has been completed, all personnel accounted for and details of missing persons (if any) passed to lifeboat commanders. • Record events and collect log books. • Monitor preparation and launch of lifeboats. • Advice all ships by VHF CH16 DSC CH70 and activated GMDSS Distress Alarm • Advice by sat- phone / telex, etc. • Reduce way of the vessel as far as possible, time allowing. • Switch on deck floodlighting.	• On hearing life raft station alarm proceeds to abandon ship stations • Carry out muster check and ensure lifejackets donned properly. • Advise the Master of missing persons (if any) and arrange search. • Prepare lifeboats-life rafts lower top embarkation deck and make ready for rapid boarding. • Time permitting, arrange for extra blankets, water, provisions, torches, etc. • Advise the Master that life rafts are prepared and crew ready for abandoning ship.	• Maintains power supplies for lighting. • Ensures manoeuvring of the Propulsion System whilst launching lifeboats/life rafts. • On instruction from the Master stops the Propulsion System, secures Engine Room and proceeds to assigned lifeboats stations.

• Time allowing, instruct Emergency and Stand-by parties to gather: extra blankets, water, provisions, torches, hand held radios, etc. • Put on lifejackets and proceed to boat embarkation points bringing to the boats EPIRB, SARTs, GMDSS radios extra pyrotechnics log books sextant, almanac, calculator, pens, paper.	• When master's order to abandon ship is received embark to life raft. • Lower rescue boat and life rafts • On hitting water, release from falls and stand-by to pick up Master and launch crew.	

Section 4: National and Local Coordination

Quick efficient co-ordination between the ship and Coastal States or other parties involved becomes vital in mitigating the effects of an oil pollution incident.

As the identities and roles of various national and local Authorities involved vary widely from state to state and even from port to port, the Master should take note of these particularities, as far as possible. In this context the Master should call upon the owner's representatives in the state/ port of question to receive the relevant information.

In several countries it is accepted that an oil spill can be tackled most effectively from the shore and there is normally no requirement on the part of the shipowner or the ship's crew to organise the clean-up response in respect of oil spilled overboard. Operational spills usually occur in port at an oil or bunkering facility and tend to be cleaned up by the facility operator.

In the case of casualties, the responsibility for organizing and controlling the clean-up response is usually assumed by an agency of government. In both cases the spiller would be expected to co-operate fully, and pay the reasonable costs of clean-up and any damages caused, up to a specified limit of liability based on the tonnage of the ship.

Most countries recognize that is unreasonable and impractical to expect a shipowner or crew to respond to a spill from their ship and therefore a government agency or port authority will normally be in charge and demand the costs afterwards. In a relatively few countries, for example USA, shipowners will be required to organize the clean-up of a spill from their ships and this will usually necessitate employing a local oil spill clean-up contractor or oil industry clean-up cooperative. A number of developing nations lack both specialized resources and contingency plans and may rely on help from a variety of sources outside the country to assist in clean-up operations. In such cases it may be in the owner's best interest to offer an active involvement in the spill response operation. However, it should be recognized that the actual response adopted by a country to a particular incident will depend upon a number of factors such as the exact location, the type and quantity of oil involved and the owner of the ship.

Prior to undertaking mitigation actions – especially in cases of an actual discharge of oil due to casualties in the territorial waters of a Coastal State – the Master should contact the Coastal State for authorization of his action.

The Master should co-ordinate all his activities with the Coastal State.

The Master should call the Coastal State for allowance to use chemical agents for response to oil pollution on the sea. Without authorization of the Authorities of the appropriate Coastal State no chemical agents should be used.

Where no responsibility for discharge response by a Coastal State is noticed the Master should take all the necessary steps as deemed appropriate to minimize the escape of oil.

With respect of the accident happened the Master should take measures as stated in Section 2 and Section 3 of this Plan.

Section 5: Non-Mandatory Information (Voluntary Part)

In addition to the mandatory provisions required by Reg. 37, Annex I, MARPOL 73/78 which are mentioned in Sections 1 to 4 of this Plan, local requirements, insurance company or owner/ operator policies etc. may dictate the provisions of additional guidance.

