

中国船级社

船上海洋污染应急计划编制指南

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第1章 通则

1.1 目的

1.1.1 本指南旨在帮助经修订的《经 1978 年议定书修订的 1973 年国际防止船舶造成污染公约》(MARPOL 73/78) (以下简称“公约”)附则I第 37 条和附则II第 17 条要求的“船上油污应急计划”、“船上有毒液体物质海洋污染应急计划”或“船上海洋污染应急计划^①”(以下简称“计划”)的编制。

1.1.2 本指南主要为船东、船舶管理者和船舶营运人编制“计划”提供通用性的指导和方法。

1.1.3 本指南也为中国船级社(以下简称“本社”)验船师审批“计划”提供指导。

1.2 适用范围

1.2.1 本指南适用于表 1.2.1 所列“计划”的编制。

表 1.2.1

“计划”名称	适用的船舶
船上油污应急计划	150 总吨及以上的油船和每艘 400 总吨及以上的非油船
船上有毒液体物质海洋污染应急计划	150 总吨及以上准予装载散装有毒液体物质的船舶
船上海洋污染应急计划	对于同时满足上述两条件的船舶,可以此替代上述两“计划”

1.3 “计划”编制的一般要求

1.3.1 “计划”编制的目的是指导船长和船上高级船员有效处理油类或有毒液体物质的意外排放,以确保采取必要措施,阻止或最大程度地降低意外排放并减轻其对水域环境影响。有效的“计划”确保从结构上以合理、安全和及时的方式采取必要的措施。

1.3.2 对特定船舶“计划”的编制,应考虑适用特定船舶的各种因素,以确保符合公约的要求:

- (1) 船舶的类型和尺度;
- (2) 货物的物理特性(仅适用于经核准装载有毒液体物质(NLS)的船舶);
- (3) 航线;
- (4) 岸基管理机构;
- (5) 设备和人员配备,等。

1.3.3 “计划”应包括对操作性溢油和事故性溢油提供响应措施的指导。

1.3.4 为达到“计划”的使用目的,计划应:

- (1) 实际可行并便于使用;
- (2) 能使船舶和岸上管理人员易于理解;
- (3) 定期评审和更新。

1.3.5 “计划”应简单明了。为便于使用,鼓励采用简明流程图或检查清单,以通过提出事件响应过程中要求的各种行动和决定方式,向船长提供指导,从而帮助船长和高级船员在应急情况下,减少错误和疏忽。

1.3.6 有关船舶及其货物等大量的背景资料不必直接作为“计划”的内容。如果这些资料与“计划”相关,可作为“计划”的附件,以免影响船上人员查找“计划”中的操作部分内容。

1.3.7 计划应使用船长和高级船员的工作语言或他们精通的语言编制,以方便使用。当船长和高级

^①本指南所述的“船上海洋污染应急计划”是指包含了“船上油污应急计划”和“船上有毒液体物质海洋污染应急计划”内容的应急计划。

船员更换导致使用的语言与计划不一致时，计划应译成新船长和高级船员适应的语言。如果所用语言不是英文，还应提供英文的译文。

1.3.8 “计划”应明确强调下列事宜：

“一些沿海国家认为，确定对海洋污染事故应采取的方法和措施以及批准可能引起进一步污染的操作（如减载）是他们的责任，而并不妨碍船东的义务。各国通常有权根据 1969 年国际干预公海油污事故公约和 1973 年干预公海非油类物质污染议定书的要求这样做。”

1.4 “计划”审批

1.4.1 审批“计划”时，应审核“计划”与经修订的 MARPOL 附则 I、II 以及经 MEPC.137(53) 决议的修订的 MEPC.85(44) 的符合性。审批后签发批准书（见本指南附件 1）。

1.4.2 按本指南编制的“计划”经批准后，可作为签发《国际防止油污证书》和/或《国际防止散装运输有毒液体物质污染证书》的必要资料 and 依据。

1.4.3 对从事海底矿物资源勘探开采或相关联的近海加工所用的固定式或移动式钻井装置或其他近海设施，其“计划”应与沿岸国家建立的程序相协调。

1.4.4 对 5000 载重吨及以上的油船，审批“计划”时应特别注意，“计划”后应附有“破损稳性和剩余结构强度岸基电脑计算程序”服务提供者的联系资料。对于已经批准过的“计划”，新增上述联系资料时，不需要再次审批。

1.4.5 对附加资料（非强制性规定）和各附录的修改，不需要再进行审批。

第 2 章 “计划”编制

2.1 “计划”应包含的内容

2.1.1 “计划”至少应包括“公约”所要求的下列几个方面的强制性规定：

- (1) 船长或负责管理该船的其他人员应遵循的油类和/或有毒液体物质污染事故报告程序；
- (2) 在发生油类和/或有毒液体物质污染事故时，需要联系的当局或人员名单；
- (3) 为减少或控制事故引起的油类和/或有毒液体物质的排放，船上人员将立即采取行动的详细说明；
- (4) 在处理油类或有毒液体物质污染事故中，为协调国家与地方当局的船上行动，要求在船上进行联系的程序和要点。

(5) 所有 5000 载重吨及以上的油船，应能快速获取“破损稳性和剩余结构强度岸基电脑计算程序”服务。

2.1.2 除强制性规定外，对地方要求、保险公司、船东/经营者的方针等，也可以纳入本“计划”中。这些内容可以包括图解和图纸、船载响应设备、公众事务、记录保持、货物具体应对资料（适用核准载运 NLSs 的船舶）和参考材料等。具体见本指南 2.8。

2.1.3 “计划”一般应包括下述八个部分：

- (1) 前言
- (2) 目录
- (3) 序言；
- (4) 报告要求；
- (5) 控制排放措施；
- (6) 与国家和地方的协作；

(7) 附加资料（非强制性规定）

(8) 附录部分。

2.1.4 本指南附件 2 给出了“计划”的样本供参考。本指南 2.2 至 2.9 给出了每个部分应涉及的内容。

2.2 前言

2.2.1 所有“计划”都应有“前言”部分，且应包括以下内容：

(1) “计划”是按经 1978 年议定书修订的 1973 年国际防止船舶造成污染公约附则 I 第 37 条和附则 II 第 17 条的要求编写的。

(2) “计划”的目的是当油类和/或有毒液体物质污染事故业已发生或可能发生时向船上的船长和高级船员提供采取措施的指导。

(3) “计划”包含本指南要求的所有资料和操作须知。各附录包含“计划”中提到的所有联系人的姓名、电话和传真号码等，以及其他参考材料。

(4) “计划”业经主管机关认可，除如下(5)之规定外，未经主管机关事先批准，“计划”的任何部分不得变动或被修改。

(5) 对附加资料（非强制性）部分和各附录的修改，不要求主管机关批准。各附录应由船东或船舶管理者和船长保持更新。”

2.3 序言

2.3.1 本部分应包含“计划”的目的和使用的有关说明，并简要说明船上计划与其他岸基计划的关系（详见本指南 1.3）。

2.4 报告要求

2.4.1 根据“公约”第 8 条和议定书 I 要求，船舶应把实际排放或可能排放情况通知最近的沿海国家，以便沿海国家采取相应的行动。

(1) 报告时机：“计划”应提供清晰、准确的指导，以使船长能够决定何时需要向沿海国家报告。

① 当发生实际排放时，只要发生下列情况之一，就应向最近的沿海国家报告：

(a) 无论什么原因（包括为了保证船舶安全或海上救生的目的）而引起的超出允许范围的油类或有毒液体物质的排放；

(b) 在船舶作业期间，油类或有毒液体物质的排放超过“公约”允许的量或瞬时排放率。

② 当有可能发生排放时，“计划”应向船长提供评估可能排放状况的指导。在判断是否有排放可能以及是否应该报告时，至少应考虑下列因素：

(a) 船舶、机器或设备损坏、故障或失灵的情况；

(b) 船位以及与陆地的接近程度或其它航行危险；

(c) 天气、潮汐、水流和海况；

(d) 交通密集度。

③ 存在下列情况时，船长应予以报告：

(a) 影响船舶安全的损坏、故障或失灵：如碰撞、搁浅、失火，爆炸、结构故障、进水、货物移动；

(b) 导致危害航行安全的机器或设备故障或失灵：如舵机、推进装置、发电机系统、船载重要导航设备的故障或失灵。

(2) 要求的资料：“计划”必须以国际海事组织 A. 851 (20) 决议通过的指南为基础，具体规定向沿海国家提交初始报告的程序。“计划”应包括一份初始报告格式（参见本指南附件 2 中表 1）。补充报告或跟踪报告也应尽可能使用同样格式。

(3) 应联系的人员名单:

- ① 当船舶涉及油类或有毒液体物质污染事故时, 必须与沿海国家或港口联系人和船舶重要联系人取得联系;
 - ② 在编制联系人清单时, 必须考虑提供 24 小时联系信息和指定联系人的替代人员。这些细节必须随着人员变更和电话、电报、电传号码的变更而及时更新。对有关联系方式(电报、电话、电传等)还应提供明确的指导。
- ③ 沿海国家联系人
- (a) 为迅速做出响应和最大程度降低油类或有毒液体物质污染事故造成的破坏, 船长应毫不迟延地立即通知有关的沿海国家, 按公约第 8 条及其议定书 I 的要求提交初次报告。报告的编制应按本指南 2.4 中规定进行。
 - (b) 在计划附录里列出由国际海事组织(IMO)制定和更新的负责接受和处理报告的沿海国家主管机关官员或代理的清单。“计划”应建议船长, 当附录中没有联络人的详细情况或在与负责的当局联络发生不当延误时, 应以最快的方式与最近的沿岸无线电台、指定的船舶动报告站或搜救协调中心(RCC)取得联系。
- ④ 港口联系人
- (a) 对涉及油类或有毒液体物质污染事故的在港船舶, 应快速通知当地代理。“计划”附录应包括定期停靠的港口信息, 如代理等。
 - (b) 对于“计划”未列出的港口, “计划”应要求船长在到港时获得关于地方报告程序的详细资料。
- ⑤ 船舶重要联系人
- (a) “计划”应附有船舶重要联系人一览表, 以便污染事故发生后, 船上人员能迅速通知各相关方(如货主、保险人、救助单位和船舶岸上管理人员)。由于污染事故发生后, 船上人员将以全部精力投入响应行动, 因此编制“计划”时, 应考虑船上人员不应被指派的繁重的通信要求所牵制。
 - (b) 船上“计划”和岸上“计划”都应能保证通知到各相关方, 为避免重复报告, “计划”应明确由谁通知各相关方。
 - (c) 对 5000 载重吨或以上油轮, 在 2007 年 1 月 1 日及以后, “计划”附录还应包括“破损稳性和剩余结构强度岸基电脑计算程序”服务提供者的联系人资料, 该资料也可放在“船舶重要联系人一览表”里:
 - a) 如果船舶直接跟“破损稳性和剩余结构强度岸基电脑计算程序”服务机构联系, 则应包括该服务提供者及其联系方法; 或
 - b) 如果船上通过船舶管理公司获得“破损稳性和剩余结构强度岸基电脑计算程序”服务, 则应包括船舶管理公司联系人及其联系方法。

2.5 控制排放的措施

2.5.1 “计划”应能就各种情况为减轻排放向船长提供明确的指导。“计划”不仅应规定采取的措施, 而且还应确定船上每个人的职责, 以避免在紧急情况下造成混乱。

2.5.2 “计划”因船而异。随着船型、结构、载运货物、设备、人员配备、甚至航线的不同, “计划”内容也可能不同, 但“计划”至少应能向船长提供下列情况的指导:

(1) 操作性溢漏: “计划”应为安全去除船上溢漏的和在甲板上残留的油类或有毒液体物质规定程序。这可以通过使用船上资源或雇用清洗公司。在任何一种情况下, “计划”应提供适当处理去除的油类、有毒液体物质和清洗材料的指导。

① 管系渗漏: “计划”应为处理管系渗漏提供具体指导。

② 舱柜溢流: “计划”应包括处理舱柜溢流的程序。是将液体货物或燃油驳到空舱或不用舱,

还是将多余的液体货物或燃油驳到岸上，“计划”都应有简要的说明。

- ③ 船体渗漏：“计划”应为处理可疑的船体渗漏而提供指导，这可能涉及通过内部调驳或驳到岸上，来降低液货舱液面的措施。当不能识别渗漏具体发生在哪一舱时，“计划”则还应提供该情况的处理程序。“计划”还应提供处理可能的船体破裂的程序，提醒船长和高级船员注意船舶应力和稳性，并采取纠正措施。

(2) 事故性溢漏：“计划”应包括各种检查清单或确保船长能考虑到海难事故^①各种因素的其他方法。这些检查清单必须根据具体船舶和具体货物或货物类型进行制定。尤其是对核准载运NLSs的船舶，检查清单或其他方法如“建议的海上散装运输液体化学品的特征”（数据单），应辨别物理性能、特殊保护装置或特别响应技术。NLS特征的数据单或类似文件的副本应与“计划”一起保存，但不必作为“计划”的一部分。此外，还必须给相关人员明确指派具体的职责。参照现有紧急集合部署表应很容易辨别人员职责。下列事故应予以考虑：

- ① 搁浅；
- ② 火灾/爆炸；
- ③ 碰撞(与固定或移动目标)；
- ④ 船体损坏；
- ⑤ 严重横倾；
- ⑥ 货物围护系统失效；
- ⑦ 货物危险反应(核准载运 NLSs 的船舶)；
- ⑧ 其它有害货物的释放(核准载运 NLSs 的船舶)；
- ⑨ 液货舱环境失控(核准载运 NLSs 的船舶)；
- ⑩ 沉没；
- ⑪ 失事/触礁；
- ⑫ 货物污染引起危险情况(核准载运 NLSs 的船舶)；和
- ⑬ 危险气体释放。

2.5.3 除本指南 2.5.2 中提及的检查清单和人员职责外，“计划”还应向船长提供关于优先措施、稳性和应力考虑、减载和减缓措施的指导。

(1) 优先措施：一般考虑大范围的海损。“计划”应向船长提供有关具体指导。

- ① 面对海难，船长首先应确保人员和船舶安全，并采取措施防止事故逐步升级。在涉及溢漏的海难中，应考虑马上采取措施以防止失火，防止人员暴露于有毒气体中并防止爆炸，如改变航向使船舶生活区处于溢漏货物的上风处、关闭不重要的进气口等；如果船舶搁浅而无法操纵，应消除所有可能的着火源并采取措施防止有毒气体或易燃气体进入居住区域和机舱处所；如果船舶还能操纵，船长可考虑把船移到较适合的位置，并与岸上当局联系，以便应急修理或卸载作业或降低对任何沿岸特殊敏感区域的威胁，这种移动可能要经沿海国家管理机关的批准。
- ② 在考虑补救措施之前，船长需要获得船舶遭受破坏的详细资料。船上应进行目视检查，对所有货油舱、燃料舱及其他舱室应进行测深。由于船舶可能失去浮性，应注意不能随便打开那些液面测量孔或观察孔，特别是当船舶搁浅时。
- ③ 评估船舶遭受的损坏后，船长应能决定采取什么措施防止或最大程度减少进一步排放。如果船底损坏，特别是损坏严重时，采取预防措施的时间往往有限，损坏舱内将迅速达到流体静力平衡(根据物理性能)。当燃油/润滑油和/或货油舱遭到重大的侧面损坏时，舱内燃料或货物也将迅速达到流体静力平衡。如损坏程度有限，如一个或二个舱，则可以考虑把损坏舱内的物质驳至未损的舱内。在考虑把油类或有毒液体物质从损坏舱驳至未损的舱时，船长应考虑：

^①参见国际安全管理(ISM)规则第 8 节的规定。

- (a) 损坏的程度；
- (b) 流体静力平衡；
- (c) 船舶驳运货物能力；和
- (d) 所涉物质(核准载运 NLSs 的船舶)的物理性质，诸如：
 - 溶解度；
 - 密度；
 - 水反应性；
 - 固化作用；和
 - 兼容性。

(2) 稳性和强度考虑：当采取措施缓解油类或有毒液体物质的溢漏或使船舶摆脱搁浅时，必须特别注意考虑船舶稳性和强度。“计划”应向船长提供详细指导，以确保具体考虑这些方面。本部分的任何内容不能被认为是对破损稳性提出的新要求，或是超出有关国际公约要求的计算。

