

TP 14707E (01/2013)

# Places of Refuge Contingency Plan Praire and Northern Region (PORCP-PNR)

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# **Responsible Authority**

Regional Director, Marine Safety and Security Directorate, PNR is responsible for this document, including any change, correction, or update.

# **Approval**

# "Original signed by Desmond Raymond"

Desmond Raymond Regional Director Marine Safety and Security, PNR

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# **Section 1**

# **NATIONAL PLACES OF REFUGE CONTINGENCY PLAN (TP14707E)**

The *National Places of Refuge Contingency Plan* (PORCP) applies to all situations where a ship needs assistance and requires a Place of Refuge within Canadian waters. This includes Canada's internal waters, territorial sea and the Exclusive Economic Zone (EEZ).

The PORCP also applies if a ship headed to Canada reports a problem (a defect, deficiency or casualty).

The PORCP **does not apply** to distress situations if lives are in danger. Existing search and rescue procedures will apply in these cases.

You can get a copy of the *National Places of Refuge Contingency Plan* (PORCP), TP14707E, at this web link: <a href="http://www.tc.gc.ca/eng/marinesafety/tp-tp14707-menu-1683.htm">http://www.tc.gc.ca/eng/marinesafety/tp-tp14707-menu-1683.htm</a>

The National Places of Refuge Contingency Plan aligns with the International Maritime Organization (IMO) Guidelines on Places of Refuge for Ships in Need of Assistance. <sup>1</sup>

<sup>&</sup>lt;sup>1</sup> Guidelines on Places of Refuge for Ships in Need of Assistance, International Maritime Organization (IMO) Resolution A.949 (23).

# Section 2

# PLACES OF REFUGE CONTINGENCY PLAN - PRAIRIE AND NORTHERN REGION (PORCP-PNR)

# **PURPOSE**

The *Places of Refuge Contingency Plan – Prairie and Northern Region (PORCP-PNR)* includes guidelines for making quick and effective decisions related to all Place of Refuge (POR) requests from ships needing help. This regional plan aligns with Transport Canada's *National Place of Refuge Contingency Plan* (TP14707E).

The PORCP-PNR recognizes that all Place of Refuge situations are unique. Transport Canada will evaluate each Place of Refuge request and base its plan on the assistance the ship needs.

The PORCP-PNR **does not** pre-identify Places of Refuge. Transport Canada Marine Safety and Security Branch designates a Place of Refuge based on each incident, with support from relevant departments and agencies.

The PORCP-PNR **does** recognize the value of having relevant documents (ex: nautical charts, Sailing Directions, etc) and specialists available to help make sound decisions.

# **BACKGROUND**

High-profile international shipping incidents involving Place of Refuge requests (ex. Erika, 1999, Caster, 2000 and the Prestige, 2002) prompted International Maritime Organization (IMO) member states to develop formal procedures to help those making Place of Refuge decisions.

In December 2003, the IMO adopted *Guidelines on the Places of Refuge for Ships in Need of Assistance* (Resolution A.949 (23) and Maritime Assistance Services (MAS) (Resolution A.950 (23). IMO asked member countries to also develop contingency plans and have an organization responsible for MAS. The Canadian Coast Guard (CCG), Marine Communication and Traffic Services is responsible for Canada's MAS.

In Canada, Transport Canada is the lead department for all Place of Refuge requests. As a result, Transport Canada developed a *National Place of Refuge Contingency Plan (TP14707E)*, which provides guidelines for an effective and efficient response to requests from ships needing help.

Transport Canada has developed Place of Refuge Contingency Plans for each region, as well. Having these plans in place will establish a way to make careful Place of Refuge decisions in a timely manner.

The importance of having a regional Place of Refuge Contingency Plan for the Prairie and Northern Region became evident during a 2010 incident in the region.

In August 2010, the *MV Clipper Adventure*, a cruise ship carrying almost 200 passengers and crew, ran aground while navigating the Northwest Passage. The Canadian Coast Guard icebreaker *The Amundsen* was the closest ship at the time, and sailed almost 500 kilometres from the Beaufort Sea to assist. Once the passengers and crew were safely off the cruise ship, the master asked to go to a Place of Refuge to protect the ship from the wind and waves. The ship's hull had suffered serious damage and needed repair. The *Clipper Adventurer* was moved to two Places of Refuge over the next month:

- 1. A sheltered bay where the damage could be fully assessed
- 2. A location where temporary repairs were made before the ship was taken to an international ship-yard for repairs.

Being able to move the ship to a Place of Refuge protected the ship from further damage, and gave the crew and salvage company time to form a plan to safely move the ship to a repair facility with minimum risk to area communities, the ship and the environment.

# **APPLICATION AND SCOPE**

The PNR regional plan aligns with the *National Places of Refuge Contingency Plan* (PORCP), and applies to all situations within the region where a ship needs assistance and requires a Place of Refuge within Canadian waters. This includes Canada's internal waters, territorial sea and the Exclusive Economic Zone (EEZ).

The PORCP-PNR also applies to ships headed to Canada that report a problem (a defect, deficiency or casualty).

#### **AUTHORITY FOR DIRECTING SHIPS**

**Note:** Please see the specified Acts and Transport Canada's National Place of Refuge Contingency Plan (TP14707E) for more details on these authorities. This information is a summary only.

While the *Canada Shipping Act, 2001* and its regulations apply in all Canadian waters, vessels in Canadian Arctic waters north of 60° North, out to the 200 nautical mile limit of Canada's Exclusive Economic Zone, are also subject to *Arctic Waters Pollution Prevention Act (AWPPA)* and its regulations. Vessels are also subject to the *Marine Transportation Security Act*, its regulations and other applicable legislation.

# Transport Canada (TC)

The *Canada Shipping Act*, 2001 (CSA 2001) gives TC the authority to make decisions and take required actions related to a Place of Refuge incident. Below is a summary of these authorities.

CSA 2001, Section 211(3)

TC Marine Safety Inspectors, with delegated authority from the Minister of Transport may:

- Direct a vessel to a location to carry out an inspection to ensure compliance,
- Direct the master of a vessel to:
  - o Stop the vessel; or
  - o Proceed to a selected place and moor, anchor or remain there for a reasonable specified period.

