



National Defence

Défense nationale

National Defence Headquarters  
Ottawa, Ontario  
K1A 0K2

Quartier général de la Défense nationale  
Ottawa (Ontario)  
K1A 0K2

## REQUEST FOR PROPOSAL DEMANDE DE PROPOSITION

### RETURN BIDS TO: RETOURNER LES SOUMISSIONS À :

Bid Receiving – PWGSC / Réception des  
soumissions - TPSGC  
11 Laurier St. / 11 rue Laurier  
Place du Portage, Phase III  
Core 0B2 / Noyau 0B2  
Gatineau  
Québec  
K1A 0S5  
Fax : 819-997-9776

#### Proposal To: National Defence Canada

We hereby offer to sell to Her Majesty the Queen in right of Canada, in accordance with the terms and conditions set out herein, referred to herein or attached hereto, the goods and services listed herein and on any attached sheets at the price(s) set out therefore.

#### Proposition à : Défense nationale Canada

Nous offrons par la présente de vendre à Sa Majesté la Reine du chef du Canada, aux conditions énoncées ou incluses par référence dans la présente et aux annexes ci-jointes, les biens et services énumérés ici et sur toute feuille ci-annexée, au(x) prix indiqué(s).

<b>Title/Titre</b> Auxiliary Gas Supply Systems and Bailout Open Circuit Valve  Systèmes auxiliaires d'approvisionnement en gaz et soupape de secours en circuit ouvert	<b>Solicitation No – N° de l'invitation</b>  <b>W8472-185698/A</b>
<b>Date of Solicitation – Date de l'invitation</b>	
<b>Address Enquiries to – Adresser toutes questions à</b> Dalton Sicard D Mar P 2-3-2-2 Dalton.sicard@forces.gc.ca	
<b>Telephone No. – N° de téléphone</b>	<b>FAX No – N° de fax</b>
<b>Destination</b> (a) 2B1 CFB Esquimalt Esquimalt, B.C. 250-363-4963 (b) 7J1 12 Wing Shearwater Shearwater, NS 902-720-1576	

#### Instructions:

**Municipal taxes are not applicable. Unless otherwise specified herein all prices quoted must include all applicable Canadian customs duties, GST/HST, excise taxes and are to be delivered Delivery Duty Paid including all delivery charges to destination(s) as indicated. The amount of the Goods and Services Tax/Harmonized Sales Tax is to be shown as a separate item.**

**Instructions: Les taxes municipales ne s'appliquent pas. Sauf indication contraire, les prix indiqués doivent comprendre les droits de douane canadiens, la TPS/TVH et la taxe d'accise. Les biens doivent être livrés « rendu droits acquittés », tous frais de livraison compris, à la ou aux destinations indiquées. Le montant de la taxe sur les produits et services/taxe de vente harmonisée doit être indiqué séparément.**

#### Solicitation Closes –

#### L'invitation prend fin

At – à : 14:00 Eastern  
Standard Time (EST)

On - le : 2017-12-20

Delivery required - Livraison exigée	Delivery offered - Livraison proposée
Vendor Name and Address - Raison sociale et adresse du fournisseur	
Name and title of person authorized to sign on behalf of vendor (type or print) - Nom et titre de la personne autorisée à signer au nom du fournisseur (caractère d'imprimerie)	
Name/Nom _____	Title/Titre _____
Signature _____	Date _____

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Solicitation No. - N° de l'invitation  
W8472-185698  
Client Ref. No. - N° de réf. du client

Amd. No. - N° de la modif.  
File No. - N° du dossier  
W8472-185698

Buyer ID - Id de l'acheteur  
Q23  
CCC No./N° CCC - FMS No./N° VME

**ANNEX “C” , PHASE 1, Bidder’s Compliance Check, Table 1 AGS and BOV Requirements A-1.....20**  
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## **PART 1 - GENERAL INFORMATION**

### **1.1 Security Requirements**

There is no security requirement associated with this bid solicitation.

### **1.2 Statement of Requirement**

The "Requirement" is detailed under Annex "A" SOW.

### **1.3 Debriefings**

Bidders may request a debriefing on the results of the bid solicitation process. Bidders should make the request to the Contracting Authority within 15 working days from receipt of the results of the bid solicitation process. The debriefing may be in writing, by telephone or in person.

### **1.4 Trade Agreements**

The requirement is subject to the provisions of the World Trade Organization Agreement on Government Procurement (WTO-AGP), Canadian Free Trade Agreement (CFTA) and the North American Free Trade Agreement (NAFTA).

## **PART 2 - BIDDER INSTRUCTIONS**

### **2.1 Standard Instructions, Clauses and Conditions**

All instructions, clauses and conditions identified in the bid solicitation by number, date and title are set out in the *Standard Acquisition Clauses and Conditions Manual* (<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual>) issued by Public Works and Government Services Canada.

Bidders who submit a bid agree to be bound by the instructions, clauses and conditions of the bid solicitation and accept the clauses and conditions of the resulting contract.

The 2003 (2017/04/27) Standard Instructions - Goods or Services - Competitive Requirements, are incorporated by reference into and form part of the bid solicitation.

- a) Section 02, Procurement Business Number is deleted in its entirety.

Subsection 5.4 of 2003, Standard Instructions - Goods or Services - Competitive Requirements, is amended as follows:

Delete: 60 days  
Insert: 180 days

### **2.2 Submission of Bids**

Bids must be submitted only to Public Works and Government Services Canada (PWGSC) Bid Receiving Unit by the date, time and place indicated on page 1 of the bid solicitation.

### **2.3 Enquiries - Bid Solicitation**

All enquiries must be submitted in writing to the Contracting Authority no later than 7 days before the bid closing date. Enquiries received after that time may not be answered.

Bidders should reference as accurately as possible the numbered item of the bid solicitation to which the enquiry relates. Care should be taken by Bidders to explain each question in sufficient detail in order to enable Canada to provide an accurate answer. Technical enquiries that are of a proprietary nature must be clearly marked "proprietary" at each relevant item. Items identified as "proprietary" will be treated as such except where Canada determines that the enquiry is not of a proprietary nature. Canada may edit the question(s) or may request that the Bidder do so, so that the proprietary nature of the question(s) is eliminated, and the enquiry can be answered to all Bidders. Enquiries not submitted in a form that can be distributed to all Bidders may not be answered by Canada.