- ① 进行内部调驳应注意对船舶总纵强度和稳性的影响。如果遭受的损坏较大，船舶可能就很难评估内部调驳对船舶应力和稳性的影响。为了获得资料以便对破损稳性和破损总纵强度进行评估，可与船东或经营者或其它机构取得联系。5000 载重吨或以上油轮，应立即与“破损稳性和剩余结构强度岸基电脑计算程序”服务联系人取得联系，以获取帮助。为了方便起见，“计划”应明确指出船长应与谁取得联系。另外，对核准载运 NLSs 的船舶，在开始作业前，必须考虑所有涉及的物质，诸如货物、燃料、液舱、涂层、管系等的兼容性。
- ② 如适用，“计划”应提供对破损稳性和破损总纵强度进行评估所要求的资料清单。

(3) 减载：如果船舶遭到大范围的结构破坏，可能需要把全部或部分货物驳到另一艘船上。“计划”应提供关于“船到船”货物驳运须遵循的程序指导。“计划”制定可参照现有的公司导则。公司“船到船”驳运作业程序的副本应与“计划”保存在一起。“计划”应写明与沿海国家协作采取措施的必要性，因为有些操作是由沿岸国家决定的。

(4) 减缓措施：当船舶和人员的安全明确后，船长可根据“计划”所给的指导，着手采取减缓措施。“计划”应明确下列方面：

- ① 评估和监控要求；
- ② 人员保护问题；
 - (a) 保护设备；
 - (b) 对健康和安全的威胁。
- ③ 所涉物质(核准载运 NLSs 的船舶)的物理特性，如：
 - (a) 溶解度；
 - (b) 密度；
 - (c) 水反应性；
 - (d) 凝固作用；和
 - (e) 兼容性。
- ④ 围护和其他响应技术(如：分散，吸收，中和)；
- ⑤ 隔离程序；
- ⑥ 人员消除污染；
- ⑦ 处理清除的油类、有毒液体物质和清洗材料。

2.5.4 持有必要的资料有助于对本指南 2.5.2 所述的情况迅速做出响应，一些图纸和船舶详细资料，诸如总布置图、舱容图等应附在“计划”里。“计划”应表明现有的货物、燃料和压载资料，包括数量和具体说明可在何处得到。

2.6 与国家和地方的协作

2.6.1 船舶和沿海国家或其它涉及方之间快捷有效的合作对减轻油类或有毒液体物质污染起到很大的作用。“计划”应写明需要联系的沿海国家，以便船长在采取减缓措施前进行联系。

2.6.2 不同国家或地方当局对发生排放的响应措施也不尽相同。一些沿海国家由代理负责迅速应对，然后向船东收取费用；有些国家则让船东负责初期应对。对后者而言，“计划”要提供更多的细节和指导以帮助船长组织应对。

2.7 附加资料（非强制性规定）

2.7.1 一般要求

（1）本部分不是强制性规定，由船东决定是否纳入“计划”。这些附加资料虽然非MARPOL73/78附则I/37和II/17的要求，可以是船舶停靠港口的地方当局的要求，或可以是对船长在应急响应时提供附加的帮助。这些资料包括，不仅限于以下内容：

- ① “计划”评审程序
- ② 培训和演习程序
- ③ 记录保持程序
- ④ 船东/经营者公共事务政策
- ⑤ 船舶图纸和资料
- ⑥ 船载应急响应设备
- ⑦ 货物具体应对资料(核准载运NLSs的船舶)
- ⑧ 参考材料

2.7.2 图纸和图表

（1）除按上述本指南2.5.4要求的图纸外，有关船舶设计和建造的其它详细资料也可附在“计划”附录里，或者表明其存放位置。

2.7.3 响应设备

- （1）如果船上装载有助于防止污染的响应设备，则“计划”应列出一份这类设备的清单。
- （2）“计划”应包括这些设备的安全使用方法，帮助船长决定何时使用这些设备。
- （3）“计划”应考虑使船员安全可行地使用这些设备。
- （4）如船舶配备这些设备，则“计划”应规定负责配置、监管和维护这些设备的人员职责。
- （5）为了确保安全和有效使用这些设备，“计划”还应向船员提供使用这些设备的培训。
- （6）“计划”应提醒船长在应对海上污染时，未经沿海国家的批准不应使用化学剂，以及当要求使用围堵或回收设备时，也应申请批准（见本指南1.3.8）。

2.7.4 岸上溢漏响应协调人员或适任人员

（1）“计划”应向船长提供请求初始响应行动的指导，以及和负责动员岸上响应资源（包括响应人员和设备）的人员一起协调初始响应行动的指导。

2.7.5 潜在的油类或有毒液体物质溢漏“响应合约人”

（1）一些沿海国家要求船舶进港时与“响应合约人”取得联系。如果船舶开往这类国家，建议预先确定各港口国的应对资源(人员和设备)及响应能力。在其他国家，尤其是1.3.8所涉及的国家一般不存在这类要求。

2.7.6 策划标准

（1）为便于预见可请求的响应资源，应分析可能的情景，并作出相应的策划（见本指南1.3.8）。

2.7.7 记录保存

（1）对于任何其它最终涉及责任、赔偿和偿还问题的事故，船东可以要求在其“计划”中包含保持油类或有毒液体物质污染事故的适当记录的指导。

（2）除船上采取的所有措施的详细情况外，记录可包含与外部当局、船东和其他方的通信联系情

况，以及收发的决定和信息的概要。

(3) “计划”也可包含有关溢漏的油类或有毒液体物质取样以及在船上保存的指导。

2.7.8 “计划”评审

(1) 船东、船舶管理者或船长应对“计划”进行定期评审，以确保“计划”所包含的信息保持现行有效。

(2) 应采用与“计划”有关的反馈机制，确保迅速获得有关变更的信息，并将其纳入“计划”。评审“计划”时，应将反馈系统和如下两种措施相结合：

- ① 定期评审：船东或船舶管理者至少每年评审一次“计划”，以获得地方法律或政策、联系人和电话号码、船舶特性或公司政策的变更信息。
- ② 结果评审：使用“计划”应对事故之后，船东或船舶管理者应对“计划”有效性进行评估，并进行相应修改。

2.7.9 “计划”演习

(1) 如果使用“计划”的人员不熟悉“计划”，则“计划”毫无价值。“计划”一般应规定演习的频度，定期的演习将确保“计划”发挥预期的功能，并确保规定的联络和通信准确。

(2) 该演习可结合船上其他演习进行，每次演习都应做好记录。如果船舶配备应急响应设备，船员操作这些设备的训练将大大增强应急响应情况的安全性和有效性。

(3) “计划”可规定训练和演习的程序，以达到其预期目标。

2.7.10 救助

(1) “计划”应包括在海难中船舶完全或部分失去操纵能力时，船员的职责以及构成危险的状况。“计划”应有帮助船长确定何时需获得救助的决定程序。决定程序包括但不限于下列情况：

- ① 最近的陆地或航行危险；
- ② 船舶方位和漂移情况；
- ③ 根据船舶方位和漂移情况，受到危险影响的位置和时间；
- ④ 海难修理的预计时间；和
- ⑤ 确定最邻近的可能援助及其响应时间(如拖轮援助时，到达出事地点并固定拖缆所花费的时间)。当船舶在航行中发生事故，影响其操作能力，船长应优先考虑获得援助的响应时间，而不是估计修理的时间。当船长估计修理需要的时间超过获得援助的响应时间时，应毫不犹豫地请求援助。

2.8 附录部分

2.8.1 “计划”应至少包括下列附录：

- (1) 沿海国家与地区联系人一览表（见本指南附件 2 中附录 1）；
- (2) 港口联系人一览表（见本指南附件 2 中附录 2）；
- (3) 船舶重要联系人一览表（见本指南附件 2 中附录 3）；
- (4) 船舶图纸或资料（见本指南附件 2 中附录 8）。

2.8.2 下列资料也可作为“计划”附录内容：

- (1) 简明流程图（考虑在船上展示流程图）（见本指南附件 2 中附录 7）；
- (2) 国家和地方当局的作用和职责的资料；
- (3) 其他参考资料。



附件 1

船上海洋污染应急计划批准书^①

APPROVAL OF SHIPBOARD MARINE POLLUTION EMERGENCY PLAN

经_____政府授权签发。

Issued under the Authority of the Government of _____.

船名

Name of ship

船级登记号

Class No.

船旗国

Flag

船舶编号或呼号

Distinctive Numbers or Letters

国际海事组织编号

IMO No.

船舶所有人

Ship's Owner

本“船上海洋污染应急计划”系根据 MARPOL 73/78 附则 I/37 和/或附则 II/17 条的规定进行审批。

This SHIPBOARD MARINE POLLUTION EMERGENCY PLAN has been examined and approved under the Provision of Annex I and /or Annex II of the MARPOL 73/78 Convention.

批准

Approval

验船师 ()

Surveyor

中国船级社

China Classification Society

地点

Place _____

日期:

Date _____

^①对于 150 总吨及以上经核准载运有毒液体物质的船舶,该批准书则命名为“船上有毒液体物质海洋污染应急计划批准书”;对于 150 总吨及以上的油船和 400 总吨及以上的非油船,该批准书则命名为“船上油污染应急计划批准书”;400 总吨及以上的经核准载运有毒液体物质的船舶,该批准书可命名为“船上海洋污染应急计划批准书”。

船上海洋污染应急计划^①

SHIPBOARD MARINE POLLUTION EMERGENCY PLAN

船名

NAME OF SHIP:

编制

Drawn _____

日期

Date _____

^①对于 150 总吨及以上经核准载运有毒液体物质的船舶，该“计划”应命名为“船上有毒液体物质海洋污染应急计划”，其内容只包括该样本中对有毒液体物质的相关内容；对于 150 总吨及以上的油船和 400 总吨及以上的非油船，该“计划”应命名为“船上油污应急计划”，其内容只包括对油类物质的相关要求；对于 400 总吨及以上经核准载运有毒液体物质的船舶，该“计划”可命名为“船上海洋污染应急计划”。

前言

INTRODUCTION

- 1 本“计划”根据《经 1978 年议定书修订的 1973 年国际防止船舶造成污染公约》附则 I 第 37 条和附则 II 第 17 条规定的要求编写。

This plan is written in accordance with the requirements of regulation 37 of Annex I and regulation 17 of Annex II of the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto.

- 2 本“计划”旨在当船舶发生或可能发生油类和/或有毒液体物质污染事故采取有关措施时，为船长和高级船员提供指导。

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 and/or noxious liquid substances pollution incident has occurred or is likely to occur.

- 3 本“计划”包括“指南”所要求的所有资料和操作程序。附录包括所有与“计划”有关的联系人的姓名、电话、电传号码等，以及其他有关资料。

The plan contains all information and operational instructions required by the Guidelines. The appendices contain names, telephone, telex numbers, etc., of all contacts referred in the Plan, as well as other reference material.

- 4 本“计划”业经主管机关认可，除下述 5 规定外，未经主管机关事先认可，“计划”的任何部分不得变动或被修改；

This plan has been approved by 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 “对附加资料（非强制性规定）部分和各附录的修改，不要求主管机关批准。各附录应由船东、船舶营运人和船舶管理者保持及时更新。

Changes to non-mandatory provisions and the appendices will not be required to be approved by the Administration. The appendices should be maintained up to date by the ship owners, operators and managers.

变更记录

Record of Revision

变更日期 Date of Revision	变更事项 Revised Provisions	船级社 Classification Societies

船舶细目

SHIP'S PARTICULARS

船名

Name of Ship

船旗国

Flag

船籍港

Port of Registry

船舶编号或呼号

Distinctive No. or Letters

国际海事组织编号

IMO No.

注册编号/船级登记号

Official Number/Class Number

船舶类型

Ship Type

交船日期

Date of Delivery

总长

Length Overall

船长

Ship's Length

船宽

Breadth

型深

Moulded Depth

夏季吃水

Summer Draught

总吨位

Gross Tonnage

净吨位

Net Tonnage

载重量

Deadweight

制造厂

Builder

制造编号

Yard No.

船东/船舶营运人及地址

Owner/Operator and Address

船舶其它有关特殊资料:

Other Relevant information Specific to the Ship: _____。

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第 1 节 序言

SECTION 1 PREAMBLE

- 1.1 本“计划”的目的是，当船上发生油类或有毒液体物质的意外排放时，向船长和高级船员提供指导，以便采取必要措施阻止或减少排放和减轻其危害。该“计划”不仅适用于控制操作性溢漏，同时也适用于控制事故性溢漏。

The purpose of the plan is to provide guidance to the Master and Officers on board concerning necessary actions to stop or minimize the unexpected discharge of oil / noxious liquid substance (hereafter referred to as “NLS”) and to mitigate its effects. The plan is applicable for the control of operational spill as well as the control of spill resulting from casualties.

- 1.2 本“计划”附录 7 中附有一个简明流程图，以指示船上人员对油类或有毒液体物质污染须作出的应急响应措施。这些措施是为了帮助船上人员采取行动，以制止或最大限度地控制油类或有毒液体物质排放和减轻污染影响。这些措施可分为两类—报告与行动，指导船长在事故中，采取必要的行动增强反应能力和减少失误。

The plan is to provide a flow chart in Appendix 6 for indicating procedures of emergency response to marine pollution implemented by the crew members on board according to the guidance developed by the International Maritime Organization. The procedure, for the crew members to take actions to stop or minimize discharge of oil / NLS or mitigate its effects, are to be divided into two part—reporting & acting, for the purpose of guiding the Master to take necessary actions, increase response ability and minimize errors during casualties.

- 1.3 船舶与沿海国或其他有关部门快速、有效的协作，对于减少污染事故的危害影响是至关重要的，因此，“船上海洋污染应急计划”应与“岸上海洋污染应急计划”相一致。

It is of great importance to the ship to set effective coordination with the coastal states and other parties concerned for minimizing the effects of marine pollution. The shipboard marine pollution emergency plan is to comply with the shoreside marine pollution emergency plan.

- 1.4 为了本“计划”的落实，要求船上和岸上的船舶管理人员都了解本“计划”。

For the plan to accomplish its purpose, it must be understood by ship management personnel, both on board and ashore.

- 1.5 “计划”可能成为船长和高级船员在船上使用的文件，“计划”应使用工作语言或船长和高级船员都懂的语言编制。若船长和高级船员的更换，导致他们的工作语言或都懂的语言发生变化，这时应使用新的工作语言颁布“计划”。如果“计划”使用的语言不是英文，则船上还应有“计划”的英文译本。

The Plan is likely to be a document used on board by the Master and Officers of the ship. It must therefore be available in a working language or languages understood by Master and Officers. A change in the Master or Officers which brings about an attendant change in their working language or languages understood would require the issuance of the Plan in the new language(s). If the language used for PLAN, the Plan in English version is to be provided.

1.6 本“计划”应定期进行评估、检查和修改（如必要）。

The plan should be periodically assessed, reviewed and revised if necessary.

1.7 附录 8 中所列有关图表可附在“计划”中或其它标明的场所。

The related plans and drawings in the appendix 8 may be appended to the Plan or their location identified.

第 2 节 报告要求

SECTION 2 REPORTING REQUIREMENTS

2.1 一般要求

General Requirement

- 2.1.1 根据 73/78 防污公约第 8 条和议定书 I 的要求,应该把油类或有毒液体物质实际的或可能的排放情况通知最近沿海国家,以便使沿海国家有可能估计此项事故受到的污染威胁以及采取适当的行动进行援救和协调行动。

Article 8 and Protocol I of Annex II of MARPOL 73/78 require that the nearest coastal state should be notified of actual or probable discharges of oil / NLS to the sea. The intent of the requirement is to ensure that coastal states are informed without delay of any incident giving rise to pollution, or threat of pollution, of the marine environment, as well as the need for assistance and salvage measures, so that appropriate action may be taken.

- 2.1.2 发生污染事故后,船长和其他负责人以国际海事组织制定的指南为基础确定报告程序^①。

The reporting procedure to be followed by the Master or other person in charge of the ship after a pollution incident is based on guidelines developed by the International Maritime Organization.

- 2.1.3 如果船舶发生污染事故,应该向最近沿海国家和港口当局以及船舶重要联系人进行报告。

If the ship is involved in a pollution incident, reports must be made to both coastal state and port contacts, as appropriate, and to contacts representing interest in the ship.

- 2.1.4 报告的程序应按本“计划”附录 4 给出的报告程序图的要求来进行。

A flow chart indicating the reporting procedure to be followed in accordance with the plan requirements is given in Appendix 4.