### CSA 2001, Section 189

When there are reasonable grounds to believe the vessel may discharge or has discharged a pollutant, the Minister or those authorized by him may:

- Direct a vessel to proceed through Canadian waters and the EEZ;
- Move to an exact place, by a specified route;
- Instruct the vessel to moor, anchor or remain at its location; and/or
- State how to unload any pollutants to reduce further risk of a pollution spill.

#### Arctic Waters Pollution Prevention Act (AWPPA), Section 15(4)

The AWPPA gives Pollution Prevention Officers, delegated by the Minister of Transport, the authority to:

- Redirect a ship that is in or near a shipping safety control zone to any site or anchorage for safety reasons or to protect the environment from a real or potential risk of pollution from the ship.
- Board any ship that is within a shipping safety control zone and conduct an inspection to check if it complies with all regulations that apply within the zone.
- Order all ships within a specified area to report their positions if they are informed or have reasonable grounds to believe that a substantial quantity of waste has been or is in imminent danger of being deposited in arctic waters.

# Marine Transportation Security Act, Section 16(1)

The Minister may also direct a ship believed to be a threat to security under the *Marine Transportation Security Act*. He may also delegate this authority to Marine Security Inspectors and Marine Safety Inspectors.

# Department of Fisheries and Oceans (DFO) Canada

While Transport Canada makes decisions about a Place of Refuge, the Canadian Coast Guard (CCG), through the authority of the Minister of Fisheries and Oceans Canada, responds to ship-source pollution spills.

DFO fulfills the federal monitoring or on-scene command role for the Government of Canada during all ship-source pollution incidents.

#### CSA 2001, Section 180

If a ship that discharged, or is likely to discharge, a pollutant, the Minister of Fisheries and Oceans Canada has authority to take steps to repair, remedy, minimize or prevent pollution damage.

#### CSA 2001, Section 175.1(2)

In the event of a discharge or threat of discharge, Pollution Response Officers appointed by the Minister of Fisheries and Oceans may direct a vessel to take specific actions to minimize further risks to the environment.

When a Place of Refuge incident also involves ship-source pollution or the threat of pollution, Transport Canada (TC) and Fisheries and Oceans Canada (DFO) will work together to decide how to best handle the incident.

The roles and responsibilities for decisions between TC and DFO in a POR incident are:

• The CCG's Marine Communication & Traffic Services (MCTS) Centres are the recognized communication hub. MCTS is responsible for issuing clearances to all ships transiting or intending to transit Canadian waters.

**Note:** The MCTS will not clear any vessel with identified problems (ex: defective, deficient or a casualty) without Transport Canada approval.

- CCG and TC Marine Safety and Security regional heads will discuss the clearance of a ship whose situation could result in a loss of life or pollution.
- TC and DFO will jointly review salvage operations, emergency lightering or the discharge of cargo.

### RESPONSIBILITY FOR DECISIONS

The TC Regional Director, Marine Safety and Security, and the Director of Maritime Services, CCG in the Central and Arctic Region:

- Will grant or deny access to a Place of Refuge;
- Will select the Place of Refuge; and
- Are responsible for any operational instructions and conditions given to the master or salvors related to the decision.

When the TC Situation Centre becomes involved because the overall risk level is determined to be high, decisions will be approved through the TC Crisis Management Structure and the Crisis Management Team.

Decisions involving other authorities with jurisdiction (i.e.: port authority, local municipal authority, aboriginal communities) must receive approval from the relevant authority.

### RESPONSIBILITY FOR THE PORCP-PNR

Regional Director, TC Marine Safety and Security, PNR is responsible for putting the regional procedures and arrangements into place.

# NOTIFICATION AND REPORTING

The CCG provides the Maritime Assistance Service (MAS) function in Canada. This means that they act as the main point of contact between the ship needing assistance and the Coastal State. All communication with the ship must go through the appropriate Marine Communications and Traffic Services Centre. (MCTS)

The MCTS also administers the Northern Canada Vessel Traffic Services (NORDREG). NORDREG was established to promote safe and efficient navigation and environmental protection in the Canadian Arctic.

The NORDREG Zone includes those waters covered by the Shipping Safety Control Zones as well as the waters of:

- Ungava Bay, Hudson Bay and Kugmallit Bay that are not in a shipping safety control zone;
- James Bay;
- Koksoak River from Ungava Bay to Kuujjuaq;
- Feuilles Bay from Ungava Bay to Tasiujaq;
- Chesterfield Inlet that are not within a shipping safety control zone;
- Baker Lake; and
- Moose River from James Bay to Moosonee.

All formal reporting notifications and any other communications required by the national and international instruments must go through the MCTS.

Transport Canada developed the *Incident Notification Procedures for the Purpose of Informing TC Senior Management and Public Safety Canada* to provide a consistent method for quickly informing TC Senior Management and Public Safety Canada of significant incidents as they occur.

TC Marine Safety and Security is responsible to gather and distribute the relevant information as set out in these procedures.

You will find the criteria for determining if **an event is significant** in the *Incident Notification Procedures for the Purpose of Informing TC Senior Management and Public Safety Canada, Appendix A*.

#### Reference documents to assist with the notification and reporting process include:

- Incident Notification Procedures for the Purpose of Informing TC Senior Management and Public Safety Canada, and
- Transport Canada General Notification Matrix for a Major Marine Incident.

# INTERNATIONAL LIAISON

Ships navigating in the Arctic may go through Canadian, US and Danish waters. Any incident involving a vessel near boundary waters in the:

- Eastern Arctic will require coordination with Denmark.
- Western Arctic will require coordination with the United States.

TC Marine Safety and Security, PNR will work with international authorities when dealing with incidents in boundary waters or where the outcomes could affect the United States or Greenland. In these situations, Marine Safety and Security, PNR will work with its counterparts in national headquarters and with the Department of Foreign Affairs and International Trade Canada (DFAIT).

TC is aware of the Canadian Coast Guard's responsibilities when the *Canada-United States Joint Marine Pollution Contingency Plan (JCP)* is activated.

## **EVALUATIONS OF THE ARCTIC COASTLINE AND INLAND WATERS**

TC Prairie and Northern Region developed site assessment tools by gathering information about the Arctic coastline and inland waters. This information includes basic navigation information for an area; its hazards, ice conditions, tides, access to lightering equipment, and details of any environmental, historical or cultural importance.

Having this information ready helps make TC as prepared as possible when a ship makes a Place of Refuge request.