## **2.4 Applicable Laws**

Any resulting contract must be interpreted and governed, and the relations between the parties determined, by the laws in force in Ontario.

Bidders may, at their discretion, substitute the applicable laws of a Canadian province or territory of their choice without affecting the validity of their bid, by deleting the name of the Canadian province or territory specified and inserting the name of the Canadian province or territory of their choice. If no change is made, it acknowledges that the applicable laws specified are acceptable to the Bidders.

## **2.5 Technical Data**

### **Contact:**

Department of National Defence  
National Defence Headquarters  
MGen George R Pearkes  
101 Colonel By Drive  
Ottawa, Ontario  
K1A 0K2  
ATTN: DMar P 2-3-2-2  
TEL: 819-939-3829  
Email: Dalton.sicard@forces.gc.ca

In order to receive Technical Data Packages against this solicitation, bidders must provide the following details with their request:

- Company Name
- Complete mailing & physical address (P.O. Box numbers not acceptable)
- Area code and telephone number
- Contact name
- E-mail address
- Solicitation Number & Closing Date

It is imperative that the request be done as soon as possible to ensure timely receipt. Notwithstanding Canada must not be held responsible for untimely release of the technical data.

## **2.6 SACC Manual Clauses**

B1000T (2014-06-26) Condition of Materiel - Bid

## **PART 3 - BID PREPARATION INSTRUCTIONS**

### **3.1 Bid Preparation Instructions**

Canada requests that Bidders provide their bid in separately bound sections as follows:

Section I: Technical Bid (3 hard copies)

Section II: Financial Bid (1 hard copy)

Section III: Certifications (2 hard copies)

Prices must appear in the financial bid only. No prices must be indicated in any other section of the bid.

Canada requests that Bidders follow the format instructions described below in the preparation of their bid:

- (a) use 8.5 x 11 inch (216 mm x 279 mm) paper;
- (b) use a numbering system that corresponds to the bid solicitation.

In April 2006, Canada issued a policy directing federal departments and agencies to take the necessary steps to incorporate environmental considerations into the procurement process [Policy on Green Procurement](http://www.tpsgc-pwgsc.gc.ca/ecologisation-greening/achats-procurement/politique-policy-eng.html) (<http://www.tpsgc-pwgsc.gc.ca/ecologisation-greening/achats-procurement/politique-policy-eng.html>). To assist Canada in reaching its objectives, Bidders should:

- 1) use 8.5 x 11 inch (216 mm x 279 mm) paper containing fibre certified as originating from a sustainably-managed forest and containing minimum 30% recycled content; and
- 2) use an environmentally-preferable format including black and white printing instead of colour printing, printing double sided/duplex, using staples or clips instead of cerlox, duotangs or binders.

#### **Section I: Technical Bid**

In their technical bid, Bidders should explain and demonstrate how they propose to meet the requirements in annex "C" and annex "D" and how they will carry out the work.

#### **Section II: Financial Bid**

Bidders must submit their financial bid in accordance with the Annex "B" Basis of Payment. The total amount of Applicable Taxes must be shown separately.

### **3.2 SACC Manual Clauses**

#### **Section III: Certifications**

Bidders must submit the certifications and additional information required under Part 5.

## **PART 4 - EVALUATION PROCEDURES AND BASIS OF SELECTION**

### **4.1 Evaluation Procedures**

**4.1.1** Bids will be assessed in accordance with the entire requirement of the bid solicitation including the technical and financial evaluation criteria.

**4.1.2** An evaluation team composed of representatives of Canada will evaluate the bids.

#### **4.2 Technical Evaluation**

The Auxiliary Gas Supply System (AGS) and Bailout Open Circuit Valve (BOV) must be verified for mandatory technical compliance listed in:

##### **4.2.1 Mandatory Technical Criteria Phase 1**

Phase 1: Annex "C" Mandatory Bidders Compliance Checklist included in the bidder's technical proposal.

##### **4.2.2 Mandatory Technical Criteria Phase 2**

Phase 2: Annex "D" - Mandatory Requirements - Pre-award Samples and Supporting Documents, provided upon request from the DND Contracting Authority.

#### **Pre-Award Sample(s) and Supporting Documentation:**

- a) As part of the technical evaluation, to confirm a bidder's capability of meeting the technical requirements, the Bidder must, upon request from the Contracting Authority, deliver the following:
  - i. one (1) pre-contract award sample of item 1 (AGS); as listed in Annex "A" SOW 4.1.7;
  - ii. two (2) pre-contract award samples of item 2 (BOV) as listed in Annex "A" SOW 4.1.7; and
  - iii. certificate of compliance of oxygen cleanliness, in accordance with Annex "A" SOW.
- b) The Bidder must ensure that the required pre-contract award samples are manufactured in accordance with the technical requirement in Annex "A" SOW, and are fully representative of the bid submitted.
- c) Rejection of the pre-contract award samples will result in the bid being declared non-responsive.
- d) The bidder must ensure the required pre-contract award samples and certificate of compliance of Oxygen Cleanliness are received within 45 calendar days from date of request with transportation charges prepaid at no charge to Canada. Failure to submit the required pre-contract award samples and the certificate of compliance of Oxygen Cleanliness in accordance with Annex "A" SOW within the specified time frame will result in the bid being declared nonresponsive.
- e) The pre-contract award samples, draft operation and maintenance instructions and certificate of compliance of Oxygen Cleanliness must be sent to the following address:

DRDC (Toronto), EDUG Grp address: 1133 Sheppard Ave. West, Toronto, Ontario M3K 2C9  
(Telephone 416-635-2091, alternate telephone 416-635-2000 ext 3071.

- f) The AGS and BOV samples submitted by the Bidder will be returned, at the bidder's expense, to Bidder in their original configuration from DRDC (T) at the supplied address from original equipment supplier. These will not be considered as part of the deliverables in any resulting contract. If the sample does not meet the requirements in Annex "C" and Annex "D" of the bid solicitation or the Bidder fails to comply with the request of the Contracting Authority, the bid will be declared non-responsive.