2.2 何时报告

WHEN TO REPORT

当船舶发生实际或可能发生海洋污染事件时,船长或船舶其他负责人必须按 1978 年议定书修定的 1973 年国际防止船舶造成污染公约 [(MARPOL 73/78) 以下简称“公约”] 第 8 条和议定书 I 的要求用表 1 及时地向最近沿海国家报告。

When the ship involves in an actual or probable marine pollution incident, the master or other persons in charge of the ship must report with table 1 without delay, the incident to the nearest coastal state, as required in Article 8 and protocol I of the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto, as amended (MARPOL 73/78) (hereinafter referred to as the “Convention”)

2.2.1 实际发生排放

Actual discharge

^①所指为国际海事组织 A.851(20)决议通过的《船舶报告制度及船舶报告要求总则 (包括危险货物、有害物质和/或海洋污染物事故报告指南)》。更简便,见 IMO 颁发的《MARPOL 73/78 关于涉及有害物质事故报告的规定》。

Reference is made to “General principles for ship reporting system 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). For ease of reference, see IMO publication “provisions concerning the Reporting of Incidents Involving Harmful Substances under MARPOL 73/78”.

无论何时发生下列情况都必须作报告:

Make a report whenever there is:

- (1) 由于船舶或设备损坏引起排放;
A discharge of oil /NLS resulting from damage to the ship or its equipment; or
- (2) 为了确保船舶安全和在海上救生目的引起排放;
A discharge of oil /NLS for the purpose of securing the safety of the ship or saving life at sea; or
- (3) 超过现行公约允许排放总量或瞬时排放率。
A discharge of oil / NLS during the operation of the ship in excess of the quantity or instantaneous rate permitted under the present convention.
- (4) 螺旋桨轴和尾轴油封装置损坏而引起的排放。
A discharge of oil resulting from damage to screwshaft and tube shaft oil seal device.

2.2.2 可能发生排放

Probable discharge

判明可能引起排放时应作报告, 并考虑下列因素:

Make a report when it is judged that there is a probability of discharge of oil /NLS, taking into account:

- (1) 船舶、机械和设备故障、失灵或损坏的性质;
The nature of damage, failure or breakdown of the ship, machinery or equipment;
- (2) 船舶所处位置和船舶靠陆地太近以及其他航行危险;
Ship's location and proximity to land or other navigational hazards;
- (3) 天气、潮汐、海流、海况;
Weather, tide, current and sea condition; and
- (4) 交通密度。
Traffic density.

2.2.3 原则上, 有下列情况应作报告:

In principle, make a report in cases of:

- (1) 涉及船舶安全因素的故障、失灵和损坏, 如碰撞、搁浅、火灾、爆炸、船体结构损坏、进水、货物移动;
Damage, failure or breakdown which affects the safety of the ship i. e. collision, grounding, fire, explosion, structural failure, flooding, cargo shifting; and
- (2) 机械和设备的损坏、影响船舶航行安全, 如舵机、推进装置、发电系统和船舶重要航行设备的故障、失灵和损坏。
Failure or breakdown of machinery or equipment which results in impairment of the safety of navigation, i. e. failure or breakdown of steering gear, propulsion, electrical generating system, and essential shipborne navigational aids.

2.3 所需资料

Information required

2.3.1 报告所使用的文字应为英文, 且包含下列资料:

The report should contain the following information and the language is to be in English

- (1) 船名、船舶呼号和船旗国;
Name of ship, call sign and flag.

- (2) 事故发生日期和时间(国际协调时间): 一共由六位数组成, 前二位是日期, 后四位是小时和分;
Date and time (UTC) of incident: a 6-digit group giving day of month (first two digits), hours and minutes (last four digits).
- (3) 船舶位置; 给出纬度: 四位数表示度和分, 加上后面 N(北)或 S(南), 和给出经度: 五位数表示度和分, 加上后面 E(东)或 W(西);
Ship's position, giving latitude: a 4-digit group in degrees and minutes suffixed with N (North) or S (South); and longitude: a 5-digit group in degrees and minutes suffixed with E (East) or W (West); or
- (4) 船舶位置;用真方位(前面三位数)和船舶到一个能清楚识别的陆地标志的距离来说明;
Ship's position by true bearing (first 3 digits) and distance (stated) from a clearly identified landmark.
- (5) 真航向(用三位数)
True course (as a 3-digit group).
- (6) 航速(用节来表示精度到 0.1 节, 三位数表示)
Speed (in knots and tenths of a knot as a 3-digit group).
- (7) 航线-预定航线资料;
Route information-details of intended track.
- (8) 无线电台的全部资料和守听频率;
Full details of radio stations and frequencies being guarded.
- (9) 下一次报告时间(如(2)一样用六位数表示)
Time or next report (a 6-digit group as in (2))
- (10) 吃水(用米来表示, 精度为 0.01 米);
Draught (in metre and hundredths of a metre);
- (11) 船上货物及燃油种类和数量;
Type and Quantity of cargo/bunkers on board;
- (12) 事故原因、缺陷及受损简况;
Brief details of defects/deficiencies/damage;
- (13) 污染简况, 包括估计流失量;
Brief details of pollution including estimate of quantity lost;
- (14) 天气及海况简述;
Brief details of weather and sea condition;
- (15) 船东/船舶营运人/代理联系细节(名称、地址、电报、电传和传真);
Contact details of ship's owners/operators/Agents (NAME, ADD, TEL, TLX AND FAX ;)
- (16) 船型和船舶尺度(长、宽、深、总吨位和载重量);
Type and ship size (length, breadth, depth, gross tonnage and deadweight);
- (17) 船上船员人数;
Number of crew on board;
- (18) 杂项
Others
- ① 事故简要
Brief details of incident

- ② 是否需要向外求援
Need for outside assistance
- ③ 正在采取的措施
Actions being taken
- ④ 船员人数和受伤情况
Number of crew and details of any injuries
- ⑤ 保赔协会或当地相应机构细节
Details of P&I Club and local correspondent

2.3.2 下列附加资料与初始报告应同时或尽可能快地发给船东或船舶营运人。

The following additional information should be sent to the owner or operator either at the same time as the initial report or as soon as possible thereafter:

- (1) 船舶和设备损坏更详细情况。
Further details of damage to ship and equipment.
- (2) 损坏是否仍在发展。
Whether damage is still being sustained.
- (3) 火灾危险和预防措施。
Assessment of fire risk and precautions taken.
- (4) 船上货物积载和数量。
Disposition of cargo on board and quantities involved.
- (5) 伤亡数量。
Number of casualties.
- (6) 其他船舶和财产的损坏。
Damage to other ships or property.
- (7) 要求协助时间(国际协调时间)和希望到达现场时间(国际协调时间)。
Time (UTC) assistance was requested and time (UTC) assistance expected to arrive at the scene.
- (8) 救助单位名称和救助设备类型。
Name of salvor and type of salvage equipment.
- (9) 是否要求进一步援助。
Whether further assistance is required.
- (10) 初步要求的备件和其他材料。
Priority requirements for spare parts and other materials.
- (11) 被通知方或了解事故的外部机构详情。
Details of outside parties advised or aware of the incident.
- (12) 任何其他主要资料。
Any other important information.
- (13) 报告格式见表 1。
A format of report is included in Table 1.

2.3.3 按下列程序进行报告

Make the report in accordance with the following procedures:

- (1) 尽快写初步报告, 不明白的事以后补充。
Make the initial report as soon as possible, leaving unknown matters to supplementary

reports.

- (2) 有必要用同样的格式做初步报告的补充，以提供事态进一步进展的情况资料。

Supplement the initial report in same form as necessary, and provide information concerning further developments.

- (3) 尽可能向有关联国家提供所需各种补充材料。

Comply as fully as possible with requests from affected states for additional information.

2.4 向谁联系

WHO TO CONTACT

- 2.4.1 沿海国家：参考附录 1 “沿海国家联系人一览表”进行联系，若船舶未在表中列出或不能及时地直接与有关应变当局取得联系，船长应有效地、最快地与最近的无线电台，指定的船舶流动报告站或救助中心(RCC)取得联系。

Coastal state: Refer to Appendix 1 “List of coastal State contacts”. In the absence of a Listed focal point, or should any undue delay be experienced in contacting the responsible authority by direct means, the master should contact the nearest coastal radio station, designated ship movement reporting station or Rescue Co-ordination Centre (RCC) by the quickest available means.

- 2.4.2 港口当局：参考附录 2 “港口联系人一览表”，若船舶抵达的港口不属表中所列港口，抵港后该轮船长应获得有关当地报告程序的详细资料。

Port state: Refer to Appendix 2 “List of port contacts” concerning information on regularly visited port. Where this is not feasible, the master should obtain details concerning local reporting procedures upon arriving in port.

- 2.4.3 船舶重要联系人：参考附录 3 “船舶重要联系人一览表”，对 5000 载重吨或以上油轮，在 2007 年 1 月 1 日及以后，“船舶重要联系人一览表”里还应包括“破损稳性和剩余结构强度岸基电脑计算程序”服务提供者/船舶管理公司联系人。

Ship interests: Refer to appendix 3 “list of ship interests contacts”. From 1 January 2007 onwards, regarding all oil tankers of 5000 tonnes deadweight or more, “list of ship interests contacts” shall include “computerized shore-based damage stability and residual structural strength calculation program” service provider / ship management company contacts.

船上海洋污染应急计划初始报告

SHIPBOARD MARINE POLLUTION EMERGENCY PLAN INITIAL REPORT

表 1
Table 1

AA	船名, 呼号, 船旗国 SHIP NAME, CALL SIGN, FLAG	
BB	事故日期和时间(国际协调时间) DATE AND TIME OF EVENT. UTC	— — — — — — 日 时 分 D D H H M M
CC	事故位置, 经纬度 或 POSITION. LAT. LONG OR N S — — — — — — 度 分 d d m m E W — — — — — — 度 分 d d d m m	DD 与岸标方位, 距离 BEARING. DISTANCE FROM LANDMARK — — — — — — 度 海里 d d d N miles
EE	航向 COURSE — — — — 度 d d d	FF 船速 节 SPEED, KNOTS — — — — 节 kn kn 1/10
LL	预定航线 INTENDED TRACK	
MM	监听的无线电台 RADIO STATIONS(S) GUARDED	
NN	下次报告日期和时间(国际协调时间) DATE AND OF NEXT REPORT. UTC	— — — — — — 日 时 分 D D H H M M
PP	船上货物及燃油种类和数量 TYPE AND QUANTITY OF CARGO/BUNKERS ON BOARD	
QQ	事故原因, 缺陷及受损简况 BRIEF DETAILS OF DEFECTS/DEFICIENCIES/DAMAGE	
RR	污染简况, 包括估计流失量 BRIEF DETAILS OF POLLUTION. INCLUDING ESTIMATE OF QUANTITY LOST	

SS	气象及海况简述 BRIEF DETAILS OF WEATHER AND SEA CONDITIONS			
	风向		浪	方向
	WIND DIRECTION	— — —	SWEEL	DIRECTION — — —
	WIND 风速	蒲氏	浪高	m
	SPEED	Beaufort	HEIGHT	m
TT	与船东/营运人/代理联系的细节 CONTACT DETAILS OF SHIP'S OWNER/OPERATOR/AGENT			
UU	船舶尺度和类型 SHIP SIZE AND TYPE		船型 TYPE:	
	船长	m	船宽	m
	LENGTH:	m	BREADTH:	m
	载重量	t	总吨位	
	DEADWEIGHT:	MT	GROSS TONNAGE:	
XX	附加情况 ADDITIONAL INFORMATION			
	事故简要 BRIEF DETAILS OF INCIDENT:			
	向外求援 NEED FOR OUTSIDE ASSISTANCE:			
	正在采取的措施: ACTIONS BEING TAKEN:			
	船员人数和受伤细节: NUMBER OF CREW AND DETAILS OF ANY INJURIES:			
	保赔协会或当地相应机构细节: DETAILS OF P&I CLUB & LOCAL CORRESPONDENT:			
	其他: OTHERS:			

注：上述格式中字母次序参照国际海事组织 A. 851 (20) 决议通过的《船舶报告制度及报告要求总则（包括涉及危险货物、有害物质和/或海洋污染物事故报告指南）》。字母不必依照所有字母顺序，因某些字母按其他标准报告格式要求用于特指某种情况，如常用于传递航线情况。

Footnote: 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.

第 3 节 控制排放的措施

SECTION 3 STEPS TO CONTROL DISCHARGE

3.1 一般要求

General Requirement

- 3.1.1 为确保本计划的实施，本节为指导船长和其他高级船员在发生溢漏事故时，如何迅速采取有关控制排放措施，以制止和减少排放。为此所有船员无论在什么时候，一旦发现船上溢漏事故，应立即报告船长或船上其他负责人。而船长及其他负责人接到事故报告后，应立即发出溢漏报警一短，两长，一短(·--·)，并组织船员按表 2 作出应急响应。(人员分工、警报信号以及集合地点可根据本船具体情况来确定，本表 2 仅供参考。)

The purpose of the plan is to provide guidance to the Master and Officers on board to take quick action to mitigate or control the discharge of oil / NLS from their ship. Whenever ship involves in an oil / NLS pollution incident, it is necessary to report to the Master and other persons in charge of the ship to effect oil / NLS spill alarm with dot, dash, dash, dot (·--·) and arrange all crew members for emergency response according to Table 2.

- 3.1.2 当操纵泵或阀来控制本节所述的排放时，船员应按有关图纸和图表，如附录 8 中的泵系和管系图、破损控制图和破损控制手册进行，以尽量防止误操作。

Whenever pumps or valves are operated to control the discharge of oil / NLS described in this section, ship's personnel should make efforts to prevent mis-operation referring to the relevant drawings, e. g. pumping/piping plan, damage control plan and damage control manual, attached in Appendix 8.

溢漏应变部署表^①

溢漏报警信号：·--·

集合地点：主甲板

表 2

职 务	负责部位	职 责
船 长	驾驶室/现场	总指挥，对外联系。
大 副	溢漏现场	协助轮机长做好溢漏现场指挥工作。
二 副	驾驶室/现场	驾驶室值班，采取应急措施，做好现场记录。
三 副	溢漏现场	提供并携带防污器材。艇长，指挥放艇，回收溢出物。
水手长	溢漏现场	提供并携带防污器材，指挥放艇，回收清除溢出物。
木 匠	溢漏现场	检查甲板排水孔，关闭有关通道，回收溢出物。
一 水	溢漏现场	艇员，协助放艇，随艇下，回收溢出物。
轮机长	溢漏现场	现场指挥，组织人员回收溢出物。
大管轮	机舱/现场	管理机舱设备和电站/回收溢出物。
二管轮	溢漏现场	控制有关阀门，防止溢出物扩散，做好现场记录。
三管轮	溢漏现场	协助放艇，随艇下，操纵艇机，回收清除溢出物。
电机员	机舱/现场	管理电站。
机匠长	溢漏现场	提供有关携带应急工具和防污器材，现场回收溢出物。
机 工	溢漏现场	艇员，协助放艇，随艇下，回收清除溢出物。
大 厨	厨房/现场	检查厨房火情，关闭有关通道/现场回收清除溢出物。

^①人员分工、警报信号以及集合地点可根据本船具体情况来确定，本表仅供参考。

OIL / NLS SPILL RESPONSE PLAN^①

Oil / NLS spill alarm: • -- •

Muster station: Main deck

Table 2

RATING	LOCATION	CONTENT OF DUTY
Master	Bridge/on site	Commander, Contact with outside
Chief Officer	Oil / NLS Spill site	Assist chief engineer to command on Oil / NLS spill site
2nd Officer	Bridge/on site	In bridge, Take emergency measurement, Make record on site
3rd Officer	Oil / NLS spill site	Provide spill response equipment. Skipper, Command descending boat, Collect Oil / NLS spill
Boatswain	Oil / NLS spill site	Provide spill response equipment. Assist to command lowering boat, Collect Oil / NLS spill
Carpenter	Oil / NLS spill site	Inspect deck scupper, shutdown relative way. Collect Oil / NLS spill
Chief motorman	Oil / NLS spill site	Provide emergency implements and Oil / NLS spill response equipment. Collect oi Oil / NLSI spill
Able Seamen	Oil / NLS spill site	Assist to lower boat and collect Oil / NLS spill
Chief Engineer	Oil / NLS spill site	Commander on site, Organize crew to collect Oil / NLS spill
1st Engineer	Engine room/on site	Manage equipment in engine room and electric plant/Collect Oil / NLS spill
2nd Engineer	Oil / NLS spill site	Control relative valves, Prevent Oil / NLS spill extension and record on site
3rd Engineer	Oil / NLS spill site	Assist to lower boat and follow the boat, Operating the motor, Collect Oil / NLS spill
Electrician officer	Engine room/on site	Manage electric plant
Chief motorman	Oil / NLS spill site	Provide emergency implements and Oil / NLS spill response equipment, collect Oil / NLS spill
Motormen	Oil / NLS spill site	Assist to lower boat, Collect Oil / NLS spill
Chief cook	Cookroom/on site	Inspect fire information in galley, Shutdown relative ways/Collect Oil / NLS spill

^① For reference only. Crew's responsibility, alarm signal and muster station to be decided accordingly.