These site assessment tools are not part of the plan, but provide basic information to the team making decisions about a Place of Refuge request. Assessments will be available to the POR assessment team members.

# **DECISION-MAKING PROCESS**

Since any situation at sea can change rapidly, TC and CCG should make decisions as quickly as possible. This does not mean, however, that they can make a decision without having an assessment team in place. (You will find more details assessment team members on Pages 12 and 13 of this plan.)

The team follows a flexible decision-making process that allows for:

- Making case-by-case assessments, and
- Addressing incidents of all levels of complexity and risk.

The POR decision-making process has three main parts:

- 1. The ship's owner/charterer/master/salvor requests a Place of Refuge;
- 2. The assessment team completes a risk assessment of the situation and develops potential options.
- 3. TC and CCG develop, then monitor the action plan.

Throughout the decision-making process, it is important to:

- Document how and why decisions were made;
- Have the risk assessment team complete risk assessments and make POR decisions,
- Contact experts and advisers when needed to get up-to-date information (ex: Environment Canada for current and forecasted weather conditions for the area where incident is happening);
- Monitor ice conditions in the area;
- Consider any logistical challenges due to the remoteness of the area; and
- Communicate with stakeholders.

Once the team has completed its risk assessment, TC will either:

- Allow access to the Place of Refuge the ship requested,
- Allow access to a Place of Refuge that the assessment team deems to be the most appropriate because of the incident details and risks involved, **or**
- Deny access to a Place of Refuge.

If the risk is too great to grant access to a Place of Refuge, TC must:

- Decide the nature and degree of assistance to the ship.
- Clearly communicate and fully document the assessment team's operational recommendations.

Once Transport Canada makes a decision, it must closely monitor the situation until it is adequately resolved. It must full document the monitoring process, as well.

The risk assessment team and all involved stakeholders will work towards making the best operational decision possible, being fully aware that it is likely that:

- No one single option will be acceptable to everyone, and
- Not all the required information will be available or be completely reliable.

Keeping proper records of this whole process is important.

# Section 3

# **HOW TO RESPOND TO A PLACE OF REFUGE REQUEST**

#### PART 1 - A SHIP ASKS FOR A PLACE OF REFUGE

A ship's master, agent, or owner will contact the Maritime Communication Traffic Services Centre (MCTS) to report a problem and ask for a Place of Refuge (POR).

Once the MCTS receives a POR request it will send the request and known details of the incident to concerned government departments or organizations, including Transport Canada Marine Safety and Security, PNR. MCTS will contact TC Marine Safety and Security, PNR through the existing communication channels. Please see *The Communications Flow Chart between TC and CCG* in Annex 2, Page 35.

When the TC Marine Safety Duty Officer receives the report, he or she will immediately inform the Manager of Compliance and Enforcement who will:

- Inform the Manager, Technical Services, PNR
- Inform the Regional Director, TC Marine Safety and Security about the Place of Refuge request.

The Regional Director, TC Marine Safety and Security will inform the CCG Regional Director (RD), Central and Arctic Region of the POR request. The CCG RD will then appoint someone to work with TC on the POR risk assessment team.

The Manager of Compliance and Enforcement, PNR will assemble the Regional Risk Assessment Team. See *Step 2*, Page 13 for more details.

# Step 1- Get the necessary ship information

#### Print out and fill in the following forms:

- Annex 1 Page 25– INFORMATION ON THE SHIP AND ITS CURRENT CONDITION Form A
- Annex 1 Page 26 ADDITIONAL INFORMATION ON THE SHIP Form B

TC Marine Safety and Security (PNR), with MCTS, will establish a way for the ship's owner, charterer, salvor or cargo owner(s) to provide all the information it needs to assess the initial request. You will find the list of required information in Annex 1 - Form A.

The risk assessment team will need additional information for the POR decision-making process. This information includes contact information for the ship and its owner, classification society, vessel details (tonnage, length, draft, etc) and information on the ships current condition. (See Annex 1 - Form B)

The ship may have already provided this information because of the reporting requirements of a number of international and national instruments. The international requirements are listed in the IMO MAS Guidelines [A.950 (23)], Annex 1.

TC Marine Safety and Security (PNR) will verify any information it receives, using whatever means available. This may include using the resources of other federal departments, provinces and territories. For example, it may use aircraft, ships or small vessels owned by the Department of National Defense (DND), CCG or the RCMP.

# Additional information for completing Form A:

For the section labeled "Describe the problem and associated issues", briefly summarize the problem or main concerns based on the incident information you've received. List all other related issues, as well. Be sure to take into account Canada's perspective as the coastal/Port State when completing this area of Form A.

*This information becomes the key statement* to use in the following steps. It will also help identify those people who can assist and those who the POR incident may affect.

# Step 2 - Identify the Regional Risk Assessment Team

### Regional Risk Assessment Team (RRAT)

TC Marine Safety and Security (PNR) will:

- Select RRAT members based on the needs of the particular incident.
- Notify the CCG Regional Director, who in turn will assign a CCG member to the RRAT.

#### Members of the RRAT should include:

- Manager, TC Compliance and Enforcement
- Manager, TC Marine Technical Services (PNR)
- An appointed CCG member
- Technical Inspector (Nautical)
- Technical Inspector (Machinery)
- Technical Inspector (Hull)and, when necessary
- Manager, TC Marine Security

TC Marine Safety and Security (PNR) can add members as the analysis and decision-making process moves forward. These members may include experts and advisors from other federal departments (Environment Canada /DFO), provincial and territorial governments, industry, and other authorities with responsibility for affected areas.

For potentially serious incidents, TC Marine Safety and Security (PNR) will establish a *Ship Rapid Assessment Team* (SRAT) to:

- Compare and evaluate shipboard data and plans; and
- Provide prompt technical guidance on the ship's stability and longitudinal strength following incidents, with the potential to cause structural damage.

In environmental emergencies, the multidiscipline *Regional Environmental Emergency Team* (*REET*) can provide:

- Environmental information and expertise, and
- Advice on the impacts of different courses of action.

TC Marine Safety and Security (PNR) has developed a list of government experts and authorities, organizations and experts you may need to contact for help in identifying and contacting risk assessment team members. You will find this list in Annex 1.

Members of the RRAT are responsible to:

- Provide technical expertise, guidance and research to the team;
- Use the relevant information gathered to complete the risk analysis and potential POR site evaluations; and
- Advise the Regional Director, TC Marine Safety and Security of the risk assessment results, with the recommended plan of action to address the situation.

