

Oil Spill Contingency Planning - IAATO

Following discussion at ATCM XXI in Christchurch, and especially Resolution 1 (1997), IAATO is pleased to report on its progress on contingency planning to the Meeting.

IAATO-members adopted an Emergency and Medical Evacuation Response (EMER) contingency plan in 1996 whereby medical evacuation from member vessels is coordinated through a central 24-hour emergency contact office in Punta Arenas. The plan has been used successfully for the past two seasons. This current report focuses on additional efforts in the area of oil spill contingency planning.

With the exception of one land-based tour operator, IAATO members organize ship-based Antarctic activities. Such activities are governed by international maritime law in addition to any requirements of the Antarctic Treaty System.

In accordance with international maritime law, all IAATO vessels carry a Shipboard Oil Pollution Emergency Plan (SOPEP) satisfying Regulation 26 of Annex 1 of MARPOL. Such a plan is also required under provisions of Article 3 of the International Convention on Oil Pollution Preparedness, Response and Cooperation, 1990. In addition, the OPRC convention includes articles addressing oil pollution reporting procedures and other requirements. IMO has presented the text of the convention to this meeting as XXII ATCM/IP96.

All IAATO member vessels are flagged from states requiring SOPEPS.

Recognizing the importance of self-sufficiency and the particular challenges of the Antarctic in regard to emergency response, IAATO engaged an outside contractor to advise on emergency response and established a sub-committee on Oil Spill Prevention and Response at its annual meeting in 1996.

At its annual meeting in July 1998, IAATO intends to discuss -- and potentially adopt -- a Special Antarctic Appendix to the SOPEPs carried by IAATO-member vessels. Before adoption, IAATO must seek outside advice on the specific legal status of such a special appendix but it is anticipated that the current SOPEPS would be further amended with a cover sheet containing language such as:

“This Shipboard Oil Pollution Emergency Plan (SOPEP) contains a Special Antarctic Appendix. When the vessel is operating within the Antarctic “Special Area” south of 60°S the vessel master shall refer to such requirements and procedures contained in this Special Appendix. Upon annual review, the vessel owner/operators may choose to incorporate such changes contained in the Special Appendix into appropriate SOPEP sections or appendices. This Appendix has been developed in accordance with ...”

1. Introduction

This paper outlines the draft recommendations developed by the IAATO sub-committee on Oil Spill Response and Prevention that will be presented to the IAATO membership for action at its annual meeting in July 1998. The draft is here presented in the interest of transparency. Any comments should be directed to the IAATO Secretariat. Please note that these recommendations have not yet been reviewed in detail by IAATO members or by ship owners.

The measures recommended include procedures on risk assessment, notification and reporting requirements, effective response, preventative planning, coordination, implementation of contingency plans and the training of staff.

2. Committee recommendations

The sub-committee on Oil Spill Prevention and Response has developed a number of recommendations in regard to oil spill pollution. Particular emphasis has been placed on prevention in order to minimize the risk of potential oil spills. To assist all members, flow charts were designed as a guideline on the preparation of oil spill contingency plans. Some of the recommendations from the committee include the following topics:

- Storage of fuel on board the vessel and risk assessment;
- Navigation experience and training of ship's officers;
- Use of non-persistent fuels;
- Shipboard contingency plans;
- Use of absorbent mats for refueling helicopters and zodiacs;
- Co-ordination of a fuel spill response;
- Equipment available for oil spill response;
- Reporting requirements and procedures;
- Notification of Parties and the CEP;
- Legal issues with regard to marine pollution.

2.1 Storage of fuel on board the vessel

Maximum and average capacity of bunker fuel tanks differs from ship to ship, depending on the itinerary for a particular voyage, anticipated weather conditions and final destination. The sub-committee took into consideration the varying specifications of each operator and considered the following: the type and maximum amount of fuel to be carried on each voyage; the storage of all fuels on board the ship; the refueling of zodiacs; spill kits used; and the current training of staff regarding handling of fuel.

IAATO notes that no Antarctic tour vessel refuels in the Antarctic or is involved in the transfer of fuel. Refueling of vessels is done outside of the Antarctic Treaty Area and, by world shipping standards, the amount of fuel carried is small.

2.2 Use of non-persistent fuels

A preliminary questionnaire was distributed among the IAATO members to determine the type, density and maximum amount of all fuels carried by IAATO vessels operating in Antarctica. Most operators use light diesel fuels. A few of the Antarctic ships use medium/heavy fuel oils, although the use of these oils appears to be decreasing as newer vessels are brought into service. Results of this preliminary survey of some Antarctic tour vessels is presented at the end of this report.