3.2 操作性溢漏

Operational spills

- 3.2.1 操作溢漏是指在正常装卸和内部驳运油或有毒液体物质过程中所引起的管路泄漏、舱柜溢出、以及船体破裂所引起的排放。

Operational spill means discharge of oil / NLS due to piping leakage, tank overflow & hold break during normal loading & unloading and internally transferring bunkers / NLS.

3.2.2 管路泄漏应变措施

Response to pipe leakage

- (1) 发出报警，采取行动并通知有关方面
Initiate alarm and take action and required Agency notification.
- (2) 尽快停止燃油/有毒液体物质的驳运作业
Stop transfer of bunker or NLS operation by quickest means possible.
- (3) 释放泄漏管路内的油压，用重力方法将管路内的油转移到适当的舱柜内，并关闭有关阀。
Relieve the pressure inside the pipeline where leakage has occurred, and transfer oil / NLS in the pipeline to a suitable tank by means of gravity, and secure relevant valves.
- (4) 使用吸油毡、木屑和棉纱等适当措施来清除甲板的漏泄物，以减少向船舶外部的漏泄。
Take proper measures to minimize volume of oil / NLS discharged outside the ship, clean up oil / NLS on deck by using oil absorbent mats sawdust and waste clothes.
- (5) 由大副和轮机长负责查明漏泄来源及原因
Identify source and cause of leakage. (Person In Charge: Chief officer and chief engineer)
- (6) 若本船无能力处理时，通知岸上协作
If incapable of disposal of casualties, to contact shoreside coordinating.
- (7) 漏泄事故未查明或事故未排除前不能恢复工作
Do not resume operation until cause of oil / NLS leakage has been revealed and excluded.
- (8) 将使用过的清洁材料和收集的漏油送至处理公司进行有效地处理
Dispose removed oil and used clean-up materials properly by means of delivering them to the disposal company.
- (9) 事故处理后需报港口当局确认后才能恢复工作
Upon disposal of casualties, operation is to be resumed with port Authorities confirmation.
- (10) 负责管路泄漏应急响应的各有关人员的职责见表 3.2.2。
The responsibilities for emergency response to pipe leakage of personnel concerned onboard are shown in table 3.2.2.

驳运系统排放

TRANSFER SYSTEM DISCHARGE

表 3.2.2

Table 3.2.2

所采取的行动 Action to be taken	M.	C. E.	C. O.	W. O.	A.
关闭泵或产生溢流设施 Secure pumping/product flow		●	●		
关闭隔离阀 Secure isolation valves			●		
检查排水孔关闭程度 Verify scuppers secured			●		
通知驳运设施/船只 Notify transfer facility/vessel			●		
报告事故 Report casualty			●	●	
船上船员待命 Alert vessel's crew			●		
执行应急响应计划程序 Implement emergency response plan procedures	●				
按要求通知代理和公司 Initiate required agency and company notification	●				
着手清除溢出物和确定溢出数量 Initiate oil / NLS spill removal and verify containment			●		
检查事故程度 Survey extent of incident		●	●		
联系岸上协助清除 Coordinate shoreside clean-up support resources	●				●
查明事故原因 Ascertain cause of casualty	●	●	●		
确定正确行动 Determine corrective action	●	●	●		

Notes: M. 船长 (Master) C. E. 轮机长 (Chief Engineer)
 C. O. 大副 (Chief Officer) W. O. 值班员 (Watch Officer)
 A. 代理 (Agent)

3.2.3 舱柜溢出应变措施

Response to tank overflow

- (1) 发出报警采取行动并通知有关方面。
Initiate, take alarm and action and required Agency notification.
- (2) 停止操作或停止驳运。
Stop operation or pump for transferring.
- (3) 关闭有关阀。
Close related valves.
- (4) 将溢流舱内的油或有毒液体物质转移到空舱, 以降低溢流舱内的压头。
Promptly shift oil / NLS in the overflowed tank to an available empty of slack tank to relieve pressure in the overflowed tank.
- (5) 将甲板上的油或有毒液体物质收集到空桶内或使用空气驱动手提泵将它们直接泵入舱内, 然后用吸油毡, 木屑, 棉纱清洁甲板上的油或有毒液体物质。
Collect oil / NLS on deck into empty drums or using portable pumps to pump oil / NLS direct into tanks through air pipes, clean up oil / NLS on deck by using oil absorbent mats, sawdust and waste clothes.
- (6) 使用过的清洁材料和收集的漏泄物应送至处理公司进行有效处理。
Dispose collected oil / NLS and used clean-up materials properly by means of delivering them to the disposal company.
- (7) 当油类或有毒液体物质漏泄事故发生时, 船长应根据规定程序将上述情况迅速通知有关方面。
When oil / NLS discharge occurs, master should immediately notify parties concerned according to the established procedures.
- (8) 必要时, 船长应请求岸上援助队进入漏泄现场。
When necessary, the master should request shore assistance to enter into oil / NLS spill response.
- (9) 当漏油事故发生时, 如果可能, 立即操纵小艇准备和布置围油栏以防油类扩散, 同时用吸油材料尽量回收漂浮的油。
When oil discharge occurs, if possible, immediately have Manoeuvre boats ready and deploy oil boom to prevent dissipation of oil, and at the same time, recover as much oil as possible using oil absorbents.
- (10) 使用化学药剂处理海上污染时, 船长应先获得沿岸国家的批准。如果没有得到管理当局的批准, 不允许使用化学药剂。
The Master should call the Coastal State for allowance to use chemical agents for response to pollution on the sea. Without authorization of the Authorities of the appropriate Coastal State no chemical agents should be used.
- (11) 事故处理后需报港口当局确认后才能恢复工作。
Upon disposal of casualties, operation is to be resumed with port Authorities confirmation.
- (12) 负责舱柜溢流应急响应的各有关人员的职责见表 3.2.3。
The responsibilities for emergency response to tank overflow of personnel concerned onboard are shown in table 3.2.3.

舱柜溢流

TANK OVERFLOW

表 3.2.3

Table 3.2.3

所采取的行动 Action to be taken	M.	C. E.	C. O.	W. O.	A.
关闭泵或产生溢流设施 Secure pumping/product flow		●	●		
检查排水孔已关闭 Verify scuppers secured			●		
通知驳运设施/船只 Notify transfer facility/vessel			●		
报告事故 Report casualty		●	●	●	
船员待命 Alert vessel's crew			●		
执行应急响应计划程序 Implement emergency response plan procedures	●				
按要求通知代理和公司 Initiate required agency and company notification	●				
通知该区域的船只 Notify vessels in area	●				
清除溢出油类或有毒液体物质和确定溢流数量 Initiate oil/NLS spill removal and verify containment			●		
检查事故程度 Survey extent of incident			●		
检查周边有关设施 Conduct perimeter survey			●		
联系岸上协助清除 Coordinate shoreside clean-up support resources	●				
查明事故原因 Ascertain cause of casualty		●	●		
确定正确行动 Determine corrective action	●	●	●		

注 (Notes) : M. 船长 (Master)

C. E. 轮机长 (Chief Engineer)

C. O. 大副 (Chief Officer)

W. O. 值班员 (Watch Officer)

A. 代理 (Agent)

3.2.4 船体渗漏应变措施

Response to hull leakage

- (1) 当渗漏发生时, 应立即将有问题的舱内的油或有毒液体物质转移到空舱或闲置的舱。
When leakage has occurred in way of oil / NLS tanks, promptly transfer oil / NLS tank in question to an available empty or slack tank.
- (2) 如怀疑水线以下的液舱渗漏时, 应立即关闭损坏舱的所有阀和空气管, 以增加舱内的真空度。
Should it be suspected that leakage has occurred below waterline in way of oil / NLS tanks immediately close all valves and all air pipes of damaged tank to create vacuum inside the tank.
- (3) 如无法判明哪一个舱发生渗漏时, 应减少与其有密切关系的所有舱的液面, 同时要考虑到船舶应力和稳性。
Should it be impossible to identify specific tank from which leakage has occurred, reduce levels of all tanks in the vicinity, and take account to stress and stability of the ship.
- (4) 尽管采取了上述所提到的方法仍继续渗漏时, 要求潜水员负责查明渗漏原因。
When leakage still continues in spite of taking actions mentioned above, identify the cause of leakage by using diver.
- (5) 如认为船内调驳油类或有毒液体物质较为困难时, 应考虑船对船驳运或将其驳到岸上。
Should it be suspected that internal transfer of oil / NLS is difficult, take into account ship to ship transfer or transfer to tanks ashore.
- (6) 当油类或有毒液体物质发生漏泄时, 船长应根据规定程序通知有关部门。
When oil / NLS discharge occurs, master should immediately notify parties concerned according to the established procedures.
- (7) 必要时, 船长应请求岸上援助队进入漏泄现场。
When necessary, the master should request shore assistance to enter into oil spill response.
- (8) 当油类发生漏泄时, 如有可能, 应立即准备好工作艇, 布置围油栏, 以防止油类扩散, 同时使用吸油毡尽量回收油类。
When oil discharge occurs, if possible, immediately have manoeuver boats ready and deploy oil boom to prevent dissipation of oil, and at the same time, recover as much oil as possible using oil absorbents.
- (9) 当使用化学药剂处理海上污染时, 应考虑它们对周围环境的影响。因此, 只有征得最近海岸国家同意后才能使用。
When chemical agents for response to pollution on the sea are used, due regard should be paid to the circumstances / environment around. Moreover, such chemicals can only be used after obtain permission from the nearest coastal state.
- (10) 事故处理后需报港口当局确认后才能恢复工作。
Upon disposal of casualties, operation is to be resumed with port Authorities confirmation.
- (11) 负责船体泄漏应急响应的各有关人员的职责见表 3.2.4。
The responsibilities for emergency response to tank overflow of personnel concerned onboard are shown in table 3.2.4.

船体渗漏

HULL LEAKAGE

表 3.2.4

Table 3.2.4

所采取的行动 Action to be taken	M.	C. E.	C. O.	W. O.	A.
关闭隔离阀 Secure isolation valves			●		
关闭泵(如适用时) Secure pumping(if applicable)			●		
通知驳运设施/船只(如适用时) Notify transfer facility/vessel(if applicable)			●		
报告事故 Report casualty			●	●	
船上船员待命 Alert vessel's crew			●		
执行应急响应计划程序 Implement emergency response plan procedures	●				
按要求通知代理和公司 Initiate required agency and company notification	●				
着手清除溢出的油或有毒液体物质和确定溢出数量 Initiate oil/NLS spill removal and verify containment			●		
确定事故位置及检查事故程度 Determine locate and survey extent of incident		●	●		
确定泄漏率、船舶结构、应力和稳性的状况 Determine rate flow loss, structural stability, and stress and stability conditions		●	●		
确定稳性和救捞计划 Implement stability and salvage plans	●				
联系岸上协助清除 Coordinate shoreside clean-up support resources	●				●
查明事故原因 Ascertain cause of casualty	●	●	●		
确定正确行动 Determine corrective action	●	●	●		

注 (Notes) : M. 船长 (Master) C. E. 轮机长 (Chief Engineer)
 C. O. 大副 (Chief Officer) W. O. 值班员 (Watch Officer)
 A. 代理 (Agent)

3.3 事故性溢漏

Spills resulting from casualties

3.3.1 事故性溢漏应变措施

Response to spill associated in casualties:

- (1) 当船舶发生如下所述事故(例如搁浅, 火灾, 爆炸, 碰撞, 船体损坏和严重横倾)所引起溢漏时, 必须立即采取如下行动。

When spill associated in casualties mentioned above (i. e. grounding, fire explosion, collision, hull damage and excessive list), the following actions should be taken immediately:

- (2) 船长应召集全体船员进入其所处的溢漏应变位置。参考表 2。

The Master should muster all crew to take up their oil / NLS spill response stations (Refer to table 2)。

- (3) 对发生任何海洋污染事件, 船长均应向最近的沿海国家和地区, 港口当局和船舶重要联系人报告。

In the event of marine pollution incident, the Master must report to the nearest coastal state, port state and ship's interests.

- (4) 为了防止更多的溢漏, 应采取下列措施:

In order to prevent additional outflow of oil / NLS, take the following measures:

- ① 确定泄漏区域。

Secure oil / NLS spill area.

- ② 减少泄漏油舱内部压力。

Reduce internal pressure in oil / NLS spill tank.

- ③ 关闭或切断通向损坏舱柜的管路以隔离损坏的舱柜。

Close or cut off related pipings leading to damage tank (s) to isolate the damaged tank (s).

- ④ 考虑破损稳性和船舶应力, 通过调整压载水使船舶处于最佳状态。

Create optimum condition by adjusting ballast. In this case, take account of damage stability and hull stress.

- ⑤ 考虑破损稳性和船舶应力, 从损坏的舱柜将油类或有毒液体物质内部驳送到未受损坏的完整舱柜。

Transfer oil / NLS internally from damaged tank (s) to intact tank. In this case, take account of damage stability and hull stress.

- (5) 必要时, 将船上损坏舱柜或部分舱柜的油类或有毒液体物质驳到其他船上, 此时应注意下列事项:

When necessary, transfer oil in the damaged tank or part of bunkers onboard to another ship. In this event, the following matters should be kept in mind:

- ① 船对船驳运前, 应事先与最近海岸国家磋商船与船过驳事宜。

Consult with coastal state about ship-to-ship transfer operation beforehand.

- ② 与前来驳运的船协商其过驳安全程序和靠船位置。

Consult with other ship, regarding safe procedures alongside and ship-to-ship positioning.

- ③ 和前来过驳的船联系天气、海况和靠泊的情况。

Communicate with other ship details of weather conditions, sea conditions, and conditions with regard to bringing ships alongside.

- ④ 确认前来船舶的详细资料，如船上油类或有毒液体物质种类、数量、温度、比重和舱里已装载的货物容积。

Confirm with other ship such details as type of shipboard oil / NLS, quantity, temperature, specific gravity and volume loaded in tanks.

- ⑤ 检查输送软管的长度和直径以及要用的渐缩接头。

Check length and diameter of hose and reducer to be used.

- ⑥ 在驳运准备中，要求主要环节统一协调如“备车”、“慢速”、“起动”和“停车”等。

In preparation of transferring, unify essential terms required, i. e. "stand by", "slow", "start" and "stop".

- ⑦ 关于软管的使用，应注意避免扭折、牵引，并使用足够长的软管。

Regarding hose to be used, take care to avoid kinking or pulling, and use a hose of adequate length.

- (6) 使用吸附材料尽可能收集溢出的油类或有毒液体物质，尽快采取措施防止污染扩散。

Try to recover as much as oil / NLS as possible using absorbent material, take action as soon as possible to prevent dissipation of oil / NLS.

- (7) 如采取减缓措施，事先需同沿海国当局取得联系给予批准。

If needs to contact coastal state for authorization prior to undertaking mitigating actions.

- (8) 当使用化学药剂处理海上污染时，应考虑它们对周围环境的影响。因此，只有征得最近海岸国家同意后才能使用。

When chemical agents for response to pollution on the sea are used, due regard should be paid to the circumstances / environment around. Moreover, such chemicals can only be used after obtain permission from the nearest coastal state.

- (9) 当弃船时，应关闭燃油管路上的加油阀或考克和所有燃油舱或液货舱空气管上的所有开口。

When abandon the ship, close intake valves or cocks on fuel oil pipings and all openings of air pipes for all bunker / liquid cargo tanks.

- (10) 设有应急拖缆的船，在弃船前，应将船上的应急拖缆系固在船头和/或船尾，另一端放置在水线附近。

In case of the ship equipped with emergency towing lines, that should be set on ship's fore and/or after part and the end of the lines should be lowered down near to the waterline before abandon ship.