TC Marine Safety and Security (PNR) will notify and assemble the RRAT when it receives a Place of Refuge request. The RRAT must document all of its analysis, evaluations and decisions.

# Step 3 – Identify potential stakeholders involved

As part of the Place of Refuge decision-making process, TC Marine Safety and Security (PNR):

- Must identify all stakeholders who could be affected by the incident and resulting decisions; and
- May be required to keep these stakeholders informed of the situation.

TC Marine Safety and Security (PNR) developed a list of stakeholders it may need to contact when responding to a Place of Refuge incident. This list is in Annex 1, Page 28.

# PART 2 - RISK ASSESSMENT OF THE SITUATION AND POTENTIAL OPTIONS

# Step 4 – Completing the Risk Assessment

#### Print out and fill in the following form:

Annex 1 – Page 25 – INFORMATION ON THE SHIP AND ITS CURRENT CONDITION – Form A

#### 4.0 – Initial Analysis of the ship's current situation

Based on the information it receives, the Regional Risk Assessment Team will quickly conduct an initial analysis of the ship's current situation to:

- Scope out the risk the problem presents; and
- Get an idea of the potential risks to the vessel while at sea.

The initial analysis should briefly cover the following sections.

#### 4.1 -Describe what can happen

Consider what could happen at sea, given the current situation. Such risk scenarios can help the RRAT:

- Identify the hazards and the potential risks;
- Predict the possible adverse consequences of what could happen, and the likelihood of it happening; and
- Estimate the urgency and time frame for making decisions.

Refer to the *National Places of Refuge Contingency Plan (PORCP)*, TP14707E, to access the definitions and examples of hazards and risks.

#### 4.2 -Decide if any immediate action is necessary

Depending on the findings of the initial analysis, it may be necessary to take immediate action, even though all the critical information and analysis may not be available. This might involve:

- Taking emergency measures outlined in existing contingency plans;
- Notifying other ships in the area;
- Providing immediate instructions to the ship to deal with urgent risks; and/or
- Taking action to complement efforts already underway by the ship.

#### 4.3 -Decide if an inspection team should be deployed

When safe, appropriate and if time allows, an inspection team should board the ship to gather additional data for further assessment and to support decision-making.

Based on the inspection team's evaluation, you may need to update the information previously recorded on "The Ship and Its Current Status – Form A".

#### **Notes:**

- You may fill out Form A several times during an incident as the situation changes.
- Be sure to include the date and time when you update the Form A.

The input and the analysis of the risks the inspection team uncovers are vital to each of the remaining steps in the decision-making process. Team members may have to remain on board to provide advice, report on actions the ship or salvor is taking, and to help monitor the condition of the ship.

TC Marine Safety and Security (PNR) has a process in place for assembling an inspection team and placing this team on board the ship. It maintains a list of qualified personnel who could be called upon to provide this expert shipboard inspection function.

# **Step 5- Identify the Options**

#### Print out and work through the following form:

- Annex 1 Page 29 CRITERIA FOR SELECTING A SUITABLE PLACE OF REFUGE Form C (STEPS 5, 6, 7)
- Annex 1 Page 30 Areas that could be put at risk in the event of a casualty Form D (STEPS 5, 6, 7)
- Annex 1 Page 32 POR Site Assessment Details Form E (STEPS 5, 6, 7)

#### 5.1 -Identify Possible Places of Refuge Sites

Consider all possible Places of Refuge sites that could give the ship what it needs to deal with the problem, while reducing the threat of further damage.

The suitability of a site will depend on the factors needed to deal with the specific incident. Some factors are depth, distance, approaches, docking facilities, holding ground, lightering equipment, access to pollution prevention kits, etc.

Conduct further assessment of the most suitable POR sites you identify at this step before choosing a final location.

#### 5.2 – Review the Regional Risk Assessment Team and Stakeholder Lists

Once you have identified Place of Refuge options, review the Regional Risk Assessment Team and list of stakeholders to see if you should add any other experts or stakeholders. This is the time to make any additions.

**Remember:** The type of expertise needed will vary from one incident to the next, as each situation is unique.

# Step 6 – Calculating Risk Estimates for Each Identified Option

#### Refer to:

The Probability and Risk Matrix in Annex 1 – Page 31 to complete this section

This risk matrix can help you determine the level of risk for a particular hazard using objective criteria relating to probability and severity.

# **6.1 - Describe all possible risks** (risk scenarios, hazards, consequences, probability)

For each potential Place of Refuge site, the regional risk assessment team should do risk scenarios by describing what mishaps could happen. These risk scenarios should:

- Identify all underlying hazards and related risks; and
- Include the voyage from the ship's current position to the Place of Refuge.

The team should also develop risk scenarios if the ship is to:

- 1) Remain in the same position;
- 2) Continue its voyage; or
- 3) Be taken out to sea.

The team may need to identify more than one risk scenario for a particular option if:

- Very different incidents could happen; or
- A different sequence of events would lead to different risks.

For example, one scenario may describe the worst likely incident with a certain probability, while another would describe an incident with less severe consequences but with a much higher likelihood of occurring. Depending on the severity and likelihood of the different scenarios for a particular option, the assessment team may conduct further risk estimates for several options.

#### **6.2** -Estimate the Risk Level (risk matrix)

Estimate the overall risk associated with each option by considering the severity of the adverse affects and the probability of the risk scenario occurring.

You can use *The Risk and Probability Matrix* (Annex 1, Page 31) to assign an overall level of risk for each option. Having an estimate of the level of risk will help you:

- Determine the appropriate risk control measures needed; and
- Compare the risk associated with different options.

## 6.3 -Identify Risk Control Measures and Evaluate their Impact

Once the team estimates the overall risk for each scenario, it should identify the control measures to reduce the risks to acceptable levels. These control measures will:

- Prevent the risk or reduce the probability of it occurring, and
- Decrease the risk or lessen the impact should it happen.

Examples of control measures are:

- Tugs,
- Pilots,
- Alternate routes,
- Temporary repairs,
- Cargo transfer/lightering
- Pollution response equipment,
- Restrictions on access and sea areas,
- Contingency plans,
- Special conditions, or
- Operational procedures.

Control measures may introduce new risks and costs you must factor into the overall risk level calculations.