#### **4.3 Financial Evaluation**

SACC Manual Clause [A0222T](#) (2014-06-26), Evaluation of Price - Canadian / Foreign Bidders

SACC Manual Clause [C2000C](#) (2007-11-30) Taxes Foreign-based Contractor

#### **4.4 Basis of Selection**

SACC Manual Clause A0031T (2010-08-16) Basis of Selection - Mandatory Technical Criteria

A bid must comply with the requirements of the bid solicitation and meet all mandatory technical evaluation criteria to be declared responsive. The responsive bid with the lowest evaluated price will be recommended for award of a contract.

### **PART 5 – CERTIFICATIONS AND ADDITIONAL INFORMATION**

Bidders must provide the required certifications and additional information to be awarded a contract.

The certifications provided by Bidders to Canada are subject to verification by Canada at all times. Unless specified otherwise, Canada will declare a bid non-responsive, or will declare a contractor in default if any certification made by the Bidder is found to be untrue whether made knowingly or unknowingly, during the bid evaluation period or during the contract period.

The Contracting Authority will have the right to ask for additional information to verify the Bidder's certifications. Failure to comply and to cooperate with any request or requirement imposed by the Contracting Authority will render the bid non-responsive or constitute a default under the Contract.

#### **5.1 Certifications Required with the Bid**

Bidders must submit the following duly completed certifications as part of their bid.

##### **5.1.1 Integrity Provisions - Declaration of Convicted Offences**

In accordance with the [Ineligibility and Suspension Policy](http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html) (<http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html>), the Bidder must provide with its bid the required documentation, as applicable, to be given further consideration in the procurement process.

#### **5.2 Additional Certifications Required with the Bid**

##### **5.2.1 Integrity Provisions – Required Documentation**

In accordance with the [Ineligibility and Suspension Policy](http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html) (<http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html>), the Bidder must provide the required documentation, as applicable, to be given further consideration in the procurement process.



## 5.2.2 Federal Contractors Program for Employment Equity - Bid Certification

By submitting a bid, the Bidder certifies that the Bidder, and any of the Bidder's members if the Bidder is a Joint Venture, is not named on the Federal Contractors Program (FCP) for employment equity "FCP Limited Eligibility to Bid" list available at the bottom of the page of the [Employment and Social Development Canada \(ESDC\) - Labour's](http://www.esdc.gc.ca/en/jobs/workplace/human_rights/employment_equity/federal_contractor_program.page?&_ga=1.229006812.1158694905.1413548969) website (http://www.esdc.gc.ca/en/jobs/workplace/human\_rights/employment\_equity/federal\_contractor\_program.page?&\_ga=1.229006812.1158694905.1413548969).

Canada will have the right to declare a bid non-responsive if the Bidder, or any member of the Bidder if the Bidder is a Joint Venture, appears on the "FCP Limited Eligibility to Bid" list at the time of contract award.

## 5.2.3 Integrity Provisions – List of Names

Bidders who are incorporated, including those bidding as a joint venture, must provide a complete list of names of all individuals who are currently directors of the Bidder. Bidders bidding as sole proprietorship, as well as those bidding as a joint venture, must provide the name of the owner(s).

Bidders bidding as societies, firms or partnerships do not need to provide lists of names.

## 5.2.4 Samples Certification

The Bidder certifies that:

( ) the manufacturer that produced the pre-contract award samples will remain unchanged for the full production of the contract quantity.

## 5.2.5 Oxygen Cleanliness compliance

A Certificate of Compliance is a written statement from an appropriate official of the Bidder attesting the full compliance of the component(s) for Oxygen Cleanliness in accordance with Annex "A" SOW. This document must be on official company stationery; it must be delivered with the pre-contract award samples; it must make reference to the applicable specification and have the original signature of the company's designated representative. Canada reserves the right to verify the statements made in the Certificate of Compliance.

## PART 6 - RESULTING CONTRACT CLAUSES

The following clauses and conditions apply to and form part of any contract resulting from the bid solicitation.

### 6.1 Security Requirements

6.1.1 There is no security requirement applicable to the Contract.

### 6.2 Requirement

The Contractor must provide the items detailed under the Requirement in Annex "A" SOW.

## 6.2.1 Technical Requirement

See Annex "A" SOW.

## 6.3 Standard Clauses and Conditions

All clauses and conditions identified in the Contract by number, date and title are set out in the [Standard Acquisition Clauses and Conditions Manual](https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual) (<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual>) issued by Public Works and Government Services Canada.

### 6.3.1 General Conditions

2010A (2016-04-04), General Conditions - Goods (Medium Complexity), apply to and form part of the Contract.

a. Definition of minister is modified as follows:

"Canada", "Crown", "Her Majesty" or "the Government" means Her Majesty the Queen in right of Canada as represented by the Minister of national defence and any other person duly authorized to act on behalf of that minister or, if applicable, an appropriate minister to whom the Minister of National Defence has delegated his or her powers, duties or functions and any other person duly authorized to act on behalf of that minister.

## 6.4 Period of the Contract

The period of the Contract will be from date of Contract award to 48 months from date of contract award.

### 6.4.1 Preparation for Delivery

The Contractor must prepare item number(s) 1 and 2 of Annex "A" SOW 4.1.7 for delivery in accordance with the latest issue of the Canadian Forces Packaging Specification D-LM-008-036/SF-000, DND Minimum Requirements for Manufacturer's Standard Pack.

The Contractor must package items 1 and 2 of Annex "A" SOW 4.1.7 separately and packaged individually.