3.3.2 搁浅应变措施

Response to ship grounded / stranded

- (1) 发出报警，采取行动并通知代理。

Initiate, take alarm and action and required Agency notification.

- (2) 假如船舶搁浅后，船舶不能操作，所有可能着火的火源均应予以消除，并采取行动防止易燃气体或有毒气体进入机舱或起居处所。

If the vessel is aground and therefore cannot manoeuvre, all possible sources of ignition must be eliminated and action taken to prevent flammable vapors or noxious vapors from entering the engine room spaces or accommodation.

- (3) 船长应尽快地确定损坏的详情，选择正确的措施来确保船舶和船员的安全。

The master should ensure that he as soon as possible receives detailed information on

the damage that the vessel has sustained, in order to find out what remedial action needs to be taken to ensure the safety of the vessel and crew.

① 进行目视检查

A visual inspection should be carried out.

② 应对所有油舱和液货舱进行测量

All oil / NLS tanks to be sounded.

③ 所有与海水接触的其它处所均应进行测量，以确认其完整性。

All other compartments which have contact with the sea should be sounded to ensure that they are intact.

④ 所有舱柜测量的数值均应与上次测量的数值进行比较，检查其是否可能渗漏。

Sounding of tanks are to be compared with last soundings to check for possible leaks.

⑤ 任何记录都应被重视并作为报告的辅助材料

Any list shall be noted and included in the report for assistance.

(4) 同时应考虑：

Also consider:

① 船舶滑离搁浅现场，对船舶完整性的危害。

Danger to the vessel's complement if the vessel should slide off grounding/stranding site.

② 船舶被大风大浪引起断裂的危险。

Danger of vessel being broken down by heavy sea, or swells.

③ 有害物质的释放积聚到危险浓度时，对船员健康的危害和周围环境的污染。

Health hazards to the vessel's crew and surrounding population due to release of hazardous substances in dangerous concentrations.

④ 渗漏的可燃物质由无法控制的火源引起的火灾。

Those fires may start due to released flammable substances by uncontrolled ignition sources.

(5) 另外，船长在采取行动时应进行如下考虑：

Furthermore, the Master should take into account the following considerations:

① 船舶是否在航道上触礁？

Is the vessel constantly being struck in the seaway?

② 船舶是否经常振动？

Is the vessel exposed to torsion?

③ 测量船舶周围水深以确定船舶所在位置的海底状况？

Sounding to be taken around the vessel to establish the vessel's position and nature of the bottom?

④ 搁浅现场是否有很大的潮差？搁浅区域是否有大潮流？

Is there a large difference in the tidal ranges at the grounding/stranding site? Are there strong tidal currents in the grounding/stranding area.

⑤ 船舶是否可能由于大潮大风和大浪冲击而被漂移到岸上？

May the vessel drift further up on the shore, due to high tides, wind and waves?

(6) 船长应估计船舶损坏对环境的影响，并采取各种行动，以减少船舶进一步损坏所造成的排放，例如：

The Master shall assess the possibility of damage to the environment, and whatever action can be taken to reduce further damage from oil / NLS release, such as:

- ① 船舶内部燃油驳运。
Transfer of bunker internally.
- ② 在潮汐变化期间，有关舱应气密隔离，以确保舱内压力稳定。
Isolate the concerned tanks hermetically to ensure that hydrostatic height in tanks are intact during tidal changes.
- ③ 评估将燃油驳运到油驳或其他船上的必要性和请求相应的协作。
Evaluate the necessity of transferring oil / NLS to barges or vessel and request such assistance accordingly.
- ④ 估计额外泄漏的可能性。
Evaluate the possibility of additional release.
- (7) 船长在考虑用本船能力起浮前，必须对下述情况进行评估并做出决定：
The Master must also evaluate the question of getting off from the grounding by own means. Before such an attempt is made, it must be determined.
- ① 起浮后，是否会造成船舶损坏，如下沉、断裂、倾覆，因此应参考破损稳性计算书、破损控制图和破舱控制手册。
Whether the vessel is damaged in such a way that it may sink, break up or capsize after getting off. References are made to the Damage Stability Booklet, Damage Control Plan and Damage Control Manual.
- ② 起浮后，船舶是否能用自己的机动能力从危险区域离开。
Whether the vessel after getting off may have manoeuvring problems by own means to get away from the dangerous area.
- ③ 如果船舶可以进行机动操纵，为便于进行应急修理或减载操作，或者为了减轻对特别敏感区域海岸的威胁，船长在得到岸上有关管理机关的允许后，可考虑将船开到较为安全的地方。这种机动操纵必须在沿海国家的监督下才能进行。
When it is possible to manoeuvre, the Master, in conjunction with the appropriate shore authorities, may consider moving the ship to a more suitable location in order to facilitate emergency repair work or lightening operations, or to reduce the threat posed to any particularly sensitive shoreline area. Such manoeuvring may be subject to coastal State jurisdiction.
- ④ 当判定没有救助是不可能起浮时，迅速通知船东安排海上救助事宜。
When judge it's impossible to refloat without aid, promptly inform Owners to arrange salvage assistance to refloat the vessel.
- ⑤ 如试图靠自身进行起浮时，应注意机器、舵或螺旋桨是否因搁浅遭到损坏，或可能因起浮而损坏。
Whether machinery, rudder or propeller are damaged due to grounding/stranding or may be damaged if trying to get off ground by own means.
- ⑥ 为减少来自其它舱的额外污染，是否可以采用调整船舶首尾吃水或足够的减载来避免其他舱柜的损坏。
Whether the vessel may be trimmed or lightened sufficiently to avoid damages to additional tanks in order to reduce additional pollution from these tanks.
- (8) 如果估计船舶靠自身来起浮将会造成进一步的损坏，那么应使船舶停留在搁浅位置，直到专业队来帮助。为此，船长应尽可能采取如下措施确保船舶安全：
If the risk of further damage (evaluated) to the vessel is greater in an attempt to refloat the vessel by own means, than by remaining aground until professional assistance has

been obtained, the vessel's Master should try to secure the vessels as much as possible by:

① 抛锚

Setting anchors.

② 有可能时, 将空压载舱打入压载水。

Taking in ballast in empty tanks if possible:

③ 撤走所有火源减少火灾危险。

Reducing fire risk by removing all igniting sources.

④ 分析船舶损坏后, 船长应决定采取什么样的措施以避免进一步溢漏。

Having assessed the damage that the vessel has sustained, the master should be able to decide whether or not any action may be taken to avoid further spillage.

⑤ 当船舶损坏到以至船上无法计算稳性时, 船长应立即通知船东或“破损稳性和剩余结构强度岸基电脑计算程序”服务提供者(如有)寻求岸上协助。

Should the damage which the vessel has sustained be of such an extent that the stability cannot be computed onboard, the Master shall inform Owners or “computerized shore-based damage stability and residual structural strength calculation program” service provider (if available) immediately and seek assistance from shore.

⑥ 在规定的时间内, 应对每一液舱的液位进行测量, 若有任何变化均应报告。

Sounding in each liquid tank to be taken at regular intervals, and any change to be reported as needed.

⑦ 在潮差大的情况下, 应隔离损坏的液舱, 以减少燃油的额外损失。

In case of large difference in the tides, the vessel should try to isolate the damaged tanks to reduce additional loss of bunkers.

⑧ 当船舶因搁浅进水时, 必须采取防进水措施, 如关闭水密门以减少进水。

When the ship tanking water due to grounding/stranding take preventive measures, i. e. close water-tight doors in order to minimize ingress of water.

(9) 如果发生油类或有毒液体物质发生泄漏, 船长应参考 3.3.1 “事故性溢漏应变措施”。

If oil / NLS leakage occurs, master should refer to 3.3.1 “response to spill associated in casualties”.

(10) 负责搁浅应急响应的各有关人员的职责见表 3.3.2。

The responsibilities for emergency response to ship grounded / stranded of personnel concerned onboard are shown in table 3.3.2.

搁浅

SHIP GROUNDED / STRANDED

表 3.3.2
Table 3.3.2

所采取的行动 Action to be taken	M.	C. E.	C. O.	W. O.	A.
报告事故 Report casualty				●	
船上船员待命行动 Alert vessel's crew				●	
执行应急响应计划程序 Implement emergency response plan procedures	●				
着手清除溢出的油和确定溢油数量 Initiate oil spill removal and verify containment			●		
查明船舶位置 Ascertain vessel's position				●	
按要求通知代理和公司 Initiate required agency and company notification	●				
隔离管路阀件 Isolate pipeline valves			●		
测量内部处所和着手结构损坏检查 Sound internal spaces and initiate structure damage survey		●	●		
内部调驳货物和/或考虑减载协助 Transfer cargo internally and/or consider lightering assistance	●		●		
确定是否需要商业救捞援助 Determine need for commercial salvage assistance	●	●	●		
监听天气、海况及潮汐 Monitor weather, sea conditions, and tidal effects			●	●	
查明事故原因 Ascertain cause of casualty	●	●	●		

注 (Notes) : M. 船长 (Master) C. E. 轮机长 (Chief Engineer)
 C. O. 大副 (Chief Officer) W. O. 值班员 (Watch Officer)
 A. 代理 (Agent)

3.3.3 触礁应变措施

Response to touch bottom

- (1) 船体发生不正常抖动或振动或主机转速发生不可理解的运转或变化时,可能是由于船舶触礁,首要的步骤是确保船舶的完整性及不使船上油舱或有毒液体物质舱发生漏泄。
Should the vessel experience unusual shaking or vibrations of hull, unexplained movements or changes in engine revolutions, it may be suspected that the vessel has touched bottom. Procedures should be initiated to ensure that vessel is intact and that there is no oil / NLS leakage from vessel's tanks.
- (2) 如果引航员在船上,请引航员解释其可能性。
If pilot onboard, inform pilot and ask for possible explanation.
- (3) 立即停车,观察主机转速是否有不正常的减速。
Stop engine immediately, and observe any unexpected speed reduction.
- (4) 确定船舶位置,比较船舶吃水与海图上的有效水深
Observe accurate position, compare the available depth on the navigational chart with vessel's draft.
- (5) 测量所有燃油舱、液货舱(如有)、压载舱、货舱舱底污水、隔离舱、管隧和其他处所,以确定船舶是否遭受任何损坏。
Take soundings for all bunker tanks, liquid cargo tanks (if applicable), ballast tanks, cargo hold bilges, cofferdams, pipe tunnel and other compartments to determine whether vessel has sustained any damage.
- (6) 如果船舶触礁后完全搁浅,船长应参考本节 3.3.2 应变措施。
If the vessel is aground eventually after touched bottom, Master shall refer to 3.3.2 of this section.
- (7) 检查是否有油或有毒液体物质泄漏。假如漏泄已发生,船长应参照 3.3.1 “事故性溢漏应变措施”。
Check for leaking of oil / NLS. If leakage occurs, master should refer to 3.3.1 "response to spill associated in casualties.

3.3.4 火灾和爆炸应变措施

Response to fire and explosion

- (1) 首先采取报警和行动并通知代理。
Initiate, take alarm and action and required Agency notification.
- (2) 在火灾和爆炸情况下,在采取损坏控制措施前应优先考虑如下:
In case of fire and explosion, the following priorities exist when the damage control measures are initiated;
 - ① 立即确定火灾和爆炸位置。
Locate immediately where the fire/explosion has taken place.
 - ② 确定损坏范围和是否有伤亡人员。
Try to determine the extent of damage, and if anyone of the compliment is injured or dead.
 - ③ 抢救人员。
Rescue lives.
 - ④ 制止船舶和货物的损坏。
Limiting the damage to vessel and cargo.
 - ⑤ 防止环境污染。

Preventing environment pollution.

- (3) 船长应命令所有船员立即到消防站集中。

The Master should order all crew to take up their fire-fighting stations.

- (4) 进行有效的和适当的消防行动。但当船舶火灾到了无法控制时，为了船上人员的安全，应准备救生艇弃船。 必须注意这个命令既不能早也不能太迟。

Conduct effective and appropriate fire-fighting operation, prepare lifeboats ready for abandon ship in case fire can not be under control and endanger safety of ship's personnel.

Take care not to give the order to abandon ship either prematurely or too late.

- (5) 应从火灾附近撤离油漆桶、擦油布、家具、绳子和其他可燃物和易爆物。

Promptly shift paint drums, oil waster, furnitures, ropes and other flammables and explosive materials in the vicinity of the fire.

- (6) 应关闭所有开口，包括门、天窗、通风管，并切断风机。必要时，冷却火灾临近处所的舱壁。

Close openings including doors, scuttles, skylights and ventilation ducts and stop all ventilation. Cool down bulkheads of adjacent compartments when necessary.

- (7) 通向火灾处所电源必须切断。

Electric power supply leading to fire site is to be cut off.

- (8) 由于风力促使火势变得更为猛烈时，可抛锚或操纵船舶将火灾处所置于下风的位置。

When the fire is becoming more intense due to the wind, anchor ship or manoeuvre ship to leeward.

- (9) 将火灾处所置于下风位置有利于消防人员不受火和烟气的侵害。

Make proper leeway so that the fire and smoke does not hamper fire-fighting activities.

- (10) 如果认为船上消防能力不够充分时，应尽早请求附近航行的船舶前来协助。

When fire-fighting activities of the ship are judged to be inadequate, request assistance from ships sailing in the vicinity before it is too late.

- (11) 假如漏泄已发生，船长应执行 3.3.1 “事故性溢漏应变措施”。

If leakage occurs, master should refer to 3.3.1 "response to oil spill associated in casualties".

- (12) 负责火灾和爆炸应急响应的各有关人员的职责见表 3.3.4。

The responsibilities for emergency response to fire and explosion of personnel concerned onboard are shown in table 3.3.4.

火灾/爆炸

FIRE/EXPLOSION

表 3.3.4

Table 3.3.4

所采取的行动 Action to be taken	M.	C. E.	C. O.	W. O.	A.
报告事故 Report casualty				●	
船上船员待命并通知附近船舶 Alert vessel's crew			●	●	
执行应急响应计划程序 Implement emergency response plan procedures	●				
确定损坏位置和损坏程度 Determine location and extent of casualty		●	●		
采取措施控制损坏和扑灭火灾 Initiate damage control measures and fire-fighting		●	●		
隔离货物和燃油管路 Isolate cargo and fuel pipelines		●	●		
确定船舶结构完整性(破损稳性和船体应力) Determine vessel's structural integrity (damage stability and hull stress)		●	●		
货物内部驳运和/或考虑协助减载 Transfer cargo internally and/or consider lightering assistance			●		
按要求通知代理和公司 Initiate required agency and company notification	●				
确定是否需要商业救捞援助 Determine need for commercial salvage assistance	●				
着手清除溢出物和确定溢出数量 Initiate spill removal and verify containment			●		
联系岸上协助清除 Coordinate shoreside clean-up support resources	●				●
查明事故原因 Ascertain cause of casualty	●	●	●		

注 Notes: M. 船长 (Master) C. E. 轮机长 (Chief Engineer)
 C. O. 大副 (Chief Officer) W. O. 值班员 (Watch Officer)
 A. 代理 (Agent)

3.3.5 碰撞应变措施

Response to collision

- (1) 当船舶发生碰撞时，船长应命令所有船员到油类或有毒液体物质溢漏应变站集合。

When a collision occurs, the master should order all crew take up their oil / NLS spill response stations.

- (2) 调查船舶损坏区域和进水率，并采取应急措施以防止事态恶化。

Investigate the damaged area of the ship and rate of ingress of water, and take emergency measures to prevent the damage becoming worse.

- (3) 测量碰撞附近的舱柜和货舱污水阱。

Sounding the tanks and cargo hold bilges adjacent to collision area.

- (4) 下述检查记录将有助于船长了解情况：

The following check list should assist the Master in assessing the situation:

- ① 有哪些舱在水线以上被穿透？有哪些舱在水线以下被穿透？

Are any tanks penetrated above or below the waterline?

- ② 如果船碰撞后在水中成为死船和两船联在一起，最慎重考虑的是将它们分开呢还是仍然联在一起？

If vessels are dead in the water and interlocked, what is the most prudent, to stay interlocked or separate?

- ③ 现在是否漏泄？少还是多？将船分开时溢油是否比联在一起还要多？

Is there any spill at present—small or large? Will a separation of interlocked vessels create a larger spill than if the vessels stay interlocked?