#### **Insurance and Financial Safeguards**

The costs of measures to prevent or minimize pollution damage and any resulting damage in an actual spill may be offset by the insurance or other financial safeguards (i.e., financial bond, bank guarantee, indemnity fund, P&I Club, etc.) that domestic law (e.g. the Marine Liability Act) and international conventions require the ship owner to have.

# Step 7 - Evaluate and compare the options

Evaluate and compare the overall risk levels of the various scenarios. Weigh the advantages and disadvantages of each option carefully. Does the option:

- Deal effectively with the ship's problem?
- Avoid risks associated with the other options?
- Present an acceptable degree of difficulty?
- Appeal to stakeholders despite residual risks and proposed actions, including the proposed control measures?
- Create international and bilateral impacts?
- Pose security risks?

#### PART 3 – IMPLEMENTING AND MONITORING ACTION PLAN

# Step 8 – Make the Place of Refuge decision

At this step, the Regional Risk Assessment Team will be able to decide whether to grant or deny access to a Place of Refuge. The team should provide access with appropriate risk control measures in place;

- When the estimated level of risk is considered low (i.e. risk level 1-3); or
- When the risk is reduced as much as possible and the risk would clearly be lower than if the ship were to remain at sea.

When it grants access, the Regional Risk Assessment Team must clearly describe the Place of Refuge and control measures required to the ship's master, salvor or owner.

When it refuses access to a Place of Refuge, the Regional Risk Assessment Team should explain its decision to the ship. If it denied access to a Place of Refuge because the risk was too great, Transport Canada and the Canadian Coast Guard should offer all possible assistance to the ship offshore, to prevent and control any potential environmental damage.

The Regional Risk Assessment Team should also tell the ship:

- What help is available; and
- What control measures it must take, if any.

# Step 9 - Examine and monitor the ship's proposed action plan until the situation is resolved

The ship shall prepare an action plan, taking into account the Regional Risk Assessment Team's decision and any control measures the team requires the ship to take.

Once an action plan is agreed on, the Regional Risk Assessment Team should notify all authorities and other stakeholders as soon as possible.

The Regional Risk Assessment Team should monitor the situation and action plan closely to deal with any changes that would increase the risks. Any changes in the situation could require the Team to:

- Re-evaluate the situation,
- Implement a different plan of action with appropriate control measures, and
- Continue monitoring the situation until it is resolved.

# Step 10 - Get feedback on the effectiveness of the process

Once the PORCP-PNR process is complete, TC Marine Safety and Security (PNR) will:

- Ask those involved in the incident to comment on the event;
- Record the feedback: and
- Use the feedback to make recommendations to the Marine Safety and Security Executive for changes in these guidelines.

# Step 11 – Final Report

The TC Lead Inspector will make sure all of the forms and reports on the POR decision-making process are saved in the incident file for future reference.

# Section 4

# PLAN REVIEW, EXERCISES AND TRAINING PACKAGE

# Process to Review and Update the PORCP-PNR

TC Marine Safety and Security (PNR) will:

• Work with the CCG and other stakeholders to review the PORCP-PNR annually. Update the plan when required.

This review will include any feedback received:

- From TC, CCG, the RRAT and stakeholders after an actual Place of Refuge (POR) incident and/ or
- After regional POR exercises involving TC, CCG, the RRAT and other stakeholders. These exercises may also include representatives from other international jurisdictions, depending on the scope of the exercise.

#### **Exercises**

TC Marine Safety and Security (PNR) will plan and organize annual exercises. These exercises will alternate between full and table-top exercises. The purpose of these exercises is to:

- Test the PORCP-PNR to:
  - o Make sure it is clear, concise, and easy to follow and use;
  - o Identify any areas that need to be updated to make it more efficient;
- Provide training on how to use the PORCP-PNR; and
- Gather feedback from TC, CCG, the RRAT, other stakeholders and international jurisdictions when applicable.

# **Training**

TC Marine Safety and Security (PNR) has developed a training package on the PORCP-PNR that will be available to TC, CCG and RRAT members.

# **ANNEXES**

# **ANNEX 1**

**FORMS AND CHECKLISTS** 

### Annex 1 - OVERVIEW OF THE POR DECISION-MAKING PROCESS

Places of Refuge Decision-Making Process (OVERVIEW OF PROCESS)				
Element	Step and Description			
Ship Request	<ul> <li>1- Obtain the necessary ship information. (Step 1)</li> <li>2- Describe the problem and associated issues. (Step 1)</li> <li>3- Identify the risk assessment team and the stakeholders the team may need to consult or keep informed. (Step 2 &amp; 3)</li> </ul>			
Risk Assessment	<ul> <li>4 - Preliminary analysis of current situation. (Step 4)</li> <li>4.1 - Describe what can happen (risk scenarios, hazards, risks, consequences, probability, urgency)</li> <li>4.2 - Decide if any immediate action is necessary</li> <li>4.3 - Decide whether or not to deploy an inspection team</li> <li>5- Identify the Options. (Step 5)</li> <li>5.1 - Identify possible places of refuge</li> <li>5.2 - Consider if you should add anyone to the risk assessment team or the stakeholder list</li> <li>6- Estimate the risk for each option. (Step 6)</li> <li>6.1 - Describe what can happen (risk scenarios, hazards, risks, consequences, probability)</li> <li>6.2 - Estimate the risk level (risk matrix)</li> <li>6.3 Identify risk control measures and evaluate their impact on the risk level</li> <li>7 - Evaluate and compare the options. (Step 7)</li> </ul>			
Action and Monitor	<ul> <li>8 - Decide to: (Step 8)</li> <li>Grant access to a Place of Refuge and specify what control measures the ship needs to take; or</li> <li>Deny access to a Place of Refuge and explain: <ul> <li>The reasons why;</li> <li>What assistance the ship can receive; and</li> <li>The control measures to take, if any.</li> </ul> </li> <li>9 - Review and agree on the ship's proposed action plan and monitor its implementation until the situation is resolved. (Step 9)</li> <li>10 - Get feedback on the effectiveness of the process. (Step 10)</li> <li>11 - Prepare Final Report (Step 11)</li> </ul>			