The amount and type of fuel is a key consideration in contingency planning. Standardization on the use of lighter, non-persistent fuels by IAATO members and their vessels would also facilitate standardization of oil spill response equipment. The wider availability of standard response equipment, the greater the potential to respond effectively to oil spill incidents.

The definition of non-persistent fuel is not fully elaborated. It is believed that fuel and oils which may be considered non-persistent in moderate climates may become persistent oils at Antarctic temperatures.

The International Oil Pollution Compensation Fund describes non-persistent oil as “oil which, at the time of shipment, consists predominantly of non-residual fractions and of which more than 50% by volume distills at a temperature of 340°C when tested by the ASTM Method D86/78 or any subsequent revision thereof.”

2.3 Navigation Experience of ship’s officers

The seas surrounding Antarctica are considered among the most inhospitable in the world. Mid-summer storms occur with little warning, fog and poor visibility is commonplace and drifting ice is a regular threat to shipping.

Because of the unique environmental hazards encountered by Antarctic shipping it is essential that there are officers on board the vessel who have experience and knowledge of Antarctic meteorology, ice conditions, tides and currents in the intended region of operation.

At the present time, IAATO-operated ships use a variety of policy standards for determining the navigation experience of deck officers. In practice, officers and crew aboard IAATO member ships often have decades of experience. The Subcommittee recommends that IAATO adopt guidelines in keeping with SCALOP recommendations that “Masters and/or Chief Officers of vessels operating under charter or in support of Antarctic operations shall have at least one season of ice navigation experience in the Antarctic.” According to IAATO standards, members must ensure that 75% of staff has previous Antarctic experience. Further guidelines will be developed in regard to the experience and training of officers and crew.

2.4 Shipboard contingency plans

In 1989 the Exxon Valdez disaster highlighted the need to develop a global network to coordinate pollution response resources. The 1990 International Convention on Oil Pollution Preparedness, Response and Cooperation (OPRC) complemented already existing IMO conventions relating to marine pollution. The OPRC Convention requires, in part, that vessels shall carry shipboard oil pollution emergency plans. The OPRC Convention also includes provisions for signatories to assess the consequences of marine oil spills and report the incident to states whose interests are likely to be affected. The requirement for vessels to carry shipboard oil pollution emergency plans has been incorporated in Annex IV of the "Protocol on Environmental Protection to the Antarctic Treaty."

From the information gathered by the sub-committee and the research conducted to date, a draft paper will be prepared for review by all IAATO members with suggestions on the proposed Antarctic appendix to current SOPEPs. If accepted by all members at their annual July meeting, then the Special Antarctic Appendix for IAATO ships operating in the area south of 60°S, will be printed.

Taking into consideration the Antarctic's extreme climate and remote location, the following topics were covered in detail:

- Pre-spill planning and risk assessment;
- The size and type of oil spill and the probability of its occurrence;
- Notification procedures;
- Movement of the spill considering weather, location and amount of fuel spilled;
- Response organization;
- The environmental effects depending on amount and type of fuel spilled;
- Proximity to SSI's and other protected areas under the Antarctic Treaty system;
- Options available for oil spill response;
- Knowledge of the response equipment;
- Experience of staff using the equipment;
- Problems associated with response and support in Antarctic conditions;
- Safety of passengers and staff;
- Termination of response activities;
- Post spill monitoring.

The IAATO sub-committee has sought advice from COMNAP, Jamestown Marine in Connecticut, U.S., the Office of Polar Programs at the U.S. National Science Foundation, and Oil Spill Response (OSRL) in Southampton, UK, in order to prepare this report.

In addition, members of the sub-committee and operators are planning to attend an Antarctic Oil Pollution Control Course in August of this year at OSRL's headquarters. IAATO wishes to thank all those who provided assistance and advice.

2.5 Use of absorbent pads during the refueling of helicopters and zodiacs

The committee will suggest a specific make of absorbent mat which would be suitable for all refueling purposes and make recommendations regarding standardization of the equipment used by IAATO vessels.

2.6 Co-ordination of an oil spill

The intention is to develop a multi-operator plan to encompass an area where a coordinated and compatible response by two or more IAATO members may be feasible. Such a plan will have to be examined carefully in regard to both its practical and legal ramifications. Such a plan would apply only where it would be effective and practical to pool and deploy equipment, support and supplies.