### 6.4.2 Shipping Instructions - Delivery at Destination

#### **D0037C (2016-01-28) - Shipping Instructions (Department of National Defence) - Canadian-based Contractor**

1. Delivery will be FCA Free Carrier at \_\_\_\_\_ (Insert the named place, e.g. Contractor's facility) Incoterms 2000. The Contractor must load the goods onto the carrier designated by the Department of National Defence (DND). Onward shipment from the delivery point to the consignee will be Canada's responsibility.
2. Before shipping the goods, the Contractor must contact the following DND Inbound Logistics Coordination Center by facsimile or e-mail, to arrange for shipment, and provide the information detailed at paragraph 3.
  - a. Insert the following for all sole source contracts, except repair and overhaul, where the Contractor is located in Canada:  
Inbound Logistics Co-ordination Center (ILCC)  
Telephone: 1-877-877-7423 (toll free)

Facsimile: 1-877-877-7409 (toll free)  
E-mail: ILHQOttawa@forces.gc.ca

- b. Insert the following for all repair and overhaul contracts where the Contractor is located between Kingston inclusive and westward to the Ontario/Manitoba border:  
Inbound Logistics Central Area (ILCA)  
Telephone: 1-866-371-5420 (toll free)  
Facsimile: 1-866-419-1627 (toll free)  
E-mail: ILCA@forces.gc.ca
  - c. Insert the following for all repair and overhaul contracts where the Contractor is located in Manitoba, Saskatchewan, Alberta, British Columbia, and the National Capital Region inclusive to east of Kingston:  
Inbound Logistics Coordination Center (ILCC)  
Telephone: 1-877-877-7423 (toll free)  
Facsimile: 1-877-877-7409 (toll free)  
E-mail: ILHQOttawa@forces.gc.ca
  - d. Insert the following for all repair and overhaul contracts where the Contractor is located in Quebec:  
Inbound Logistics Quebec Area (ILQA)  
Telephone: 1-866-935-8673 (toll free), or  
1-514-252-2777, ext. 4673, 2852  
Facsimile: 1-866-939-8673 (toll free), or  
1-514-252-2911  
E-mail: 25DAFCTrafficQM@forces.gc.ca
  - e. Insert the following for all repair and overhaul contracts where the Contractor is located in Atlantic (New Brunswick, Prince Edward Island, Nova Scotia, Newfoundland and Labrador):  
Inbound Logistics Atlantic Area (ILAA)  
Telephone: 1-902-427-1438  
Facsimile: 1-902-427-6237  
E-mail: BlogILAA@forces.gc.ca
3. The Contractor must provide the following information to the DND Inbound Logistics Coordination Center when arranging for shipment:
- a. the Contract number;
  - b. consignee address (for multiple addresses, items must be packaged and labelled separately with each consignee address);
  - c. description of each item;
  - d. the number of pieces and type of packaging (i.e., carton, crate, drum, skid);
  - e. actual weight and dimensions of each piece type, including gross weight;
  - f. full details of dangerous goods/hazardous products, as required for the applicable mode of transportation, signed certificates for dangerous goods/hazardous products as required for shipment by the International Maritime Dangerous Goods Code, the International Air

Transport Association regulations or the applicable Canadian Transportation of Dangerous Goods Regulations, and a copy of the safety data sheet in English and French.

4. Following receipt of this information by Canada, Canada will provide the appropriate shipping instructions, which may include the requirement for specific consignee address labelling, and the marking of each piece with a Transportation Control Number.
5. The Contractor must not ship the goods before receiving shipping instructions from the DND Inbound Logistics contact.
6. If the Contractor delivers the goods at a place and time which are not in accordance with the given delivery instructions or fail to fulfill reasonable delivery instructions given by Canada, the Contractor must reimburse Canada any additional expenses and costs incurred.
7. If Canada is responsible for delays in delivering the goods, ownership and risk will be transferred to Canada upon expiry of either 30 days following the date on which a duly completed shipping application is received by Canada or by its appointed forwarding agent, or 30 days following the delivery date specified in the Contract, whichever is later.

#### **D0035C (2016-01-28) - Shipping Instructions (Department of National Defence) - Foreign-based Contractors**

1. Delivery will be FCA Free Carrier at \_\_\_\_\_ (*insert the named place, e.g. Contractor's facility*) Incoterms 2000. The Contractor must load the goods onto the carrier designated by the Department of National Defence (DND). Onward shipment from the delivery point to the consignee will be Canada's responsibility
2. Before shipping the goods, the Contractor must contact the following DND Inbound Logistics Coordination Center by facsimile or e-mail, to arrange for shipment, and provide the information detailed at paragraph 3.
  - a. *Insert the following when the Contractor is located in the United States (U.S.):*  
Inbound Logistics Coordination Center (ILCC):  
Telephone: 1-877-447-7701 (toll free)  
Facsimile: 1-877-877-7409 (toll free)  
E-mail: [ILHQOttawa@forces.gc.ca](mailto:ILHQOttawa@forces.gc.ca)  
OR
  - b. *Insert the following when the Contractor is located in United Kingdom (UK) and Ireland:*  
Inbound Logistics United Kingdom (ILUK):  
Telephone: 011-44-1895-613023, or 011-44-1895-613024, or  
Facsimile: 011-44-1895-613047  
E-mail: [CFSUEDetUKMovements@forces.gc.ca](mailto:CFSUEDetUKMovements@forces.gc.ca)  
In addition, the Contractor must send to ILUK the completed form "Shipping Advice and Export Certificate" by e-mail to: [CFSUEDetUKMovements@forces.gc.ca](mailto:CFSUEDetUKMovements@forces.gc.ca).  
The shipment of any items above the value of 600 GBP (pound sterling) being exported from the United Kingdom and Ireland will be cleared by DND using Her Majesty's Customs & Excise (HMCE) New Export Systems (NES). The Contractor must comply with HMCE requirements by registering with HMCE or by having a freight forwarder

complete the entry. A printed copy of the NES entry Export Declaration clearly displaying the Declaration Unique Consignment Reference Number must be provided by the Contractor and attached to the consignment. The Contractor must ensure that this procedure is carried out for all stores whether they be initial purchase or repair and overhaul export items. HMCE will authorize Canadian Forces Support Unit (Europe) to ship the goods only if the procedure has been adhered to completely and properly by the Contractor.  
OR