# $Annex\ 1 - Overall\ Steps - Places\ of\ Refuge\ Contingency\ Plan - PNR\ Checklist$

		OVERALL STEPS - CHECKLIST				
Date Sta			Date Completed (YYYY-MM-DD)			
Ship's I Call Sig			Type of Vessel			
	Official Number / IMO Number					
Flag			Location (Lat. + Long. coordinates)			
Step	Action				Yes	No
1		ituation report and / or Information from the ship, lep 1 – Forms A & B.	MCTS, agent or o	ther sources.		
2	2 Summarize TCMS's concerns on hazards and associated issues.  Complete Form A.					
3	Identify possible risk assessment team members. (TC, CCG, EC, USCG, etc.) Identify other interested stakeholders. Review potential assessment team members and stakeholders list found in Annex 1, Page 28.					
Preliminary analysis of current situation with the assessment team.  Identify risks, hazards, immediate action needed for POR request.  Decide if an inspect team needs to be deployed.  Complete Step 4.						
5 Identify feasibility of each potential POR location using available information. Complete Step 5. Review members of the risk assessment team and interested stakeholders.						
6	Estimate	the risks and hazards for each POR option. (Step 6 the risk level. ( <i>Use the Risk Matrix, Annex 1, Page</i> the risk control measures and their impact.		his process.)		
7	Evaluate	te and compare POR options. Complete Annex 1, Form E.				
8	Decision – grant or deny access to a POR with control measures.					
9		and agree on ship's proposed action plan. implementation of action plan.				
10	Debrief I on the pr					
		Be sure to thoroughly document the entire F	POR decision-mak	ing process.		

	Completed By	Sighted By
Signature		
Print Name		
Title		
Date		

Annex 1 – Steps 1 & 2 – Information on the Ship and its Current Condition – Form A

Information	on the Ship Request [as per IMO Resolution A.949 (23)]	FORM A
Information Provided by the Ship	Marine Safety's Notes	
What assistance is required from Canada? (Ex: lightering, pollution fighting measures, towage, stowage, salvage, storage, repairs, etc.)		
Explain why the ship needs assistance, including the cause and extent of the damage or problem.  (Ex: fire, explosion, damage to ship, including mechanical and structural failures, collision, pollution, impaired stability, grounding, etc.)		
What are the hazards and associated risk and estimated consequences of potential casualty if the ship:		
Remains in the same position,		
Continues on its voyage,		
Reaches a Place of Refuge, or		
Is taken out to sea.		
<b>Describe the problem and associated issues.</b> Briefly summarize the problem and issues from Canada's perspective.		

Annex 1 – Step 1 - Additional Information on the Ship – Form B

	SHIP CONTACT INFORMATION	FORM B	Page 1 of 2
Ship Identity (Name, flag, IMO / MMSI number)			
Master's name and nationality			
Is the Master still onboard? (Y/N)			
Name of the person on the ship making the request; include date and time			
Last port of call			
Working language on board			
Security (certificate and level)			
<ul> <li>Local representative of the company</li> <li>Name</li> <li>Address</li> <li>Telephone number and email</li> </ul>			
Registered Owner  Name Address			
<ul> <li>Telephone number and email</li> <li>Registered Company         <ul> <li>Name</li> <li>Address</li> </ul> </li> <li>Telephone number and email</li> </ul>			
If Bare-Boat Charter  Name Address Telephone number and email			
Classification Society Local			
Representative      Name     Address     Telephone number and email			
Is the ship insured? Ship's insurers:  Name Address Telephone number and email			
Local P&I Representative  Name Address			
Telephone number and email			
Type of Ship	Si	hip Particulars Year Constructed	
Size	Tonnage Length Beam	Draft of Ship Air Draft	
Propulsion, Thrusters			
Anchoring Gear			
Towing Gear			
Fuel (Type and Quantity)			
Nature and condition of cargo, stores, bunkers, in particular dangerous goods  Type, Quantity, and Condition			

Annex 1 – Step 1 - Additional Information on the Ship – Form B

	Ship Pa	articulars	FORM B	Page 2 of 2
Position of ship (and how it was determined)				
Course and speed (making way, adrift or at anchor)				
Route Information				
Status of crew, salvors, others (number on board and assessment of human factors, including fatigue				
Details of any casualties on board or near the ship				
Actual pollution or potential for pollution				
What is the urgency of the situation? Likelihood of casualty?				
Sea room	Depth	Drift	Traffic Density	
Has the Classification Society been informed? (Y/N)				
		Ship Condition	(damage / defects / deficie	ncies)
Seaworthiness of the ship (buoyancy, stability, list, trim)				
Status of propulsion, power generation and steering				
Status of essential ship borne navigation aids				
Details of changes in ship condition since the initial event				
		Ass	istance Information	
Master's / Salvor's Intentions				
Names of vessels in area or assisting in situation				
Response actions taken by the ship (i.e., salvors contacted, engaged, at scene)				
Distance and time to the Place of Refuge				
Details of what is required from a Place of Refuge				
Docking ability				
Is anchoring possible?				
Can the ship be accessed by helicopter?				
Additional notes				

Annex 1 – Step 2 & 3 – List of Potential Risk Assessment Team Members and Stakeholders

# List of Potential Risk Assessment Team Members and Stakeholders

- TC Marine Safety (Ship Rapid Assessment Team, ship technical and operational expertise, routing)
- DFO CCG (response, spill and clean-up expertise)
- DFO (scientific and operational expertise on fisheries, ocean, habitat)
- Environment Canada (Regional Environmental Emergency Team input, weather forecast)
- Ship Inspection Team (TC Marine Safety)
- TC Legal Services
- TC Marine Security
- TC Communications
- Provincial/Territorial authorities
- Municipal authorities
- Classification society
- Emergency services (police, fire)
- Salvage companies
- Shipyards
- Surveyors
- Health officials
- Canada Revenue Agency (CRA)
- Search and Rescue (SAR)
- Department of National Defense (DND)
- Department of Foreign Affairs and International Trade Canada (DFAIT)
- Royal Canadian Mounted Police(RCMP)
- United States Government (State of Alaska)
- Government of Denmark (Greenland)
- Flag State
- Parks Canada (marine parks)
- Aboriginal groups
- Shipping industry
- Fishing industry
- Recreational Boating industry

Annex 1 – Step 5, 6 & 7 – Criteria for Selecting a Suitable Place of Refuge – Form C