Such additional information material, including diagrams and/ or drawings, reference material etc., may be of help for the Master when responding to an oil pollution incident or an emergency situation as well as may be required by local Authorities in ports visited by the individual ship.

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8	Ship's Plans and Drawings: • General Arrangement Plan • Capacity Plan • D.O. Transfer & Bunkering System • D.O. Purifying & Service System • Air Pipes • Lubrication Oil System • Bilge System (Bilge Pipe Lines) • MARPOL Diagram • MARPOL Line Diagram	59

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Appendix 1 - Initial Notification

Extract from section 2 reporting requirements.

Label	Function	Explanation
A	Ship	Name, call sign and nationality
B	Date and time (UTC) of event	A 6-digit group giving day of month (first two digits), hours & minutes (last four digits)
C (OR)	Position	A 4-digit group giving latitude in degrees and minutes suffixed with N or S, and a 5-digit group giving longitude in degrees and minutes suffixed with E or W
D	Position	True bearing (first 3 digits) and distance (state distance) in nautical miles from clearly identified landmark (state landmark)
E	True course	A 3-digit group
F	Speed at time of incident	In knots and tenths of knots as a 3-digit group
L	Route information	Details of intended track
M	Radio communications	Full details of radio stations (names) and frequencies being guarded
N	Time (UTC) of next report	A 6-digit group as under BB above
O	Ship's draught	
P	Cargo on board: can be included in „RR„ as relevant	Type(s) and quantity(ies) of cargo/ bunker on board and brief details of any dangerous cargoes as well as harmful substances and gases that could endanger persons or the environment
Q	Defects or damage or deficiencies or other limitations	Brief details of conditions of the ship as relevant; ability to transfer cargo/ ballast/ bunker fuel
R	Description of pollution or possible overboard discharge	Brief details of pollution; this should include the type(s) of fuel oil, an estimate of the quantity discharged, whether the discharge is continuing, the cause of the discharge and, if possible, an estimate of the movement and area of slick
S	Weather conditions	Brief details of weather and sea conditions prevailing including wind force and direction and relevant swell details
T	Ship's representative and/ or owner	Name, address, telex and telephone number of the ship's owner and representative (charterer, manager or operator of the ship or their agents)
U	Ship's size and type	Details of length, breadth and type of ship as well as capacity (tonnage)
X	Miscellaneous and additional information	Any other information including relevant details such as brief details of incident, need for outside assistance, action being taken to limit further discharge; details of any personnel injuries sustained, details of P & I Club and local correspondent.

INITIAL NOTIFICATION – EXAMPLE

The following format provides an example as to how Initial Notification information shall be presented:

A	*MV „X„, Call Sign D..., German Flag*
B	*01 12 36*
C	*2528N 05740E*
E	*179*
F	*186*
L	*Bound Singapore from Muscat*
M	*Bahrain Radio 500 KHz, VHF 16, INMARSAT No. 888 888*
N	*As required*
O	*Draught 7m*
P	*650 TEU/ NO IMDG CARGO/ BUNKERS 580 IFO/ 75 MDO*
Q	*Collision with cargo ship ..., HFO-Service tank starboard breached, no fire and all essential shipboard systems operational*
R	*Quantity of fuel oil lost from breached tank about 10 tonnes; tank now empty* *Slick moving SE away from land and out of Gulf of Oman*
S	*Weather fine, wind NNW, 3 Bft, sea state slight to moderate, no swell*
T	*Owner Blue Horizon Co., Vorsetzen 12, 20459 Hamburg, Tel. +40 123 45, Telex 876 54* *Fax +40 876 543*
U	*Length 169 m, breadth 25 m, tonnage 23.000 tdw, type container ship*
X	*No personnel injuries sustained; no clean-up operations possible from ship; Ship safe P and I Club advised; local correspondent is Miller on Tel. Dubai 54 444. Proceding to Dubai for survey/ repairs.*

MASTER

Note: The alphabetical reference letters in the above format are from 'General principles for ship reporting systems and ship reporting requirements, including guidelines for reporting incidents involving dangerous goods, harmful substances and/ or marine pollutants' adopted by the International Maritime Organization by resolution A.851(20). The letters do not follow the complete alphabetical sequence as certain letters are used to designate information required for other standard reporting formats, e.g., those used to transmit route information.