- ④ 如果溢漏，船舶分离产生的火花是否会点燃油或点燃从船上漏出的其他可燃物质？

If there is a spill, will the separation of the vessels cause spark that can ignite the oil / NLS or other flammable substances leaked out from vessels?

- ⑤ 船舶联在一起比分开是否对当地交通影响更大？

Are the vessels of a greater danger to other traffic in the area if they are interlocked than if separate?

- ⑥ 如果船舶碰撞在水线以下，部分舱柜损坏相当严重，以至减少浮力，那么在分开时那一条船沉没的可能性要大？

What is the danger of either vessel sinking when separating, if vessels have sustained serious damage to tanks below the waterline due to reduced buoyancy?

- ⑦ 如果船要分开，各自如何操纵自己的船？

If the vessels are separated, how is the manoeuvrability of own vessel?

- (5) 当调查结果发现因损坏引起进水，根据进水位置和数量采取必要的防进水措施或泵出进水。这些措施包括关闭水密门，嵌入木塞，使用防撞垫，水泥箱和舱壁加强板和泵水等。

When ingress of water is found as a result of damage investigation, take necessary measures to prevent water ingress or pump out the water already taken, according to the position and amount of water taken in. Such measures include the closing of water-tight doors, inserting wooden plug, the use of collision mats, cement box, strengthening or bulkhead and use of pumps to discharge water.

- (6) 当采取各种对策后，船舶因进水仍有沉没危险时，应考虑选择适当位置进行抢滩。

When there is risk of sinking due water penetration is severe even after countermeasures are taken, consider beaching the ship at an appropriate position.

- (7) 若发生漏泄，船长应执行 3.3.1 “事故性溢漏应变措施”。

If oil leakage occurs, master should refer to 3.3.1 “Response to oil spill associated in casualties”.

- (8) 负责碰撞应急响应的各有关人员的职责见表 3.3.5。

The responsibilities for emergency response to collision of personnel concerned on board are shown in table 3.3.5.

碰撞 COLLISION

表 3.3.5
Table 3.3.5

所采取的行动 Action to be taken	M.	C. E.	C. O.	W. O.	A.
报告事故 Report casualty				●	
船上船员待命并通知附近船舶 Alert vessel's crew				●	
执行应急响应计划程序 Implement emergency response plan procedures	●				
与事故有关的船进行联络 Establish communications with involved vessel				●	
采取措施控制损坏 Initiate damage control measures		●	●		
隔离有影响船舶受损区域的货物、燃油管路 Isolate cargo and fuel pipelines sources to affected areas of vessel		●	●		
确定船舶结构完整性(破损稳性和船体应力) Determine vessel's structural integrity (damage stability and hull stress)		●	●		
按要求通知代理和公司 Initiate required agency and company notification	●				
确定是否需要商业救捞援助 Determine need for commercial salvage assistance	●				
着手清除溢出物和确定溢出数量 Initiate spill removal and verify containment			●		
联系岸上协助清除 Coordinate shoreside clean-up support resources	●				●
查明事故原因 Ascertain cause of casualty	●	●	●		

注 (Notes) : M. 船长 (Master) C. E. 轮机长 (Chief Engineer)
 C. O. 大副 (Chief Officer) W. O. 值班员 (Watch Officer)
 A. 代理 (Agent)

3.3.6 船体损坏/围护系统失效应变措施

Response to hull damage / containment system failure.

- (1) 船舶已经失落一处和多处外壳板、发生重大裂纹或船体/围护系统遭受严重损坏。船长必须立即拉响总警铃，召集全体人员到集合地点，说明船舶状况，并准备放艇。

Should the vessel loose one or more shellplating, develop major cracks, or suffer severe damage to hull / containment system, the Master must immediately sound the General Alarm to call the complement of their Mustering Station, and inform them of the situation, and prepare lifeboats for launching.

- (2) 下述问题应予以考虑:

The following questions should be considered:

- ① 船是否有趋于沉没或倾覆的危险。

Is the vessel in any immediate danger of sinking or capsizing?

如果是:

If yes:

- (a) 发遇险通报,

Send distress message,

- (b) 通知船东,

Notify owner.

- (c) 立即撤离船舶。

Immediately evacuate the vessel.

- ② 如果油类或有毒液体物质泄漏事故是或可能是与事故有关, 参见 3.3.1

If there is, or likely to be an oil / NLS spill in connection with the incident, notify as 3.3.1

- ③ 如果没有泄漏, 船长应采取必要控制损坏的手段。

If no, the master should initiate damage control measures as found necessary.

- ④ 当发现进水时, 根据进水位置和进水采取必要的防进水措施或将水泵出, 这些措施包括关闭水密门, 嵌入木塞, 用泵排水等。

When ingress of water is found, take necessary measures to prevent water ingress or pump out the water already taken, according to the position and amount of water taken in. Such measures include the closing of watertight doors, inserting wooden plugs, the use of pumps to discharge water.

- ⑤ 如因船舶压载水或浮力的损失而使船舶倾斜, 则应尽可能采用内部调整压载水或燃油的方法使其浮正。

If vessel has a list due to loss of ballast or buoyancy, it is necessary and possible to rearrange the ballast or bunkers by internal transfer operation in order to get the vessel level.

- ⑥ 船舶稳性和应力是否存在不正常的变化? 船上能否计算这种变化? 如果不能, 船长应该立即通知船东或“破损稳性和剩余结构强度岸基电脑计算程序”服务提供者(如有)寻求岸上的协助。

Is there any abnormal change in the vessel's stability and stress situation? Can such change be calculated on board? If not, the master should immediately inform owner or "computerized shore-based damage stability and residual structural strength calculation program" service provider (if available) and seek assistance from shore.

⑦ 船舶是否需要救助队护送到最近安全港口或修理港? 如果需要, 船长应迅速通知船东作出安排。

Dose vessel need salvage or escort to the nearest port of refuge or repair port? If so, the Master should immediately inform Owner to arrange.

⑧ 同时, 应注意最近天气对船舶拟定航线的影响。

Obtain latest weather forecast, and assess its impact on the present situation.

(3) 如果发生油类或有毒液体物质泄漏, 船长应参考 3.3.1 “事故性溢漏应变措施”。

If oil / NLS leakage occurs, the master should refer to 3.3.1 “Response to spill associated in casualties”.

(4) 负责船体或围护系统损坏应急响应的各有关人员的职责见表 3.3.6。

The responsibilities for emergency response to hull or containment system damage of personnel concerned onboard are shown in table 3.3.6.

船体损坏/围护系统失效

HULL DAMAGE / CONTAINMENT SYSTEM FAILURE

表 3.3.6

Table 3.3.6

所采取的行动 Action to be taken	M.	C. E.	C. O.	W. O.	A.
报告事故 Report casualty				●	
船上船员待命并通知附近船舶 Alert vessel's crew			●	●	
执行应急响应计划程序 Implement emergency response plan procedures	●				
采取措施控制损坏 Initiate damage control measures		●	●		
隔离通向受影响舱柜的货物、燃油管路 Isolate cargo and fuel pipelines sources to affected tanks		●	●		
确定船舶结构完整性(破损稳性和船体应力) Determine vessel's structural integrity (damage stability and hull stress)		●	●		
测量有关舱柜和空舱 Conduct tank/void gauging			●		
按要求通知代理和公司 Initiate required agency and company notification	●				
确定是否需要商业救捞援助 Determine need for commercial salvage assistance	●	●	●		
着手清除溢出物和确定溢出数量 Initiate spill removal and verify containment			●		
联系岸上协助清除 Coordinate shoreside clean-up support resources	●				●
查明事故原因 Ascertain cause of casualty	●	●	●		
确定正确行动 Determine corrective action	●	●	●		

注 (Notes) : M. 船长 (Master) C. E. 轮机长 (Chief Engineer)
 C. O. 大副 (Chief Officer) W. O. 值班员 (Watch Officer)
 A. 代理 (Agent)

3.3.7 严重横倾的应变措施

Response to excessive list

- (1) 发出警报。

Sound alarm.

- (2) 若船舶因某些原因突然发生严重横倾时，船长必须采取以下措施：

Should the vessel for some reason suddenly start to list excessively, the master should take the following actions:

- ① 调整航向和航速。

Adjust course and speed of the ship.

- ② 应立即停止燃油或货物或压载水的驳运操作(如进行时)。

Immediately stop all bunker / cargo transferring operation or ballast operation, if any.

- ③ 关闭和切断有关管路。

Closing and blanking the related piping.

- ④ 封闭泄漏部位。

Closing the position of leakage.

- ⑤ 测量所有液舱/货舱以判断引起严重横倾的原因。

Soundings to be taken in all tanks/cargo holds to determine the cause of excessive list.

- (3) 如果这种情况是由于泵入或泵出压载水的误操作引起，则立即换到正确的舱柜，并采取相反措施矫正位置。

In case of mis-operation of ballast/deballast, change to corrective tanks and take proper counter measures to rectify the situation.

- (4) 如果是由于初稳性距为负值所引起的横倾，为改善稳性，不能往顶边舱泵入压载水。正确方法是往底部双层底压载水舱泵水直到恢复稳性。

In case the cause of excessive list is determined due to negative G. M., do not put ballast into tanks on high side for the purpose to correct the excessive list. The correct way is to fill the double bottom ballast tanks on low side until negative stability being recovered.

- (5) 如果严重横倾是由于船体损坏所引起，则参考 3.3.6。

If the cause of excessive list is due to hull damage refer to 3.3.6.

- (6) 如果全体乘员处在危险之中，应准备放艇。

If the vessel's complement is in jeopardy, prepare lifeboats for launching.

- (7) 如果船舶状况能得到控制，必须通告。

When if situation is brought under control, inform as necessary.

- (8) 若发生油类或有毒液体物质泄漏，船长应考虑 3.3.1 “事故性溢漏应变措施”。

If oil / NLS leakage occurs, master should refer to 3.3.1 "Response to Spill Associated in Casualties".

- (9) 负责严重横倾应急响应的各有关人员的职责见表 3.3.7。

The responsibilities for emergency response to excessive list of personnel concerned onboard are shown in table 3.3.7.

严重横倾 EXCESSIVE LIST

表 3.3.7
Table 3.3.7

所采取的行动 Action to be taken	M.	C. E.	C. O.	W. O.	A.
报告事故 Report casualty				●	
船上船员待命并通知附近船舶 Alert vessel's crew			●		
执行应急响应计划程序 Implement emergency response plan procedures	●				
关闭泵或产生溢漏设施 Secure pumping/product flow		●	●		
关闭隔离阀 Secure isolation valves			●		
进行周边检查 Conduct perimeter survey			●		
通知驳运设施/船舶 Notify transfer facility/vessel			●		
按要求通知代理和公司 Initiate required agency and company notification	●				
着手清除溢出物和确定溢出数量 Initiate spill removal and verify containment			●		
联系岸上协助清除 Coordinate shoreside clean-up support resources	●				●
查明事故原因 Ascertain cause of casualty	●	●	●		
确定正确行动 Determine corrective action	●	●	●		

注 (Notes) : M. 船长 (Master) C. E. 轮机长 (Chief Engineer)
 C. O. 大副 (Chief Officer) W. O. 值班员 (Watch Officer)
 A. 代理 (Agent)

3.3.8 船舶浸水/沉没

Ship submerged/foundered

- (1) 值班员发现险情, 应立即报警。
Sound alarm.
- (2) 船长在接到值班人员报告后, 发遇险信号。
After briefing from watch officer, master should send distress message.
- (3) 确认所有人员都已集中。
Ensure crew mustered.
- (4) 确保关闭有关水密门。
Ensure watertight door closed where appropriate.
- (5) 船长评估船体损坏程度, 如果是船体损坏可参考“3.3.10 船体损坏应变措施”。
Assess extent of damage. If hull damaged, refer to “3.3.10 Response to hull damage”
- (6) 采取措施减少船舶进水。
Steps being taken to minimise ingress of water.
- (7) 如果发生污染事故, 船长要立即通知船公司和沿海国家。
If pollution confirmed, master should inform office and coastal state.
- (8) 考虑隔离损坏区域, 如必要, 考虑调驳燃油、压载水或淡水; 考虑调驳货物(如可能), 尽可能减少污染。
Consider isolation of damaged area; Consider transfer of bunker / ballst / FW if necessary; Consider transfer of cargo if possible.
- (9) 准备救生艇。
Keep lifeboats ready for embarkation.
- (10) 如果船舶部分或全部浸水, 采取所有措施疏散船上所有的人员, 避免接触溢出的货物或油类。提醒其它船舶或最近的沿岸国家协助救生。
If the ship is wrecked to the extent that it or parts of it are submerged, take all measures to evacuate all persons on board. Avoid contact with any spilled cargo or oil. Alert other ships and/or the nearest coastal state for assistance in rescuing lives.

3.3.9 其它危险货物和/或蒸气释放

Other hazardous cargo and/or vapour release

- (1) 在危险有毒液体物质释放时, 采取必要的行动保护船员免受伤害, 特别是免受该物质或它的蒸气的玷污。避免该物质或蒸汽蔓延全船。如果发生任何危险物质或蒸气释放, 可转移船舶将生活区置于释放点的上风。
In case release of hazardous liquid noxious substances, takes necessary actions for the protection of the crew against health hazards, especially by contamination with materials or its toxic vapours. Avoid material or vapours spreading over the ship. If any dangerous material or vapour is released from any part of the containment system, take arrangements to free the deck area as far as possible by turning the ship to have the accommodation upwind of the point of release.
- (2) 从危险区域疏散船员, 如果有人不得不在危险区域值班, 要注意个人防护, 避免和有害物质直接接触。
Evacuate crew members from the endangered area. If persons have to carry out any unavoidable duties within the endangered area, care for personal protection for those persons to avoid direct contact.

(3) 应消除所有可能的点火源，关闭不重要的空气吸口，防止蒸气进入起居处所和机舱。
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.

(4) 采取措施减少液舱的液位或压力，阻止物质或蒸气的散发。
Take measures to reduce tank level or pressure to stop any emittance of material or vapour.

3.3.10 液舱环境失控（核准载运 NLSs 的船舶）

Loss of tank environmental control (for ships certified to carry NLSs)

- (1) 考虑任何由于液舱环境失控而可能引起的爆炸危险。
Consider any explosion dangers arising out of loss of tank environmental control.
- (2) 迅速地参考随船的装运货物资料单，根据所提供的资料采取预防措施或行动。
Promptly consult the Data Sheet available for the cargo shipped onboard about possible hazards and necessary precautions / actions to be taken according to the information provided.
- (3) 避免空气进入未受控制区域，以避免在该区域产生危险混合物。
Avoid any intake of air into the uncontrolled spaces to avoid a dangerous mixture to be built up within the respective space.

3.3.11 货物的危险反应（核准载运 NLSs 的船舶）

Dangerous reaction of cargo/contamination yielding a hazardous condition (for ships certified to carry NLSs)

- (1) 当有毒液体货物溢到甲板、水里或由于舱的内部泄漏和其它货物发生混合时，应考虑到该混合物可能会产生危险的反应。
In case of spillage of NLS cargo on deck, in the water or incidental mixture with other cargo through internal tank leakage consider dangerous reactions of such mixture.
- (2) 当上述事故发生时，应立即停止所有操作，关闭所有的阀。
When the above incidents happened, stop all operations immediately, shut all valves.
- (3) 关闭起居处所的门，切断通风。
Close all accommodation doors and shut ventilation.
- (4) 船上禁止吸烟，准备好消防泵。
Ban all smoking onboard vessel, keep fire pump ready.
- (5) 迅速地参考随船的装运货物资料单，根据所提供的资料采取必要的预防措施或行动。
Promptly consult the Data Sheet available for the cargo shipped onboard about possible hazards and necessary precautions / actions to be taken according to the information provided.
- (6) 当溢出物质或其蒸船上油污应急计划气（可能）伤害船员时，采取必要的行动保护船员的安全。
Take necessary actions for the safety of the crew for the case of (possible) contamination with the spilled material or its vapours.

3.4 其它措施

Other measures

3.4.1 船长优先措施

The Captain's priority actions

- (1) 首先确保人员安全，同时采取措施防止事故扩大。
Give top priority to ensure safety of personnel, and at the same time take actions to prevent

extension of incident.