- c. *Insert the following when the Contractor is located in a country other than Canada, the U.S., the UK and Ireland:*  
Inbound Logistics Europe Area (ILEA):  
Telephone: +49-(0)-2451-717199 or 717200  
Facsimile: +49-(0)-2451-717189  
Email: [ILEA@forces.gc.ca](mailto:ILEA@forces.gc.ca)  
OR
- d. *Insert the following for U.S. Foreign Military Sales (FMS):*  
Inbound Logistics Coordination Center (ILCC):  
Telephone: 1-877-447-7701 (toll free)  
Facsimile: 1-877-877-7409 (toll free)  
Email: [ILHQOttawa@forces.gc.ca](mailto:ILHQOttawa@forces.gc.ca)  
Canada is responsible for the carrier selection for shipments of the goods supplied under this FMS contract. Instructions on how to obtain carrier selection from Canada are contained in U.S. Department of Defense 4000.25-8-M, Military Assistance Program Address Directory, and Canadian Special Instructions Indicator (SII). The Contractor must not ship the goods until the SII has been complied with.
3. The Contractor must provide the following information to the DND Inbound Logistics contact when arranging for shipment:
- a. the Contract number;
  - b. consignee address (if multiple addresses, items must be packaged and labeled separately with each consignee address);
  - c. description of each item;
  - d. the number of pieces and type of packaging (e.g. carton, crate, drum, skid);
  - e. actual weight and dimensions of each piece type, including gross weight;
  - f. copy of the commercial invoice (in accordance with clause [C2608C](#), section 4, of the *Standard Acquisition Clauses and Conditions Manual*) or a copy of the Canada Border Services Agency form CI1 [Canada Customs Invoice](#) (PDF 429KB) - ([Help on File Formats](#));
  - g. [Schedule B](#) codes (for exports) and the Harmonized Tariff Schedule codes (for imports);
  - h. North American Free Trade Agreement Certificate of Origin (in accordance with clause [C2608C](#), section 2) for the U.S. and Mexico only;

- i. full details of dangerous material, as required for the applicable mode of transportation, signed certificates for dangerous material as required for shipment by the International Maritime Dangerous Goods Code, or International Air Transport Association regulations or the applicable Canadian [Dangerous Goods Shipping Regulations](#) and a copy of the material safety data sheet.
4. Following receipt of this information by Canada, Canada will provide the appropriate shipping instructions, which may include the requirement for specific consignee address labelling, the marking of each piece with a Transportation Control Number and customs documentation.
5. The Contractor must not ship goods before receiving shipping instructions from the DND Inbound Logistics contact.
6. If the Contractor delivers the goods at a place and time that are not in accordance with the given delivery instructions or fail to fulfill reasonable delivery instructions given by Canada, the Contractor must reimburse Canada any additional expenses and costs incurred.
7. If Canada is responsible for delays in delivering the goods, ownership and risk will be transferred to Canada upon expiry of either thirty (30) days following the date on which a duly completed shipping application is received by Canada or by its appointed forwarding agent, or thirty (30) days following the delivery date specified in the Contract, whichever is later.

#### 6.4.3 SACC Manual Clauses

D5510C (2012-07-16) Quality Assurance Authority (DND) - Canadian-based Contractor  
D5515C (2010/01/11) Quality Assurance Authority (DND) – Foreign – based and United States Contractor  
D5540C (2010-08-16) ISO 9001:2008 - Quality Management Systems - Requirements (QAC Q)  
D5605C (2010-01-11) Release Documents (DND) – United States-based Contractor  
D5606C (2012-07-16) Release Documents (DND) - Canadian-based Contractor  
D2025C (2013-11-06) Wood Packaging Materials  
D6010C (2007-11-30) Palletization  
C2610C (2007-11-30) Customs Duties - DND - Importer

#### 6.5 Authorities

##### 6.5.1 Contracting Authority

The Contracting Authority for the Contract is:

##### To be provided at contract award

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Public Works and Government Services Canada  
Acquisitions Branch

Directorate: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone: \_\_\_\_\_

Facsimile: \_\_\_\_\_

E-mail address: \_\_\_\_\_

The Contracting Authority is responsible for the management of the Contract and any changes to the Contract must be authorized in writing by the Contracting Authority. The Contractor must not perform work in excess of or outside the scope of the Contract based on verbal or written requests or instructions from anybody other than the Contracting Authority.

### 6.5.2 Technical Authority

The Technical Authority for the Contract to be inserted at contract award.

Name:

Title:

Organization:

Address:

E-mail:

The Technical Authority named above is the representative of the department or agency for whom the Work is being carried out under the Contract and is responsible for all matters concerning the technical content of the Work under the Contract. Technical matters may be discussed with the Technical Authority, however the Technical Authority has no authority to authorize changes to the scope of the Work. Changes to the scope of the Work can only be made through a contract amendment issued by the Contracting Authority.

### 6.5.3 Procurement Authority

The Procurement Authority for the Contract is:

Name: Dalton Sicard

Title: D Mar P 2-3-2-2

Organization : DGMEPM

Address : 455 Blvd de la Carriere

E-mail: dalton.sicard@forces.gc.ca

The Procurement Authority is the representative of the department or agency for whom the Work is being carried out under the Contract. The Procurement Authority is responsible for the implementation of tools and processes required for the administration of the Contract. The Contractor may discuss administrative matters identified in the Contract with the Procurement Authority however the Procurement Authority has no authority to authorize changes to the scope of the Work. Changes to the scope of Work can only be made through a contract amendment issued by the Contracting Authority.

### 6.5.4 Contractor's Representative

The person responsible for:

#### General enquiries

Name: \_\_\_\_\_

Telephone No.: \_\_\_\_\_

Facsimile No.: \_\_\_\_\_

E-mail address: \_\_\_\_\_

#### Delivery follow-up

Name: \_\_\_\_\_

Telephone No.: \_\_\_\_\_

Facsimile No.: \_\_\_\_\_

## 6.6 Payment

### 6.6.1 Basis of Payment

#### **C0207C 2013-04-25 - Basis of Payment - Firm Price, Firm Unit Price(s) or Firm Lot Price(s)**

In consideration of the Contractor satisfactorily completing all of its obligations under the Contract, the Contractor will be paid a *firm unit price as specified in Annex "B" Basis of Payment for a cost of \$ \_\_\_\_\_ insert the amount at contract award*). Customs duties are *included* and Applicable Taxes are extra.