A blank form is provided in the following pages.

INITIAL NOTIFICATION – BLANK FORM

A	
B	
C	
D	
E	
F	
L	
M	
N	
O	
P	
Q	
R	
S	
T	
U	
X	

MASTER

Note: The alphabetical reference letters in the above format are from 'General principles for ship reporting systems and ship reporting requirements, including guidelines for reporting incidents involving dangerous goods, harmful substances and/ or marine pollutants' adopted by the International Maritime Organization by resolution A.851(20). The letters do not follow the complete alphabetical sequence as certain letters are used to designate information required for other standard reporting formats, e.g., those used to transmit route information.

Appendix 2 - Coastal State Contacts (Focal Points)

The most updated version of the Circular shall be included here in the Plan.

Appendix 3 - Port Contacts

The following table provides an example as to how port contacts information could be presented:

Name of Port Contact	Address	Means of contact	Remarks
Port Authority (Harbour Master etc.)	.....	Phone... Fax... VHF-Channel...	...
Terminal Officials	...	...	...
Company´s Local Agent	...	...	...
...	...	...	...
	...	...	...
	...	...	...
	...	...	...

Appendix 4 – Ship Interest Contacts

Institution / person	Address	Telephone	Facsimile	E-mail
Ship Owning Company				
Astrea Shipping Company	38 Charilaou Trikoupi str. & 69 Okeanidon str., Elefsina, GR19200, Greece	T: +30 211 8885130	+30 211 8885070	marine@assogroup.com
Ship Managing Company				
Asso Marine Shipping Company (Main Switchboard)	Thesi Kalympaki Elefsina, GR19200, Greece	T: +30 211 8885130	+30 211 8885070	marine@assogroup.com operations@assogroup.com
Ioannis TOGIAS (Marine Division Director)		T: +30 211 8885180		itogias@assogroup.com
Ioannis STASINOPOULOS (DPA/CSO/CMLCO)		T: +30 211 8885231 M: +30 6955062241		istasinopoulos@assogroup.com
Christos KASTANOS (Ops & Crew Manager)		T: +30 211 8885110 M: +30 6951952017		ckastanos@assogroup.com
Diamantis APESSOS (Superintendent Eng.)		T: +30 211 8885105 M: +30 6951978055		dapessos@assogroup.com
Iro STYLIANOU (Administrative Assistant)		T: +30 211 8885130		marine@assogroup.com
Other Contacts				
American Bureau of Shipping - ABS (Classification Society)	1, Sachtouri Str. & Posidonos Ave. GR176 74 Kallithea, Greece	T: +30 210 441000 24/7: +30 6932588891	+30 210 4293659	ABSPiraeus@eagle.org
Bureau Veritas – BV (RO – RSO)	23 Etolikou str., Piraeus,GR18545 , Greece	T: + 30 210 4063000 +30 210 4063136 M: +30 6944868398 +30 6940771552	+30 210 4063063	grc_ism@gr.bureauveritas.com
Arion Enterprises Inc. Mr. N. Gkiouzelakis (Insurance broker)	44 Hatzikiriakou Avenue, Piraeus, GR18538, Greece	T: +30 210 4290525 M: +30 6944335506	+30 210 4290526	arion@arioninsurance.com
SKULD (P&I Club)	Contact is made through Insurance Broker			
Dim. Papadimitriou & Associates (Technical Advisor)	92 Kolokotroni str., GR18535, Piraeus, Greece	T: +30 210 4175660 +30 210 4175655 M: +30 6936697090	+30 210 4220060	dpb@otenet.gr
AqualisBraemar (inc. The Salvage Association)	5-7 Filellinon str., Piraeus, GR18536, Greece	T: +30 210 4292690 M: +30 6943210535		piraeus@aqualisbraemar.com