What does the ship need to d	deal with the problem?	Suitability of O	ptions	FORM C	
Potential Requirements	Details	Refuge A	Refuge B	Refuge C	
Shelter (weather, sea, swell, ice)					
Safe anchorage (holding ground, depth)					
Facilities / equipment (reception facilities, transfer facilities [i.e., pumps, hoses, barges, lightering, etc)					
Repair Facilities (shipyard, cranes, cargo gear, personnel)					
Salvage and Towing					
Emergency Facilities (Fire fighting equipment)					
Docking Requirements (draught, length, availability)					
Sea room to maneuver					
Other					
Other Place of Refuge Considerations	Details	Refuge A	Refuge B	Refuge C	
Navigation (traffic, unobstructed approach, pilots, tides, currents, ice, anchorage)					
Assistance nearby if needed (Oil and chemical response, salvage, towage)					
Distance to refuge versus urgency					
Accessibility by land, sea and air					
Ability of the refuge to contain or limit the spread of pollution					
Characteristics of the refuge that would reduce the impact of pollution or facilitate clean-up efforts					
Emergency Response Capabilities (i.e.: SAR, evacuation, medical, HAZMAT)					
Is there a site suitable for beaching the problem ship, if necessary?					
Security, ability to restrict are, access					
Weather and Sea conditions (prevailing winds, tide, current, ice, weather, sea)					

Annex 1 – Steps 5, 6 & 7 – Areas That Could Be Put at Risk in the Event of a Casualty – Form D

Consider each of these factors for each potential POR site identified. Note some factors may not apply to all options.

Heal	th, Safety and Se	FORM D	
	Refuge A	Refuge B	Refuge C
Public Safety / Security			
(Consider distance to populated areas, size, etc.)			
Persons on Board			
Responders			
Salvors			
Persons in the Vicinity of the Ship			
Other Ships in the area			
Air quality, contamination			
	Environmental		
Sensitive areas (habitat, species), ecological reserve or protected area			
Wildlife (marine, terrestrial, avian)			
Waters in the vicinity of the ship			
Adjacent coastlines			
Neighbouring countries (U.S.A, Denmark)			
	Socio-Economic		
Community and business interests (Consider distance to communities and industrial areas)			
Impact on fisheries (offshore, approaches, shellfish)			
Public and Private Property			
Infrastructure (Bridges, channels, blockage, dock facilities, other installations)			
Port delays / Interruptions			
Costs (i.e., salvage, environmental clean up, transport, cargo handling, repatriation of crew/passengers, emergency services, repair facilities, removal of wreck, etc.)			
Marine Transportation System			
Offshore oil and gas activities			
The ship and its cargo			

Annex 1 – Step 6 – Risk and Probability Matrix

# **RISK MATRIX**

This risk matrix can help you determine the level of risk for a particular hazard by providing objective criteria that relate to probability and severity.

Severity of Adverse	Probability of Adverse Consequences Over Time				
Consequence	Highly Probable	Probable	Unlikely	Improbable	
Catastrophic	9	8	7	5	
Severe	8	7	6	3	
Significant	7	6	4	2	
Minor	5	3	2	1	

# Probability and Severity of Adverse Consequences and the Overall Risk Level

# **Estimate Severity of Adverse Consequences:**

You can categorize the severity of the overall consequences associated with a risk scenario as follows:

*Catastrophic*: multiple deaths, multiple major injuries, extreme property or environmental damage, extreme negative impact on the economy, major national or long term impact.

**Severe:** death, major injuries, severe property or environmental damage, loss of the ship, major risk to safety or restriction to shipping, regional impact.

Significant: many injuries, significant property or environmental damage, short-term consequences, local impact

*Minor*: some minor injuries, some property or environmental damage, minor short-term consequences.

## **Estimate Probability of Adverse Consequence:**

You can categorize the overall probability associated with a risk scenario as follows:

Highly probable: accident will almost certainly occur.

Probable: accident is likely to occur.

Unlikely: accident could occur.

Improbable: accident is not likely to occur.

Annex 1 – POR Site Assessment Details - Form E (Steps 5, 6 & 7)

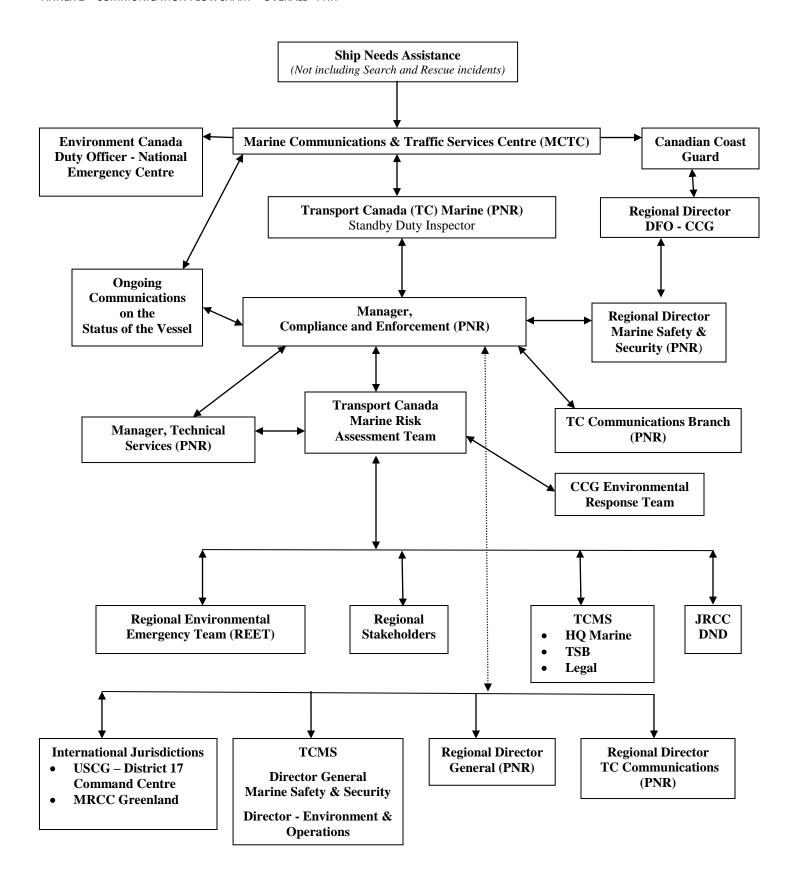
**Assessment Details** – (Complete one form for each location you consider.)