- ① 检查是否有人员受伤
Check if there are injured personnel.
 - ② 从大副和轮机长处查阅船上货物, 压载, 燃油和水的资料。
Check the cargo, ballast, bunker and water informations on board from Chief Officer and Chief Engineer.
 - ③ 判断是否需要请求协助。
Make a judgement on whether a request for rescue should be requested.
 - ④ 决定是否需要弃船
Decide whether abandon ship is necessary.
- (2) 通过目视检查和对所有液舱和其他舱室液位测量的方法来获得详细的损坏资料。
Obtain detailed information of the damage, by visual inspection and sounding tanks and other compartments.
 - (3) 如果认为船舶留在此地仍会带来更大危险, 则应考虑将船舶移到更安全的地方。
Should it be suspected that staying the ship there brings the situation worse, take account of shifting the ship to a more suitable location.
 - (4) 考虑破舱稳性和船舶应力的影响, 为了船舶安全, 必要时, 应考虑进行内部驳油/货。
When necessary, consider transferring oil/cargo internally for safety of the ship taking into account the effect on damage stability and hull stress.
 - (5) 在油类或有毒液体物质的泄漏事故中应采取如下措施以防失火和爆炸:
In oil / NLS discharge incident, take the following measures in order to prevent the occurrence of fire and explosion:
 - ① 如果发生任何危险物质或蒸气释放, 可转移船舶将生活区置于释放点的上风。
If any dangerous material or vapour is released, have the accommodation upwind of the point of release by turning the ship.
 - ② 关闭非重要的空气进口。
Shut down non-essential air intakes.
 - ③ 防止易燃或有毒气体进入起居处所和机舱。
Prevent flammable vapors or noxious vapors entering accommodation and engine room space.
 - ④ 消除所有可能的点火源。
Eliminate all possible sources of ignition.
 - ⑤ 准备灭火设备和灭火器材。
Prepare fire fighting equipment and fire extinguishers.
 - ⑥ 经常对起居处所和机舱进行易燃气体测量。
Regularly test for flammable gas in accommodation and engine room space.
 - ⑦ 禁止吸烟和停止使用明火源。
Smoking and other naked flame sources are strictly prohibited.
 - (6) 当在空气不流通处所采取措施, 应注意有毒气体对人体的危害。
When taking measures in places where gas can stagnate, pay full attention to the effect of toxic gases on the human body.

3.4.2 减缓措施

Mitigating Activities

- (1) 当船上的人员及船舶的安全已经成功解决时, 应考虑下述方面:

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

① 评估状况及监控所有行动

Assessment of the situation and monitoring all activities

② 人员保护问题，诸如保护衣物的使用、暴露在有害物质中的人员的去污措施以及防止其它对健康和安全的威胁。

Personnel protection issues, such as the use of protective clothing, decontamination of personnel expose to hazardous material, other threats to health and safety.

- (2) 当甲板上发生溢漏，应该进行隔离，防止发生污染(如塞住甲板排水孔)。然后使用专用材料(如吸附材料)进行清除。

When a spill takes place on deck, it should be isolated in such way to prevent pollution (i.e. deck scuppers should be plugged.). Then the spillage should be removed by using dedicated materials (i.e. absorbent material)

- (3) 用于隔离、转移或清除溢出物的材料应收集和隔离，防止发生其它危害，如火灾、爆炸、有毒或易燃蒸汽的释放。这种材料应安全地保存，直到处置给岸上设施。

Materials used for isolation, removal or clean up operation of the spill are to be collected and isolated in a way that prevents further endangers such as fire, explosion and release of toxic or flammable vapours. Such materials should be stored in a safe condition until disposal to shore facilities.

- (4) 完成清除过程后，对人员消除沾染。

Decontamination of personnel after finishing the cleanup process

- (5) 对人员消除沾染时，要根据污染的种类及范围，采取相应的措施。

When performing decontamination of personnel, certain procedures depending on the type of contamination as well as the extent of contamination should be followed.

3.4.3 稳性和强度考虑

Stability and strength considerations

- (1) 要考虑船舶总体强度和稳性在任何时候均在安全范围内。

Take account of ship's overall distress and stability at all time are within safe limit.

- (2) 船舶搁浅时，应力会改变；船舶内部货物的移动或部分货物的丢失也可能导致应力增加。

The stresses may change once a ship is agrounded and internal transfer of cargo or loss of cargo may also increase the stresses.

- (3) 受损船舶应尽快将以下信息发给船东或者管理公司：

A damaged ship should send the following information to the owner or operator as soon as it is available.

① 配载情况

Loading Condition

- (a) 货物/压载水-数量和分布

Cargo/ballast – amount and disposition

- (b) 货物油/燃料油-数量和分布

Cargo oil or fuel oil – amount and disposition

- (c) 吃水-自由漂浮时

Draught – when free floating

② 损伤的位置及范围

Location and extent of damage

③ 船舶状况

Condition of ship

- (a) 搁浅的程度(在船周围测深)
Extent of grounding (sounding around the vessel)
- (b) 前、中、后部吃水
Draught – forward, amidship, aft
- (c) 货物和燃油在数量和分布上的减少
Cargo and fuel – loss or change in amount or disposition
- (d) 已采取的措施
Action already taken

④ 当地的情况

Local Conditions

- (a) 潮汐范围及何时涨潮或落潮
Tide – range and when rising or falling
- (b) 风力和风向
Wind – force and direction
- (c) 海流和浪高
Current and swell height
- (d) 天气预报
Weather forecast
- (e) 海底的特征
Nature of bottom
- (f) 当地其它重要的特征
Other locally significant features

- (4) 对 5000 载重吨或以上的油船，船长应跟“破损稳性和剩余结构强度岸基电脑计算程序”服务提供者取得联系，以获得技术支持。

On tankers of 5000 tonnes deadweight or more, the master shall contact “computerized shore-based damage stability and residual structural strength calculation program” service provider for technical assistance.

3.4.4 减载

Lightening

- (1) 如果船舶遭受到较大的结构损害，可能需要将全部或部分货物/燃油驳运到其他船舶。
If the ship has sustained extensive structural damage, it may be necessary to transfer all or part of the cargo/ bunker to another ship.
- (2) 在和专门的服务船舶进行“船对船”的驳运操作情况下，通常由对方那条船的船长任总指挥。
In Ship-to-Ship-transfer operations involving a specialized service ship, the Master of that ship will normally be in overall charge.
- (3) 当接受船是非专门服务船舶，任总指挥的船长或其他人员，应由相关船长在操作开始前共同确定。
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.
- (4) 实际的燃油/货物驳运操作应根据接受船的要求进行。

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

- (5) 在任何情况下船长应对自己船舶、船员、货物/燃油和设备的安全负责，不允许其他船长、船东、协调官员或其他人员的活动危害到他们的安全。

In all cases each Master remains responsible for the safety of his own ship, its crew, 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.

- (6) 船对船的驳运操作应和合适的当地主管机关协调好。

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

- (7) 当船长选择作业区域时，应考虑下面几点：

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

- ① 通报的必要和获得主管机关的同意

The need to notify and obtain the agreement of any responsible authority

- ② 有关船舶的目的地

The destinations of the ships concerned

- ③ 提供庇护，特别是对海浪和涌。

The shelter provided, particularly from sea and swell

- ④ 海域和水深应能满足系泊、起锚的机动操纵和驳运操作，当操作只能抛锚进行时允许安全抛锚。

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.

- ⑤ 通航密度

The traffic density

- ⑥ 天气状况和预报

The weather conditions and the weather forecasts

- (8) 为避免使误解，应在作业开始前商定使用的语言。

To avoid any misunderstanding, a common language to be used in communication should be agreed before the operation commence.

- (9) 除上述“船对船”操作的总原则之外，船长还应注意公司制定的附加说明。

In additions to the general principles of Ship-to-Ship operations as aforementioned the Master should take note of supplemented instructions issued by the company.

第 4 节 与国家和地方的协作

SECTION 4 NATIONAL AND LOCAL CO-ORDINATION

- 4.1 船上与沿海国家或港口当局快速有效的协作对于减少污染事故的危害影响是至关重要的。
Quick, efficient co-ordination between the ship and coastal states or port authorities involved becomes vital in mitigating the effects of pollution incident.
- 4.2 当发生海洋污染事故，船长为实施本“计划”作出应急响应前，必须与沿海国家和港口当局取得联系，并提供本计划附录中所列资料，以便得到核准。
When marine pollution incident occurs, prior to take emergency response for implementation the plan, the Master is to contact with the Coastal States and port Authorities and submit the documents in Appendix to this plan for approval.
- 4.3 船长按本“计划”提供的指导实施响应时，应向沿海国家和/或港口当局报告船上所采取的响应措施的人员和相关的回收程序，以便与沿海国家和/或港口当局保持密切联系。
While emergency response taken according to the guidance in the plan, the Master is to report the responsible persons and regarding recovering procedures to the Coastal States and /or port authorities, so as to keep close contact between the ship and Coastal States and/or port authorities etc.
- 4.4 沿海国家和/或港口当局的油类或有毒液体物质溢漏应变系统
Oil / NLS spill response system of Coastal State and/or port authorities Co-ordination.
- 4.4.1 由于沿海国家和/或港口当局的性质和职责在各国之间和各港口之间都有较大的差异，因此船长必须明白自己船上的职责和响应机构及沿海国家和/或港口当局的职责和响应机构。参照附录 1 和附录 2 与这些国家和/或港口当局进行联系。
The identities and roles of various Coastal State and/or port Authorities involved vary widely from state to state and/or even from port to port. And the Master should clarify roles and responsibilities of the ship and Coastal State and port Authorities. And concerning arrangement Coastal State and/or port Authorities refer to Appendix 1 and Appendix 2.

第 5 节 附加资料(非强制性规定)

SECTION 5 ADDITIONAL INFORMATION (NON-MANDATORY)

5.1 计划核查程序

Plan review procedures

- 5.1.1 建议船东、营运人或船长对本“计划”进行核查，确保所制定的“计划”是最新的。资料的更改和变化应尽快纳入和反馈到本“计划”，这种反馈可采取如下两种方式：

Regular review of the plan by the owner, operator or master is recommended to ensure that the specific information contained there is current. A feedback system should be employed which will allow quick capture of changing information and incorporation of it into the plan. This feedback system should incorporate the following two means:

- (1) 定期核查：本“计划”应由船东或营运人每年至少审核一次，将更改的最新地方法律和政策，联系机关名称和数量，船舶特性，公司政策等对本“计划”进行更新。

Periodic review: The plan should be reviewed by the owner or operator at least yearly to capture changes in local law or policy, contact names and numbers, ship characteristics, or company policy.

- (2) 事故核查：在发生事故使用本“计划”后，船东或营运人应对本“计划”进行验证并作相应修改。

Event review: After any use of the plan in response to an incident, its effectiveness should be evaluated by the owner, or operator and modifications made accordingly.

5.2 培训和训练程序

Training and drill procedures

- 5.2.1 培训和训练程序应被正式确定。培训和训练应在船上与其他演习一起进行，并作适当记录（见本“计划”附录 6）。船员们能熟练地使用油污设备将会大大增加船舶在紧急状态下防止油污的有效性和安全性。

Procedures for training and drill may be defined regularly. Such training and drill may be held in conjunction with other shipboard exercises and appropriately logged in Appendix 6 of the plan. When oil response equipment is used, hands on experience with it by crew members will greatly enhance safety and effectiveness in an emergency situation.

5.3 响应设备

Response equipment

- 5.3.1 参照附录 5 “船上溢漏响应设备和材料清单”。

Refer to Appendix 4 “List of oil / NLS spill response equipment material on board”.

- 5.3.2 备注

Remarks

- (1) 应指定专人负责船上污染应变设备的维护保养。

Specialist responsibilities for pollution response equipment maintenance onboard should to be appointed.

- (2) 使用化学药剂处理海上污染时，船长应先获得沿岸国家的批准。如果没有得到管理当局的批准不允许使用化学药剂。

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

5.4 记录保存程序

Record keeping procedures

5.4.1 保存和维护油类或有毒液体物质溢漏事故的详细记录和综合文件是非常重要的,故应充分利用航行日志做好记录。

It is essential to keep and maintain a comprehensive and detailed record of the oil / NLS spill incident. Consequently, the log book should be fully utilized to record:

(1) 与外国主管当局、官员和其他有关方面联系。

Communications with external authorities, the office and other related parties.

(2) 收发的信息连同所作决定的摘要。

Summary of information passed and received together with decision made.

(3) 发生溢漏时的风向、风力、潮流和海面的详细情况以及溢出物的流动情况。

The movement of oil / NLS spill being observed plus details of prevailing wind, current and sea conditions.

(4) 油类或有毒液体物质污染区域的简单阐述,在港口发生溢漏时对其他船、筏和设备可能的影响。

Brief description of areas contaminated by the oil / NLS and information on other craft facilities likely to be affected when the oil / NLS spill occurs in port.

① 所写的材料应尽可能使用照片作为辅助资料,但使用照相机时应不违反当地规定。

Written data should be supported by photographs whenever possible although care must be taken to ensure that the use of camera does not contravene local regulations.

② 如果船舶不是溢漏负责方,那么船体和甲板的照片能帮助澄清船舶状况。如果是其他船舶发生溢漏,也应当拍照和报告。

If the ship is not responsible for a particular spill, photographs of the hull and deck may help to verify the situation. Similarly, if another ship is found spilling oil, this ship should be photographed, if possible, and be reported on sight.

(5) 靠近船舶的海面照片可能帮助确定溢漏的情况。

Photographs of the sea surface close to the ship may help to ascertain the spill situation.

(6) 港口当局和部门的任何响应细节,如适用时,参加清理人员和所使用的设备的型号和数量及材料。

Brief details of any response from the port authorities and information, when available, on number of personnel engaged in the cleanup activities, type and quantity of clean-up equipment and material used.

5.5 其他

OTHERS

附录 1 沿海国家与地区联系人一览表^①

APPENDIX 1 LIST OF COASTAL STATES CONTACTS

国名及联络处 Nation/contact point	地址 Address	联络方法 Method of contact

^①沿海国家与地区联系人：可登录 IMO 网站 <http://www.imo.org/home.html> >>> National Contacts 进行下载。IMO 在每年 12 月 31 日公布“沿海国家与地区联系人清单”，并于每年 3 月 31 日、6 月 30 日和 9 月 30 日对“沿海国家与地区联系人清单”进行更新，且在 IMO 网站上发布。船东、船舶营运人和船舶管理者应保证对“沿海国家与地区联系人一览表”及时更新。

附录2 港口联系人一览表^①

APPENDIX 2 LIST OF PORT CONTACTS

名称 NAME	地址 ADDRESS	联系方法 MEANS OF CONTACT

^①这些资料将在船舶抵达港口前由船东/船舶营运人/租船人提供，然后由船长正确填写。

These information to be provided by owners/managers/charterers before arrival port and filled in properly by master.