A recommendation under consideration by the sub-committee is the development of a central coordinating office, similar to that used by IAATO for the Emergency and Medical Evacuation Response (EMER). The subcommittee notes various requirements for land-based coordination of oil spill response and will study the implications of such coordination for operators in the Antarctic.

A designated office could coordinate with all other IAATO members for additional back-up, response, supplies, and possible evacuation of passengers. The procedure would be comparable to the EMER and would allow the vessel and staff to concentrate on the problem at hand and be assured that all other member vessels, bases and authorities were regularly apprised of the situation and their assistance sought as required.

In practice, IAATO member vessels are in regular and ongoing contact to coordinate itineraries, report on local conditions and discuss other matters related to operating in the Antarctic. The contact information for IAATO member vessels (presented as an appendix to XXII/IP88) is compiled and circulated to members and COMNAP. The collection and distribution of program and contact information to its members provides IAATO with a self reliant back up and support service.

2.7 Equipment available for oil spill response

The committee will propose recommended equipment for individual ships which may be required to manage an oil spill. Consideration is given to equipment al-

ready carried by most vessels. A detailed inventory of all oil spill response kits carried by each ship would be held at IAATO and distributed as required.

In addition the sub-committee will research the practicality of storing supplementary response equipment, at an agreed location, to be used in the event of a major oil spill. The option of storing equipment in Punta Arenas, Chile which could be air-dropped to a stricken vessel, by an Adventure Network International aircraft, will also be included.

2.8 Training and Exercises

The Subcommittee recommends that IAATO survey current training of company environmental officers and especially vessel masters and crew in oil spill emergency response and develop a set of recommendations. Additionally, some regular oil pollution emergency exercises, perhaps in cooperation with a national program, would be useful in improving emergency preparedness.

2.9 Reporting and monitoring requirements and procedures

Article 8 and Protocol 1 of MARPOL 73/78 requires the Vessel Master to make an incident report to the nearest coastal state whenever there is an actual or probable discharge of oil into the sea from a vessel. The procedures contained in the Reporting Requirements section of the current SOPEP are based on guidelines developed by the IMO. Any discharge of oil from a vessel will be recorded in the ship's Oil Spill Log Book.

The Sub-committee recommends the Special Antarctic Appendix to IAATO-member vessel SOPEPs include a contact list of Antarctic research stations with a requirement to contact any national program facility in the area that may be affected. Additional recommendations on reporting will be developed in consultation with COMNAP. The Appendix would also include a regional map with facilities clearly indicated.

Further requirements for notification will be elaborated in the Special Antarctic Appendix, which shall include notification of Parties and the Committee for Environmental Protection as provided for in Annex I, Article 7 and Annex IV, Article 7. Notice of activities undertaken in cases of emergency are to be circulated immediately to Parties and to the Committee.

2.10 Legal issues with regard to marine pollution

As cruise operators to the Antarctic, the sub-committee believes it is important that IAATO and its members be fully aware of legal issues surrounding marine pollu-

tion. Among other issues, the status of the Special Antarctic Appendix and legal implications of coordinated response must be studied carefully.

3. Fuel Survey

NOTE: This partial survey of some IAATO member vessels is presented for discussion only. Please note that refueling of member vessels is done outside the Antarctic Treaty Area at ports of departure and none of the tour vessels are involved in transport of bulk fuel to vessels, stations or other facilities within the Antarctic.

1. Kapitan Dranitsyn and Kapitan Khlebnikov.

TYPE OF FUEL	MAX. (mt)	MIN. (mt)
IFO 40	3,200	300
MGO	300	100
Lub. Oil	200	50
Outboard gas	6,000 ltrs	1,000 ltrs

2. Shulyekin, Shokalskiy, Multanovskiy, Molchanov

TYPE OF FUEL	MAX. (mt)	MIN. (mt)
MGO	320	50
Lub. Oil	20	5
Outboard gas	2,000 ltrs	600 ltrs

3. Hanseatic, Bremen

TYPE OF FUEL	MIN. (mt)	MAX. (mt)
HFO	480	519
MDO	10	45
For lifeboats		500 ltr
Emergency Diesel Eng.		1m3
Outboard Engines	3	14

4. Akademik Ioffe, Akademik S. Vavilov

TYPE OF FUEL	Max. (mt)	Min. (mt)
MGO - DMA	1100	60
Mobilguard 412	18	1
Gasoline	1.8	0.2