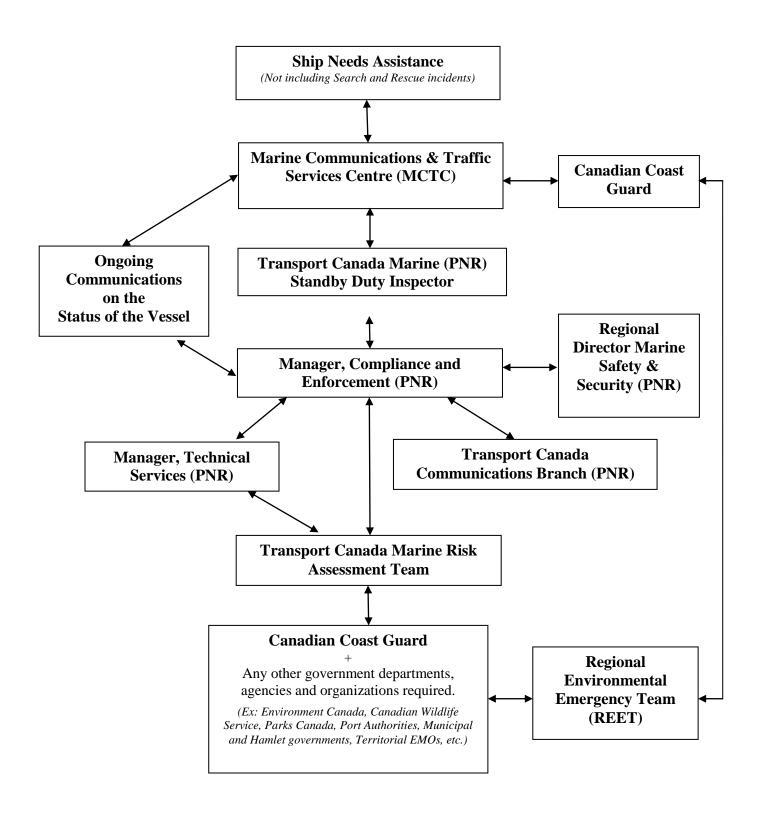
Assessment Details – (Co	essment Details – (Complete one form for each location you consider.)						
For POR location:	– (Complete one form for each location you consider.)						
What is the problem and associated issues: (Step 1 & 2)							
<b>Options</b> (i.e. port / place / in position / continues voyage): (Step 5)							
Describe what could happen (risk scenario, hazards, risks): (Step 6)							
<b>Potential Consequence:</b> (Step	6)						
Risk Estimation:	Consequence category:	Probability ca	tegory:	Risk Level:			
			legory.	Hish Zeven			
	Specify:	Specify:					
Control Measures:							
Risk Evaluation:	Advantages:	Advantages:					
(Step 7)							

# **ANNEX 2**

**COMMUNICATION FLOW CHARTS** 

ANNEX 2 - COMMUNICATION FLOWCHART - OVERALL - PNR





# **ANNEX 3**

**RESOURCES AND REFERENCE MATERIALS** 

ANNEX 3 - RESOURCES AND REFERENCE MATERIALS

#### **Acts, Regulations and Resolutions**

#### International

International Maritime Organization (IMO)

- IMO Resolution A.949 (23) "Guidelines on Places of Refuge for Ships in Need of Assistance"
  - http://www.imo.org/blast/blastDataHelper.asp?data\_id=9042&filename=949.pdf
- IMO Resolution A. 950 (23) "Maritime Assistance Services (MAS)
  - http://www.imo.org/blast/blastDataHelper.asp?data\_id=9043&filename=950.pdf
- IMO Place of Refuge Information Document
  - http://www.imo.org/blast/mainframe.asp?topic\_id=746

#### Canadian

- Canada Shipping Act, 2001
  - http://www.tc.gc.ca/eng/acts-regulations/acts-2001c26.htm
- Arctic Waters Pollution Prevention Act
  - http://laws-lois.justice.gc.ca/eng/acts/A-12/
- Marine Transportation Security Act

http://laws-lois.justice.gc.ca/eng/acts/M-0.8/

#### **Additional Reference Documents**

- Transport Canada's National Places of Refuge Contingency Plan (PORCP), TP 14707E.
  - http://www.tc.gc.ca/eng/marinesafety/tp-tp14707-menu-1683.htm
- Canada-United States Joint Marine Pollution Contingency Plan (JCP)
  - http://www.dfo-mpo.gc.ca/Library/343409.pdf
- Incident Notification Procedure for the purpose of informing TC Senior Management and Public Safety Canada (RDIMS # 3670719)
- Transport Canada General Notification Matrix for a Major Marine Incident (RDIMS # 348747)

#### **Nautical Charts**

The Canadian Hydrographic Service produces all Canadian nautical charts. For a list of current nautical charts, please see:

- Nautical Charts and Publications, Catalogue 4, Arctic, 2008,
- Nautical Charts and Publications, Catalogue 3, Ontario/Manitoba including the Great Lakes, or
- The Canadian Hydrographic Service website at: www.charts.gc.ca

#### **Publications**

- Sailing Directions, ARC 400, Canadian Hydrographic Service, Department of Fisheries and Oceans Canada, First edition, 2009.
- Sailing Directions, ARC 401, Hudson Strait, Hudson Bay and Adjoining Waters, Canadian Hydrographic Service, Department of Fisheries and Oceans Canada, First edition, 2009.
- Sailing Directions, ARC 403, Western Arctic, Canadian Hydrographic Service, Department of Fisheries and Oceans Canada, First edition, 2011.
- Sailing Directions, Arctic Canada, Canadian Hydrographic Service, Department of Fisheries and Oceans Canada, Volume II, Fourth edition, 1985.
- Sailing Directions, Great Slave Lake and Mackenzie River, Canadian Hydrographic Service, Department of Fisheries and Oceans Canada, Seventh Edition, 1989.
- Canadian Tide and Current Tables, Arctic and Hudson Bay, Department of Fisheries and Oceans Canada, Volume 4, 2012.
- Marine Environmental Handbook, Arctic Northwest Passage, Department of Fisheries and Oceans Canada, First Edition, 1999.
- Inland Waters List of Lights, Buoys and Fog Signals, Canadian Coast Guard, 2009.
- Canadian Tidal Manual, Department of Fisheries and Oceans Canada, 1983.
- Ice Navigation in Canadian Waters, Canadian Coast Guard, Revised September 1999.