

*If there is any discrepancy between the English and French document, the English document takes precedence.*

Unclassified – Non Classifié

## Request for Information – Ship Based Chemical Detection System for the Canadian Surface Combatant

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### **Disclaimer**

This Request for Information is neither a call for tender nor a Request for Proposal (RFP). No agreement or contract will be entered into based on this Request for Information. The issuance of this Request for Information is not to be considered in any way a commitment by the Government of Canada, nor as authority to potential Respondents to undertake any work that could be charged to Canada. This Request for Information is not to be considered as a commitment to issue a subsequent solicitation or award contract(s) for the work described herein.

Participation in this RFI is encouraged but is not mandatory. There will be no short-listing of potential Suppliers for the purposes of undertaking any future work as a result of this RFI. Similarly, participation in this RFI is not a condition or prerequisite for the participation in any potential subsequent solicitation.

Respondents will not be reimbursed for any costs incurred by participating in this RFI.

### **1. Background**

Canada's defence policy, "*Strong, Secure, Engaged*" (SSE), has committed to investing in 15 Canadian Surface Combatant (CSC) ships. These ships will be Canada's major surface component of maritime combat power. With its effective warfare capability and versatility, it can be deployed rapidly anywhere in the world, either independently or as part of a Canadian or international coalition. The CSC will be able to deploy for many months with a limited logistic footprint.

The CSC will be able to conduct a broad range of tasks, including:

- Delivering decisive combat power at sea;
- Supporting the Canadian Armed Forces, and Canada's Allies ashore;
- Conducting counter-piracy, counter-terrorism, interdiction and embargo operations for medium intensity operations; and
- Delivering humanitarian aid, search and rescue, law and sovereignty enforcement for regional engagements.

The acquisition is for 15 ships to replace both the retired Iroquois-class Destroyers and the Halifax-class frigates. The construction of the first CSC vessel is expected to begin in 2023/2024.

### **2. Requirement Description**

The Ship Based Chemical Detection System is fitted to give an automatic warning of the presence of chemical and biological agents and is fitted to detect agents both internally and externally to the CSC Ship. The SICS is comprised of detectors installed near key operations positions, which continuously monitor air within the ship and via Through Bulkhead Units, to sample air outside of the ship. The system then feeds information to the ships Integrated Platform Management System. On detection of a chemical or biological presence above a set threshold, a relay contact within the detector is automatically made to generate a signal to the Ships Public Address and Alarm Systems for the crew to take appropriate action.

### 3. Purpose

The purpose of this Request for Information is to identify potential suppliers that have previously provided and/or installed Ship based Chemical Detection Systems with integration of these sensors with an Integrated Platform Management System. A list of questions is provided in Annex A to this RFI.

### 4. Potential Scope and Constraints

#### 4.1. National Security Exception

In regard to national security interests, at this time, Canada believes it will not likely invoke its right under national and international trade agreements, and not use a National Security Exception (NSE) for this procurement.

#### 4.2. Industrial and Technological Benefits Policy

The Industrial and Technological Benefits (ITB) Policy, including value proposition, will not apply to the Ship Based Chemical Detection System procurement. Any potential winning Bidder(s) will not be required to undertake business activities in Canada equal to the value of any resultant contract(s).

### 5. Schedule

Canada is finalizing the procurement schedule which will be communicated under a future RFI amendment.

### 6. Submitting Questions

- a) Questions about this RFI can be submitted to the Contracting Authority at the positional mailbox identified in section 7 below up to five (5) working days before the closing date and time indicated on the cover page of this document. Canada may not answer questions received after that time.
- b) To ensure the consistency and quality of information provided to suppliers, significant questions received and the answers will be posted on the Government Electronic Tendering Service (GETS) as an amendment to this RFI.

### 7. Point of Contact

Prospective bidders are asked to submit their written response in either official language to the questions identified in Annex A via email directly to:

Attn: Benjamin Hoar  
Material Acquisition and Support Specialist,  
Canadian Surface Combatant Project (CSC)  
Department of National Defence  
PMOCSCPFM-BGPNCCGAF@forces.gc.ca

### 8. Identification of Response:

Each supplier must ensure that its name and return address, the solicitation number, and the closing date are included in the response in a prominent location. The supplier must also identify a representative whom Canada may contact about the response, including the person's name, title, address, telephone number and email address.

## **9. Confidentiality**

If a supplier considers any portion of its response to be proprietary or confidential, the supplier must clearly mark those portions of the response as proprietary or confidential. Canada will treat the responses in accordance with the Access to Information Act and any other laws that apply.

## **10. Closing date for the RFI:**

Responses to this RFI are to be submitted to the CSC Procurement Authority identified above, on or before, close of business on November 10<sup>th</sup>, 2023, at 4 PM Est.

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## Annex A – Ship Based Chemical Detection System Standard List of Questions

The Request for Information responses should address the following questions:

- a. Has your organization built and delivered Ship Based Chemical Detection Systems that meet the following high-level requirements in Annex A.1?
- b. To meet the high-level requirements identified in Annex A.1, would your organization be required to design and manufacture a new solution, or provide Commercial and Military-off-the-Shelf components (COTS/MOTS)?
- c. Have your products previously been integrated into a ships Integrated Platform Management Systems and a ships Public Address and Alarm System? If not, would you require the help of an outside firm?
- d. Referencing the high-level requirements in Annex A.1 included in the present RFI, are there any issues therein that would prevent an otherwise suitable solution from being proposed?
- e. Outline any key assumptions, constraints, concerns, conclusions and recommendations that, in respondent's opinion, Canada should consider as the project evaluates the various options.
- f. If possible, a Bill of Material should be submitted as part of this RFI.

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### Annex A.1 Internal and External Chemical Agent Detection High Level Specification

The following are the high-level requirements that the CSC Ship Based Chemical Detection Systems will be required to meet. Additional requirements will be provided at time of RFP issue.

1. The proposed internal and external Chemical and Biological Agent detection solution must be able to detect the following chemical and biological agents:

Hydrogen Cyanide	Cyanogen Chloride	Phosgene
Diphosgene	Chlorine	Sulphur Mustard
Lewisite	Tabun	Sarin
Soman	VX	Viruses
Bacteria	Rickettsiae	
Toxins	Bio-Regulators	

1. For the External Chemical Agent detection solution, the proposed solution must ensure no ingress of water during rough weather.
2. The proposed internal and external Chemical Agent detection solution must provide chemical and biological status updates while:
  - Carrying out a series of self-checks while in Standby mode;
  - Operate in sample mode;
  - Be able to display level of chemical and biological exposure as separate bar indication;
  - Be able to provide chemical and biological agent type and level to an Integrated Platform Management System; and
  - Be capable of reporting fault conditions and equipment temperature to the Integrated Platform Management System.
3. The proposed internal and external chemical solution must:
  - Perform a self-test application of power; and
  - Carry out a confidence test by injecting a known chemical or biological source.
4. The proposed internal and external chemical solution must have the ability to provide chemical and biological alarms to the ship's Public Address and Alarms subsystem when a certain threshold is met and must:
  - Provide alarm acknowledgement and reset functionality; and
  - Automatically reset its alarm state, if after 1 minute no further chemical or biological activity is detected above a set limit.
5. The proposed solution shall be categorized as Class 1 Equipment, in accordance with MAP-470 Shock Design Manual.