Appendix 5 – Stability and Strength Assessment Notification Forms

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STABILITY AND STRENGTH ASSESSMENT NOTIFICATION – FORM 1

MSV ASTREA (IMO 8520771)	
TRIP:	From……To……
Date:	Departure……Arrival (estimate)……

Drafts after incident	
FWD	P. ……(m) S. ……(m)
AFT	P. ……(m) S. ……(m)
MID-SHIP	P. ……(m) S. ……(m)
TRIM	P. ……(cm) S. ……(cm)
LIST	P. ……(dg)(◦) S. ……(dg)(◦)
WATER GRAVITY	……(t/m³)

Advice required for the following actions	1 …… 2 …… 3 …… 4 ……

Damage Description	Damage location and extension are to be sketched on form 3

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STABILITY AND STRENGTH ASSESSMENT NOTIFICATION – FORM 2

MSV ASTREA (IMO 8520771)	
TRIP:	From……To…….
Date:	Departure……Arrival (estimate)…….

	Tank / Space Description §	100% Volume (m^3)	Quantity ⍰ Departure check (t)	Quantity ⍰ After Accident (t)	Cargo Gravity ⍰ (t/m^3)	Damaged ⍰ (Y/N)
1	FORE PEAK TK	142.697				
2	No2 D.B. WATER BALLAST TK	43.521				
3	No3 DEEP WATER BALLAST	230.780				
4	No3 DEEP WATER BALLAST	230.778				
5	No9 WATER BALLAST TK	27.746				
6	No9 WATER BALLAST TK	27.746				
7	No11 WING WATER BALLAST TK	38.769				
8	No11 WING WATER BALLAST TK	35.621				
9	No12 WATER BALLAST TK	88.555				
10	No12 WATER BALLAST TK	88.555				
11	No13 WING WATER BALLAST TK	161.048				
12	No13 WING WATER BALLAST TK	148.770				
13	No14 A.P. WATER BALLAST TK	95.605				
14	No14 A.P. WATER BALLAST TK	91.471				
15	No16 A.P. WATER BALLAST TK	62.747				
16	No16 A.P. WATER BALLAST TK	62.747				
17	No18 A.P. WATER BALLAST TK	37.836				
18	No18 A.P. WATER BALLAST TK	31.587				
19	No2 FRESH WATER TK	137.666				
20	No2 FRESH WATER TK	137.666				
21	No17 A.P. FRESH WATER TK	66.760				
22	No17 A.P. FRESH WATER TK	66.760				
23	No4 WING DIESEL OIL TK	115.867				
24	No4 WING DIESEL OIL TK	128.697				
25	No5 D.B. DIESEL OIL TK	65.217				
26	No5 D.B. DIESEL OIL TK	65.217				
27	No6 D.B. DIESEL OIL TK	101.822				
28	No6 D.B. DIESEL OIL TK	46.600				
29	No6 D.B. DIESEL OIL TK	46.600				
30	No7 D.B. DIESEL OIL TK	32.423				
31	No7 D.B. DIESEL OIL TK	32.423				

⍰ This Column Shall Be Filled By the Master Before Each Voyage When Loading Operations Are Complete.
§ See The Sketches In Form 3 And Form 4.

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STABILITY AND STRENGTH ASSESSMENT NOTIFICATION – FORM 2 (CONT.)

Tank / Space Description §		100% Volume (m^3)	Quantity ⍰ Departure check (t)	Quantity ⍰ After Accident (t)	Cargo Gravity ⍰ (t/m^3)	Damaged ⍰ (Y/N)
32	No8 D.B. DIESEL OIL TK	75.579				
33	No8 D.B. DIESEL OIL TK	17.827				
34	No8 D.B. DIESEL OIL TK	20.552				
35	No10 D.B. DIESEL OIL TK	80.121				
36	No10 D.B. DIESEL OIL TK	80.121				
37	No14 DIESEL OIL TK	99.449				
38	No19 DIESEL OIL SERV. TK	24.335				
39	No20 DIESEL OIL SETTL TK	35.845				
40	No21 DIESEL OIL SERV. TK	35.845				
41	No32 D.O. TK FOR EMER. GEN.	0.900				
42	No25 LUB OIL USED TK	8.466				
43	No27 LUB OIL SYST. TK	5.999				
44	No27 LUB OIL SYST. TK	5.999				
45	No28 LUB OIL STORE TK	8.800				
46	No29 HYDRAULIC OIL TK	2.564				
47	No30 HYDRAULIC OIL TK	2.564				
48	No31 HYDRAULIC OIL TK	2.138				
49	BILGE TK	16.933				
50	SLUDGE TK	16.933				
51	SEWAGE TK	12.829				
52	FO DRAIN TK	4.233				

⍰ This Column Shall Be Filled By the Master Before Each Voyage When Loading Operations Are Complete.
§ See The Sketches In Form 3 And Form 4.

