

Lake Winnipeg Research Consortium Inc.
M.V. Namao

GENERAL STATEMENT OF RISKS

The ship will normally be operated in accordance with the policies and procedures issued to meet the requirements of the International Management Code for the Safe Operation of Ships and for the Prevention of Pollution (ISM Code). The ISM Code is Chapter IX of the International Maritime Organization's International Convention for the Safety of Life at Sea (SOLAS).

Supernumerary personnel should also take note that the Criminal Code of Canada provides that, *"The master or officer in command of a vessel on a voyage is justified in using as much force as he believes, on reasonable grounds, is necessary for the purpose of maintaining good order and discipline on the vessel."* [R.S. c.C-34, s.44.]

MV *Namao* is a dynamic platform with violent movements in three axis. For this reason, supernumerary personnel must have a good sense of balance and be extremely aware of the placement of their feet and use handholds and grab rails when the vessel is working in a sea. Supernumerary personnel must also take care to secure equipment and personal effects to prevent these items from moving or being thrown about while at sea. Failure to do so can result in broken bones, lacerations, abrasions, burns, or, if the person is thrown overboard, drowning.

Persons who suffer from seasickness should be aware that they need to start a course of preventative medication well in advance of joining the ship. The ship's medical chest has limited quantities of motion sickness pills and suppositories but their effect is very limited when started after sickness is encountered. Failure to control seasickness could result in dehydration, confusion, or the loss of situational awareness that could be a contributing factor in falls and inappropriate response to stimuli.

Potable water supplies on short duration voyages are normally supplied from tanks aboard ship that have been filled with municipal supply. Potable water supplies are routinely checked for contamination. Non-potable water may contain a level of salt or tank minerals, which can irritate the skin.

MV *Namao* uses a common messing system. That means that meals are centrally prepared from a cyclical menu. Cooks, at a minimum, are certified to the Ship's Cook certificate requirements of the Marine Certification Regulations of the Canada Shipping Act. There is a potential for allergic reactions to certain ingredients used in food preparation if the catering staff are not warned in advance of the supernumerary personnel's allergens or dietary needs. Allergic reactions may be manifested in loss of consciousness or swelling restricting breathing or circulation that could result in disability or death.

Although well maintained and operated by proficient individuals there is always the possibility of mechanical or system failures. This may mean that there will be sudden electrical blackouts or temperature vagaries in the supply of domestic water. Emergency power can be supplied quickly to essential circuits but these circuits are not normally fitted in passenger cabins or laboratory work areas. These situations present a risk to individuals of disorientation, loss of power to personally essential equipment, destruction or deterioration of temperature sensitive samples resulting in contamination and bacterial development, burns, scalds, and falls or knocks.

MV *Namao* is a working ship that may be involved in lifting large weights, scientific research, or search and rescue. Each of these various tasks carries its own set of risks. Normally supernumerary personnel are not directly involved in these operations. However, in the case of search and rescue, it is possible that supernumerary personnel may be required to assist in caring for survivors. This will expose the supernumerary personnel to unpleasant sights, smells, and sounds, which might include exposure to bodily fluids from victims. There is a risk of exposure to disease.

Work and life aboard a ship will quite often involve the use of small boats operating remotely from the mother ship. While appropriate personal protective equipment will be supplied, there are still possibilities of injury from being struck by suspended loads, falling into the sea, slipping or falling in transfer between the boat and the ship or shore, as well as exposure to sea and weather conditions. This exposes the supernumerary personnel to possible hypothermia, drowning, lacerations, fractures, and other injuries.

MV *Namao* is required to be self-reliant to face emergency situations aboard such as flooding and fire. While the ship is well-maintained, well-crewed, and contingency plans are in place, there is always a possibility of an untoward event. In these cases, the supernumerary personnel may find themselves assigned to assist the ship's crew in controlling flooding, fighting fire, or assisting in the readying of craft for abandoning ship. In these types of circumstances the supernumerary personnel will be working under direct supervision. There is a danger of being drowned, suffering severe burns, being struck or impaled, or reacting unfavourably to unaccustomed strenuous exertion in a high drama situation.

Medical treatment aboard ships is normally limited to First Aid provided by a holder of a Marine First Aid Certificate. The ship's Rescue Specialist, when carried, may provide more aggressive treatment. However, in either case, medications and equipment carried aboard is extremely limited, is geared primarily to treat injuries as opposed to medical conditions, and is sufficient to stop bleeding, immobilize breaks, or maintain breathing. Personal requirements for prescription medication, or patent medicines, required to treat pre-existing conditions, are the personal responsibility of the individual. Supernumerary personnel with pre-existing medical conditions must ensure: that their condition is stable; that their medication is both established and available; that their condition is known to their on-board supervisor, the First Aid Attendant(s) and/or Rescue Specialist, and the Commanding Officer; and, that they have a sufficient supply of their prescribed medication with them for the planned duration of the voyage plus an appropriate additional amount to allow for the possibility of delays. Failure to do so could result in long and short-term complications or death.

In the event of medical emergencies or injuries at sea, the ship will contact medical authorities ashore to obtain advice. The ship may have to divert to the closest port of refuge to evacuate the patient. The time taken to gain port or to evacuate the patient depends on many variables – the distance to be traveled, sea conditions, weather conditions, the seaworthiness of the ship, the speed of the ship, and the skill of the navigating officers. It is possible that the time taken to evacuate the patient may be measured in days. The condition of the patient may be adversely affected by this factor.

Even though many ships are helicopter landing capable, the ability of the helicopter to make an immediate evacuation cannot be assumed. The distance off shore, the weather, the sea-state, the skill of the helicopter pilot, and the capacity of the helicopter will all have an effect on the time taken to affect an evacuation. The condition of the patient may be adversely affected by this time factor. It should also be noted that evacuation by helicopter where the patient is winched upwards to the helicopter in a stretcher or horse collar is a terrifying experience, especially when combined with rough sea conditions, darkness, and an already heightened apprehension of mortality on the part of the patient.