Canada will not pay the Contractor for any design changes, modifications or interpretations of the Work, unless they have been approved, in writing, by the Contracting Authority before their incorporation into the Work.

#### **H1001C 2008-05-12 - Multiple Payments**

### 6.6.2 Electronic Payment of Invoices – Contract

The Contractor accepts to be paid using any of the following Electronic Payment Instrument(s):

- a. Direct Deposit (Domestic and International);
- b. Electronic Data Interchange (EDI);

## 6.7 Invoicing Instructions

### 6.7.1 Invoicing Instructions

1. The Contractor must submit invoices in accordance with the section entitled "Invoice Submission" of the general conditions. Invoices cannot be submitted until all work identified in the invoice is completed.

2. Invoices must be distributed as follows:

a) The original and one (1) copy must be forwarded to the following address:

National Defence Headquarters  
MGen George R. Pearkes Building  
101 Colonel By Drive  
Ottawa, ON K1A 0K2  
Attn: D Mar P 2-3-2-2  
Email: dalton.sicard@forces.gc.ca

### 6.7.2 Release Documents – Distribution

The Contractor must prepare the release documents in a current electronic format and distribute them as follows:

- (a) One (1) copy mailed to consignee marked: "Attention: Receipts Officer";
- (b) Two (2) copies with shipment (in a waterproof envelope) to the consignee;
- (c) One (1) copy to:

National Defence Headquarters  
Mgen George R. Pearkes Building  
101 Colonel By Drive  
Ottawa, ON K1A 0K2  
Attention: D Mar P 2-3-2-2



Email: \_\_\_\_\_ (to be inserted at contract award)

- (e) One (1) copy to the Quality Assurance Representative;
- (f) One (1) copy to the Contractor; and
- (g) For all non-Canadian contractors, one (1) copy to:

DQA/Contract Administration  
National Defence Headquarters  
Mgen George R. Pearkes Building  
101 Colonel By Drive  
Ottawa, ON K1A 0K2  
E-mail: ContractAdmin.DQA@forces.gc.ca

## 6.8 Certifications and Additional Information

### 6.8.1 Compliance

Unless specified otherwise, the continuous compliance with the certifications provided by the Contractor in its bid or precedent to contract award, and the ongoing cooperation in providing additional information are conditions of the Contract and failure to comply will constitute the Contractor in default. Certifications are subject to verification by Canada during the entire period of the Contract.

## 6.9 Applicable Laws

The Contract must be interpreted and governed, and the relations between the parties determined, by the laws in force in Ontario.

## 6.10 Priority of Documents

If there is a discrepancy between the wording of any documents that appear on the list, the wording of the document that first appears on the list has priority over the wording of any document that subsequently appears on the list.

- (a) the Articles of Agreement;
- (b) the supplemental general conditions
- (c) the general conditions 2010A Goods (Medium Complexity),
- (d) Requirement;
- (e) the Contractor's bid dated \_\_\_\_\_ (insert date of bid) (If the bid was clarified or amended, insert at the time of contract award: “, as clarified on \_\_\_\_\_” **or** “, as amended on \_\_\_\_\_” and insert date(s) of clarification(s) or amendment(s))

## 6.11 Defence Contract

SACC Manual clause [A9006C](#) (2012-07-16) Defence Contract

## 6.12 SACC Manual Clauses

D2000C (2007-11-30) Marking  
D2001C (2007-11-30) – Labelling  
B4052C (2014-06-26) – Recommended Spare Parts List – Contract

1. The Contractor must, within \_\_\_\_ days after contract award, provide to the Procurement Authority a Recommended Spare Parts List (RSPL) prepared in accordance with the current issue of Canadian Forces Specification D-01-100-214/SF-000. The RSPL must contain the Contractor's

recommendation for spares required to maintain the equipment for a 24-month period, and must provide the basis for the spares selection to be made by Department of National Defence. Upon request from the Contractor, the specification will be provided by the Contracting Authority.

2. Supplementary Provisioning Technical Documentation (SPTD), as prepared by the actual manufacturer of the item, is required for the codification and cataloguing of all items listed in the RSPL. The SPTD called up in the above specification must accompany the RSPL as detailed in the specification. Specific details of the data elements required must be listed on a Provisioning Documentation Selection Sheet, prepared in accordance with the above specification, and be submitted in electronic ASCII text format.
3. Questions regarding the preparation, format or contents of the above provisioning documentation must be directed to the Procurement Authority.

### **6.13 Materials: Contractor Total Supply**

The Contractor will be responsible for obtaining all materials required in the manufacture of the item(s) Specified. The delivery stated for the item(s) allows the necessary time to obtain such materials.

### **6.14 Procedures for Design Change/Deviations**

The Contractor must follow these procedures for any proposed design change/deviation to contract specifications.

The Contractor must complete **Part 1 to 12B the Design Change/Deviation form DND 675**, Annex "E", and forward two (2) copies to the Technical Authority and one (1) copy to the Contracting Authority. The Contractor will be authorized to proceed upon receipt of the design change/deviation form signed by the Contracting Authority. A contract amendment will be issued to incorporate the design change/deviation in the Contract.

### **6.15 Post Contract Award Meeting**

The Design Authority or his delegated representatives at National Defence Headquarters and the applicable DND Quality Assurance Representative (DNDQAR) must be afforded access to the Contractor's plant and all other premises where pertinent processes are being performed, on the same basis as afforded the representative of National Defence Headquarters, DGQA.

A post contract award meeting may be convened within twenty (20) calendar days after award of contract. Participants may include representatives of the Contractor, DND Design Authority, DNDQAR, DND project Authority, Contracting Authority and the DND Administrative Authority. Other meetings may be convened as required.

The Contractor is responsible for the recording and distribution of the minutes for all contract related meeting. The minutes must be sent to the Contracting Authority for acceptance prior to the distribution to all participants or as otherwise directed in the contract within ten (10) calendar days of the subject meeting. The minutes must be used only as a record of proceedings.



**Statement of Work  
(SOW)**

**Auxiliary Gas Supply Systems (AGS)**

**and**

**Bailout Open Circuit Valve (BOV)**



**NOTICE**

This documentation has been reviewed by the technical authority and does not contain controlled goods. Disclosure notices and handling instructions originally received with the document shall continue to apply.