STABILITY AND STRENGTH ASSESSMENT NOTIFICATION – FORM 3

MSV ASTREA (IMO 8520771)	
TRIP:	From……To…….
Date:	Departure……Arrival (estimate)…….

Note For The Master	When transmitting this present Form insert in this page the sketches of the ship as they are reported in the Capacity Plan.

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FOLLOW–UP NOTIFICATION – FORM 4

MSV ASTREA (IMO 8520771)	
TRIP:	From……To…….
Date:	Departure……Arrival (estimate)…….

Additional Information Concerning Stability and Hull Strength Assessment	
Reported Damage	Please detail extent and location of structural damage. Please attach sketches. Also indicate damaged compartments, bulkheads, frame Nos and dimensions where possible.

Proposed Actions And Requirements	Any Other Relevant Information, Details Of Actions Being Undertaken Or Proposed, Salvage Operations etc.

Please List The Technical Information You Urgently Require	Y / N
1. Residual Stability	
2. Residual Strength	
3. Lightering Proposal	
4. Cargo Transfer Proposal	
5. Other Remedial Actions	
6.	
7.	

Appendix 6 - National & Local Coordination Form

MSV ASTREA (IMO 8520771)
TRIP: From……To…….
Date: Departure……Arrival (estimate)…….
Responsible on board coordinator:……
Responsible coastal states:……
Coastal state: 1. ……
Does the local authority of the next port of call take charge of response activities? (Y / N) ……
If the answer is Y , indicate the procedure to be followed to activate and co-ordinate the response resources: …… …….
Is responsibility for initiating response placed on the ship owner? (Y / N) ……
If the answer is N, indicate the procedure to be followed to activate and co-ordinate the response resources: …… …….
Coastal state: 2. ……
Does the local authority of the next port of call take charge of response activities? (Y / N) ……
If the answer is Y , indicate the procedure to be followed to activate and co-ordinate the response resources: 1…… 2…….
Is responsibility for initiating response placed on the ship owner? (Y / N) ……
If the answer is N, indicate the procedure to be followed to activate and co-ordinate the response resources: 1…… 2…….
Coastal state: 3. ……
Does the local authority of the next port of call take charge of response activities? (Y / N) ……

- continues on next page -

National & Local Coordination Form (Cont.)

If the answer is Y , indicate the procedure to be followed to activate and co-ordinate the response resources: 1…… 2……
Is responsibility for initiating response placed on the ship owner? (Y / N) ……..
If the answer is N, indicate the procedure to be followed to activate and co-ordinate the response resources: 1…… 2……
Coastal state: 4. ……
Does the local authority of the next port of call take charge of response activities? (Y / N) ……..
If the answer is Y , indicate the procedure to be followed to activate and co-ordinate the response resources: 1…… 2……
Is responsibility for initiating response placed on the ship owner? (Y / N) ……..
If the answer is N, indicate the procedure to be followed to activate and co-ordinate the response resources: 1…… 2……

- END -

Appendix 7 - List of Oil Spill Response Equipment Carried On board

ITEM	LOCATION	USE	NUMBER / QUANTITY

Note: The Chief Officer ensures that the equipment is well stocked, in good operating condition and in the prescribed location.

Appendix 8 - Ship's Plans and Drawings

(Located in the vessel's office)

No	Name
01K	General Arrangement Plan
150-550581	Capacity Plan
30B	D.O. Transfer & Bunkering System
26C	D.O. Purifying & Service System
345-53-A	Air Pipes
710-800	Lubrication Oil System
19E	Bilge System (Bilge Pipe Lines)
29A	MARPOL Diagram
29B	MARPOL Line Diagram