附录3 船舶重要联系人一览表

APPENDIX 3 LIST OF SHIP INTEREST CONTACTS

A. 与“破损稳性和剩余结构强度岸基电脑计算程序”服务提供者/船舶管理公司联系
“COMPUTERIZED SHORE-BASED DAMAGE STABILITY AND RESIDUAL STRUCTURAL STRENGTH
CALCULATION PROGRAM” SERVICE PROVIDER / SHIP MANAGEMENT COMPANY CONTACTS

名称 NAME	地址 ADDRESS	联系方法 MEANS OF CONTACT

B. 与船东/营运人联系

OWNER/OPERATOR CONTACTS

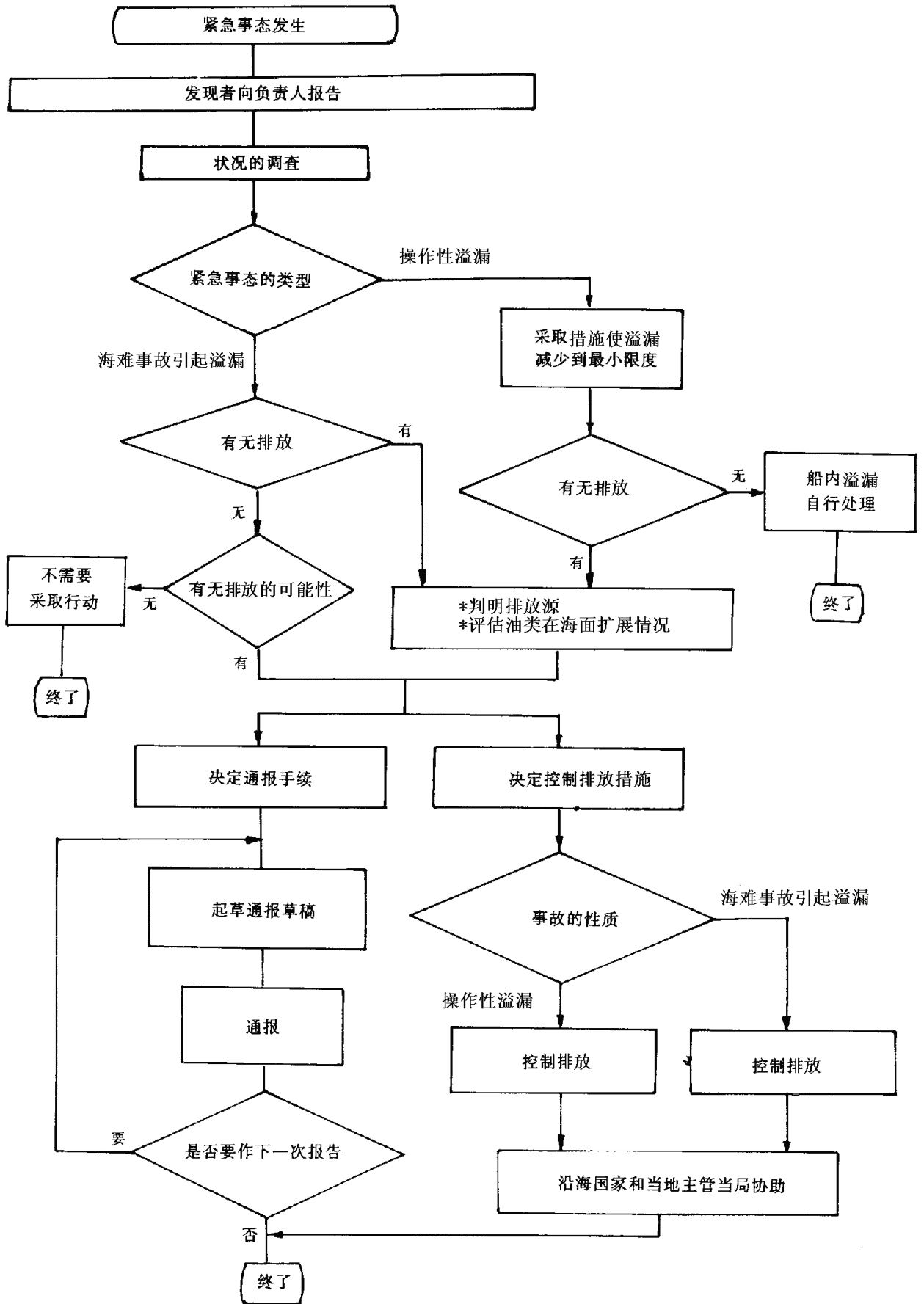
名称 NAME	地址 ADDRESS	联系方法 MEANS OF CONTACT

C. 其他船舶重要联系人

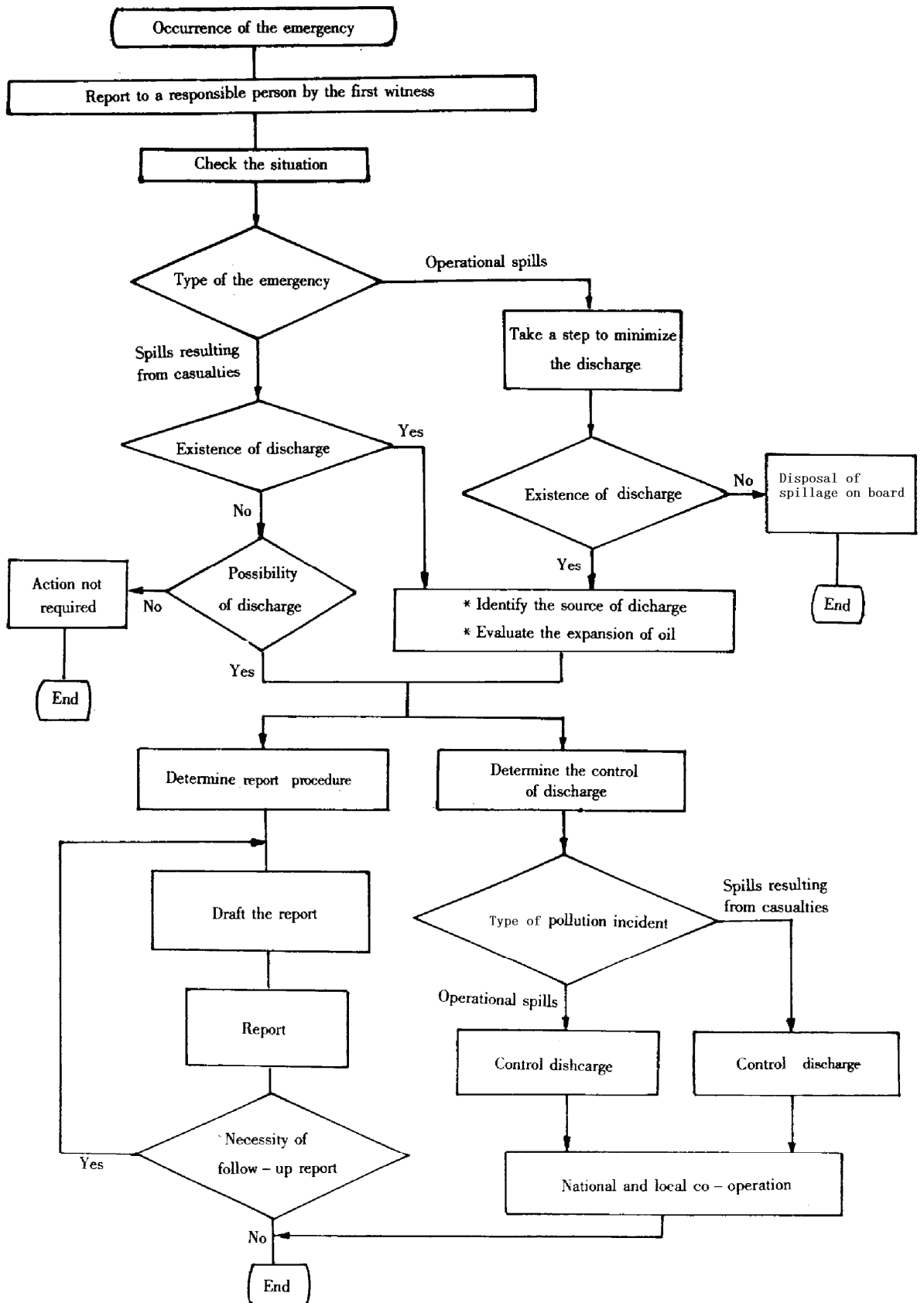
OTHER SHIP INTEREST CONTACTS

名称 NAME	地址 ADDRESS	联系方法 MEANS OF CONTACT

附录 4 报告程序



APPENDIX 4 REPORTING PROCEDURE



附录5 船上油类/有毒液体物质溢漏应变设备和材料清单^①

**APPENDIX 5 LIST OF OIL / NLS SPILL
RESPONSE EQUIPMENT AND MATERIALS ON BOARD**

设备和材料 EQUIPMENT AND MATERIALS	型号 TYPE	数量 QUANTITY	注 REMARK
围油栅 Oil fence			
吸收浮油处理剂或吸油毡 Oil slick disposal or oil absorbent			
手提式泵(附有桶、托盘和空气管) Portable pump (with bucket, dish and airhoses)			
溢油化学剂或溢油凝固化学剂 Oil spill response chemicals or oil gel chemicals			
装废弃回收物的空桶 Empty drums for holding recovered waste			
不产生火花的铲和桶(如需要) Non-sparking shovels and buckets (if necessary)			
棉纱 Rags			
木屑 Sawdust			
甲板落水孔封堵设施 Deck scupper plug devices			
防护服和呼吸器 Protective clothing and breathing apparatus			

上述设备存放位置_____。

Above equipment and materials located in_____。

^① 船东或船舶管理者可根据船舶具体情况，确定所需设备和材料以及合理的数量。

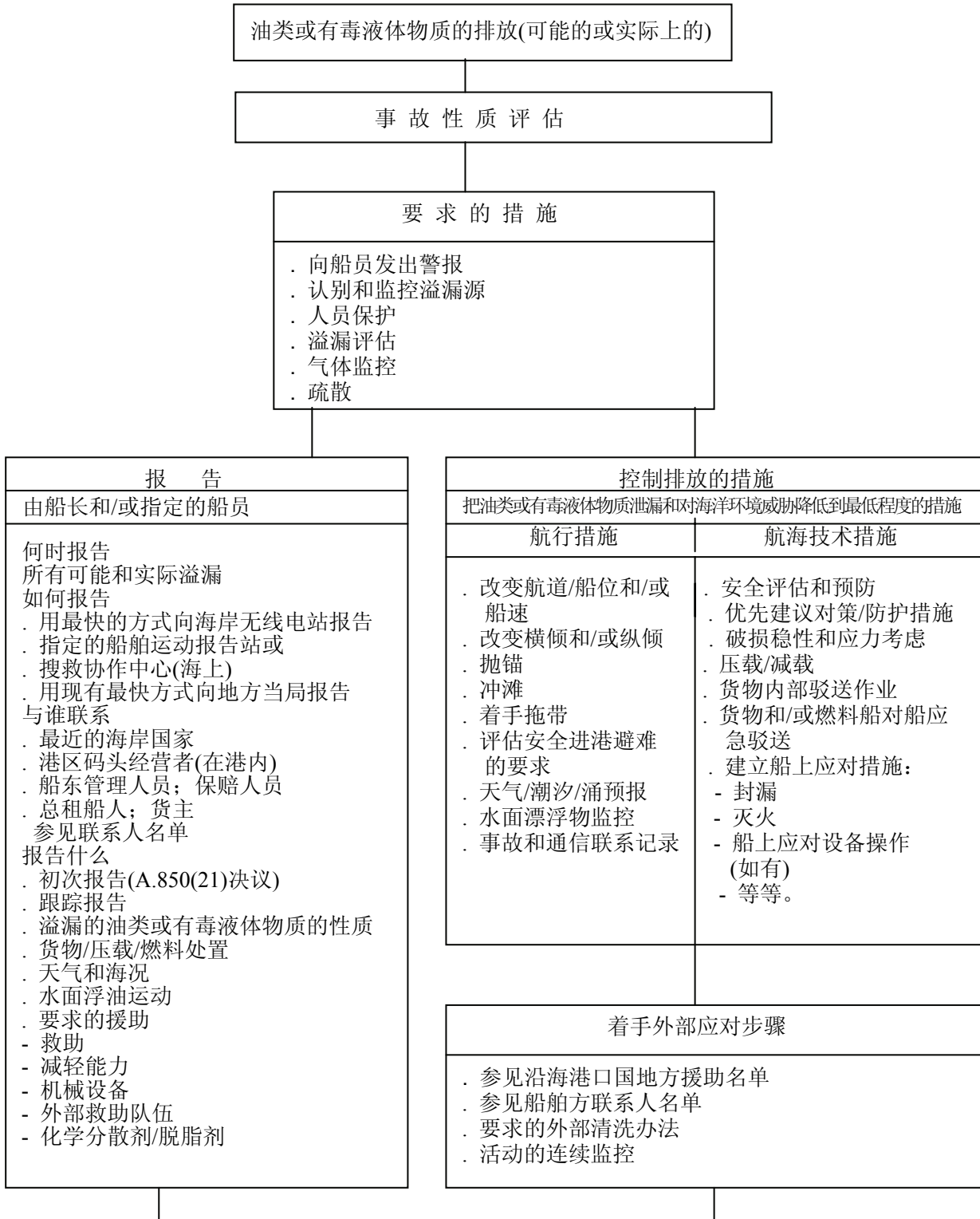
附录 6 防止海洋污染训练记录

APPENDIX 6 RECORD OF MARINE POLLUTION PREVENTION DRILLS

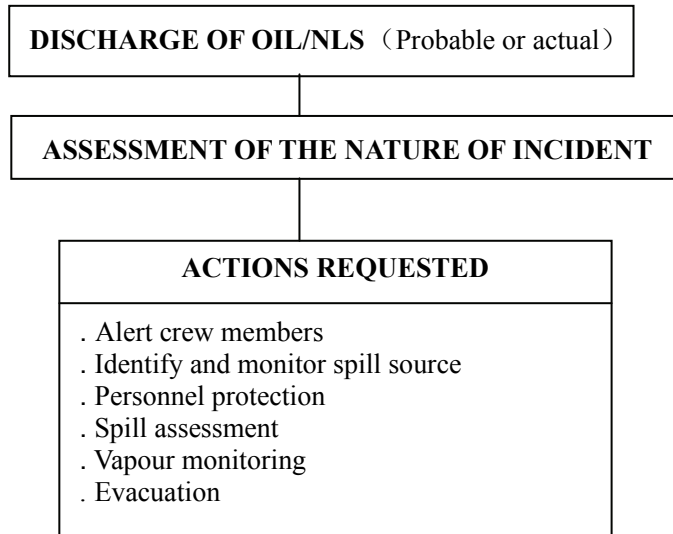
日期 DATE	溢漏意外事故种类 TYPE OF SPILL CONTINGENCY	船舶位置 LOCATION OF SHIP	细目 PARTICIPANTS

附录 7 简明流程图

本流程图是船上人员根据 IMO 颁布的指南，为应对油类或有毒液体物质污染紧急情况时而遵循的行为过程的概要。本图不完全，因而不应作为应急响应行动的唯一参考。进行响应行动时，还应考虑“计划”的具体参考资料。这些步骤是为帮助船上人员采取措施停止或最大程度降低油类或有毒液体物质的排放以及减轻其影响而设计安排的。这些步骤分成两大类—报告和措施。



APPENDIX 7 SUMMARY FLOWCHART



REPORTING
By master 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
Whom to report . Nearest coastal state . Harbour and terminal operations (in port) . Shipowner's manager; P&I insurer . Head charter; cargo owner . Refer to contact lists
What to report . Inital report . Follow-up report . Characteristics of oil or NLS spilled . Cargo/ballast/bunker dispositions . Weather and sea conditions . Slick movement . Assistance required -Salvage -Lightening capacity -Mechanical equipment -External response team -Chemical dispersant/degreasant

ACTION TO CONTROL DISCHARGE	
Measures to minimize the escape of oil or noxious liquids substance and threat to the marine environment	
<u>Navigational measures</u>	<u>Seamanship measures</u>
. 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	. safety assessment and precaution . Advice on priority measures . Stability and stess consideration . Ballasting/deballasting . Internal cargo transfer operations . Ship to ship transfer of cargo and/or bunker . Set up ship response for: -Leak sealing -Fire fighting -Handling of shipboard response equipment (if available) -etc.

<u>STEPS TO INITIATE EXTERNAL RESPONSE</u>
. Refer to coastal port state listings for local assistance . Refer to ship interest contact list . External clean-up responses required . Continued monitoring of activities

附录 8 有关图表

APPENDIX 8 RELATED PLANS AND DIAGRAMS

序号	图表名称	YES/NO
No.	Name of Plans and Diagrams	
1	总布置图 General arrangement	<input type="checkbox"/>
2	船舳剖面图 Midship section	<input type="checkbox"/>
3	基本结构图, 包括纵剖面、甲板和内底结构图 Construction profile, incl. long. section, decks and inner bottom	<input type="checkbox"/>
4	外板展开图 Shell expansion	<input type="checkbox"/>
5	舱容图 Tank capacity plan	<input type="checkbox"/>
6	舱底水和压载管系图 Bilge piping and ballast piping	<input type="checkbox"/>
7	燃油驳运系统图 Fuel oil transfer system	<input type="checkbox"/>
8	装载手册和稳性资料 Loading manual and stability information	<input type="checkbox"/>
9	破舱稳性资料 Damage stability information	<input type="checkbox"/>

注: 如有, 在方格填☒; 如没有在方格填☐

Note: If YES, fill the blank like this: ☒; If NO, fill the blank like this: ☐.

以下资料可从相应负责人处获得:

序号	其它资料	负责人
No.	Other Information	People In Charge
1	当前燃油资料 (包括数量和说明) Current Bunker Information (including quantities and specifications)	轮机长 Chief Engineer
2	当前货物资料 (包括数量和说明) Current Cargo Information (including quantities and specifications)	大副 Chief Officer
3	当前压载资料 (包括数量和说明) Current Cargo Information (including quantities and specifications)	大副 Chief Officer