**AVIS**

Cette documentation a été révisée par l'autorité technique et ne contient pas de marchandises contrôlées. Les avis de divulgation et les instructions de manutention reçues originalement doivent continuer de s'appliquer.

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AMENDMENT LIST

VERSION	DATE	DETAILS	BY

## **ANNEX “A”**

### **Release Conditions**

This version of the Statement of Work (SOW) is an unclassified Department of National Defence document. It is formatted in accordance with the Project Approval Guide.

The information and direction issued in this document will be used to acquire an Auxiliary Gas Supply System (AGS) and Bailout Open Circuit Valve (BOV) system to the Canadian Armed Forces (CAF) personnel. This document identifies the user requirements and forms the basis for preparation of technical and performance specifications and the subsequent issue of a Request for Proposal by the Department of National Defence (DND).

**ANNEX “A”**

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## ANNEX “A”

### 1. Scope

#### 1.1. Purpose

**1.1.1.** This SOW defines the requirement for an Auxiliary Gas Supply System (AGS) and Bailout Open Circuit Valve (BOV) system for use by the Canadian Armed Forces (CAF) Clearance Divers. This system needs to consist of Commercial Off-The Shelf or Military off the Shelf (MOTS) components for both the AGS and BOV, which together will make up the required kit. The required AGS and BOV systems need to work independently as well as together.

#### 1.2. Background

**1.2.1.** The AGS and BOV project will augment the current Canadian Underwater Mine Countermeasures Apparatus Version 2 (CUMA V2) rebreather set used by CAF personnel by delivering a safer system.

**1.2.2.** The increase in operational tempo has highlighted many deficiencies or lack of flexibility in equipment currently used by naval personnel. The acquisitions of the AGS and BOV systems will correct some of the deficiencies.

**1.2.3.** The original CAF CUMA V2 diving emergency procedure was to have the diver make an ascent to the surface at a controlled and standard rate, omitting all in-water decompression stops. The diver would then be treated on a therapeutic recompression table for omitted decompression. However, for deeper dives and shallow, long dives, subsequent EDUG research showed that this could lead to a possible fatal or Severe Decompression Accident (SDA). Interim procedures were instated to prevent SDA with the introduction of the CUMA V2 Red Light Drill Procedures. These procedures call for the diver to ascend to 12 metres of sea water (msw), check that the CUMA V2 can still provide oxygen, then proceed to 9 msw and commence an oxygen decompression stop. This is a contradiction to conventional decompression theory which would assign a high risk of decompression sickness with a direct ascent to 12 msw. Consequently, Experimental Diving and Undersea Group (EDUG) was tasked to develop a viable solution that allows a diver with a failed CUMA V2 to avoid a SDA and eliminate the risk associated with a direct ascent to 12 msw.

**1.2.4.** The current in service equipment has the following deficiencies:

- a. The CUMA V2 rebreather sets do not have an adequate bailout system;
- b. The current system is an independent gas supply delivered through a fixed orifice at a pre-set flow rate directly into the divers closed breathing loop;
- c. This system will not provide any assistance to the diver in the event of a breathing loop failure (flooded loop, malfunction of check valves, caustic cocktail). Damage to a counterlung, breathing hose or the scrubber assembly

## ANNEX “A”

would require a diver to abort the dive and without a separate breathing assembly the diver could be in a life threatening situation. A separate breathing system is needed to allow the diver to reach the AGS decompression gas without having to route it through the diver’s failed CUMA V2; and

- d. If diver were to obey the correct rate of ascent this would leave the diver, in this specific scenario, with no life support alternative at hand for period of at least 2 minutes 20 seconds.

**1.2.5.** In accordance with Reference A of Section 2, the BOV should meet the Standard relating to non-magnetic equipment detailed at NATO Standardization Agreement (STANAG) 2897 EOD, EOD Equipment Requirements And Equipment.

**1.2.6.** The BOV must not replace the AGS in anyway, instead BOV must offer an independent open circuit system designed to get the diver from depth to the AGS.

**1.2.7.** The main threats to personnel are direct ascent from 81 msw to surface after a bottom time of 25 minutes would likely lead to Severe Decompression Accident (SDA) or possible death. This distance from the bottom to first decompression stop could be as great as 42 meters (81 msw – 39 msw).



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### 1.3 Terminology

Acronym / Abbreviation	Description
AGS	Auxiliary Gas Supply
BOV	Bailout Open Circuit Valve
CAF	Canadian Armed Forces
COTS	Commercial off the Shelf
DND	Department of National Defence
EDUG	Experimental Diving and Undersea Group
EOD	Explosive Ordnance Disposal
FDU	Fleet Diving Unit
LP	Low Pressure
MOTS	Military off the Shelf
msw	Metre of Sea Water
NATO	North Atlantic Treaty Organization
OC	Open Circuit
OEM	Original Equipment Manufacturer
RCN	Royal Canadian Navy
SPG	Submersible Pressure Gauge
TA	Technical Authority

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### 2. Applicable Documents

- A. STANAG 2897, EOD Equipment Requirements And Equipment;
- B. Latest copy of STANAG 1410, Standard Unmanned Test Procedures and Acceptance Criteria for Underwater Breathing Apparatus;

Available upon request from contracting authority:

- C. C-87-010-000/TB-003, Oxygen Cleaning Small Parts 35 bar (500 psi) or less (2011-08-01); and
- D. C-87-010-000/TB-004, Oxygen Cleaning (2011-07-14).

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### 3. Technical Requirements

**3.1.1.** This BOV concept consists of a separate independent mounted cylinder also known as onboard bailout, which is fitted with a first and second stage regulator assembly. The BOV will augment the in-service CUMA V2. The BOV allows the diver to carry an open circuit backup emergency system that would permit travel from the bottom to the surface or from the bottom to the AGS.

**3.1.2.** The AGS employ an alternative breathing gas, such as Nitrox and Oxygen that may enable the AGS to be deployed and used at a deeper depth for decompression obligation.

**3.1.3.** A Commercial off the Shelf (COTS) or Military off the Shelf (MOTS) component is required, AGS and BOV that are currently in use are desirable for procurement, preferably ones that are already in use by one or more NATO allies. This will provide improved interoperability, standardized operating procedures and reduced operating costs while on domestic and/or international operations.

**3.1.4.** The AGS and BOV sub-systems must be assembled from proven components (COTS) and not be a prototype or pre-production model, as there are often unknown problems with these types of systems that may result in recalls or significant maintenance time, which in turn will reduce user confidence and may pose a safety hazard.

**3.1.5.** Performance tests of BOV must meet latest version of STANAG 1410, Reference B of Section 2, when tested to a ventilation rate from 10 to 90 l·min<sup>-1</sup> under Actual Temperature, Pressure and humidity (ATP) conditions, and must have a Work of Breathing (WOB)  $\leq 1.7$  J·l<sup>-1</sup>.

**3.1.6.** The BOV will become an integral part of the CUMA V2 Emergency Procedures. The AGS will provide an independent gas supply to the BOV.

**3.1.7.** The AGS and BOV as an assembly must be provided in an Oxygen Clean state for diver's breathing Oxygen services in accordance with Reference C and Reference D of Section 2.

**3.1.8.** It is preferable if the onboard bailout cylinder can be installed in the present location at the lower portion of the backpack fairing of CUMA V2. The in-service 0.8 litre onboard bailout cylinder diameter is 8 cm (3.1 inches) by 26 cm (10.24 inches) long. Refer to all pictures attached in Appendix A. Depending on the new technology available for the new onboard bailout cylinder, it may be required mounting to a new location such as clipped on side of the CUMA V2 diver's harness. New securing straps and arrangement must be provided.

**3.1.9.** The BOV must be integrated to CUMA V2 breathing hoses. The Inside diameter of breathing hoses at mouthpiece is 47.7 mm (1.88 inch) with smooth interior cuff ends surface measuring 31.75 mm (1.25 inch) in length.

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**3.1.10.** Divers wearing the equipment should have confidence that the BOV will not degrade their ability to perform any assigned task or function, and provide the necessary protection against expected threats. Every effort should be made to minimize the weight of the equipment.

**3.1.11.** The contractor must provide equipment that works with DND issued dry suit or wet suit, 3-finger, nominal 7mm (but not less than 6 mm) neoprene nylon two-side protective mitts, and CUMA V2.

**3.1.12.** The contractor must provide equipment that allows divers to not interrupt their normal breathing pattern when switching to the BOV or connecting to AGS.

**3.1.13.** The contractor must provide equipment that allows divers to isolate the onboard bailout cylinder/cylinders with gloved hand after connecting to AGS.

**3.1.14.** The BOV design should minimize single point of failure that if it fails, will stop the entire system from working.

**3.1.15.** The evaluation, trial and testing of both AGS and BOV systems must occur concurrently to ensure compatibility.

**3.1.16** The BOV must be compatible with current in-service CUMA V2. The AGS must be compatible with the BOV without any constraints and interruption of diver normal breathing pattern.

**3.1.17** The size of the systems delivered by the contractor must allow for both AGS and BOV to be simultaneously deployed by CAF Clearance diver personnel while performing CUMA V2 diving operations.

**3.1.18** The contractor must provide a BOV that fits to the in-service CUMA V2 Cressi-Sub Full Face Mask (FFM) Non-Mag version.

**3.1.19** The addition of a BOV and onboard bailout cylinder for each CUMA V2 rebreather diving sets must provide the diver with an independent breathing source to safely ascend from the bottom through the water column to the AGS or surface on open circuit.

**3.1.20** The contractor must provide a system capable of connecting the BOV Quick Connect (QC) hose to the AGS correct decompression gas cylinder QC hose without interrupting their normal breathing pattern.

The BOV and CUMA V2 will be configuration managed as a set. All AGS and BOV items will be maintained, inspected, catalogued and controlled by Canada.

**3.1.21.** The AGS and BOV should be easily maintainable by CAF trained Dive Technicians and Fleet Maintenance Facilities.

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**3.1.22** All AGS and BOV maintenance, repairs and overhaul procedures fall within the following categories:

- a. **1<sup>st</sup>-LINE MAINTENANCE:** Planned maintenance and calibration are conducted by operators unless otherwise indicated;
- b. **2<sup>nd</sup>-LINE MAINTENANCE:** internal visual inspection & magnetic ranging check and all calibration panel checks and all corrective maintenance detailed below conducted by Clearance Diver Technicians; and
- c. **3<sup>rd</sup>-LINE MAINTENANCE:** Non-Destructive Testing (NDT) Hydrostatic-test, dye penetrant test if necessary, X-ray, O<sub>2</sub> cleaning and any other item requiring assistance from Fleet Maintenance Facility (FMF) or, the manufacturer or other outside authority.

**3.1.23** Any cleaning of the diving apparatus or its components must be conducted in accordance with Reference C of Section 2, C-87-010-000/TB-003, Oxygen Cleaning of Small Parts 35 bar (500 psi) or less and Reference D of Section 2, C-87-010-000/TB-004, Oxygen Cleaning Procedures.

**3.1.24** The AGS and BOV must remain in service and supportable for at least ten (10) years expected life cycle or until they are replaced with systems that are equivalent or superior for the support of the ever-evolving CAF diving requirements.

**3.1.25** The AGS and BOV must safely operate in all environments ranging from Operations in Tropical regions to the Canadian Arctic and in zero underwater visibility. Contractor must provide a system where divers can locate and operate controls individually and in combination without accidental operation of other controls in all diver conditions.

**3.1.26** The AGS and BOV must provide enough breathing gas to the diver to complete all decompression requirements..

**3.1.27** The AGS and BOV must allow RCN Clearance Divers to perform mission-essential tasks without any performance degradation that compromises the successful completion of the tasks or places the individual at risk.

- a. Must allow diver to operate all components at surface/sub-surface during low light conditions; and
- b. Provide equipment that will allow divers to safely conduct all emergency diving procedures,

**3.1.28** The BOV will be worn by Canadian Clearance Divers diving with CUMA V2.

**3.1.29** The BOV must allow the proper fit to current in service CUMA V2.

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**3.1.30** The AGS will be lowered to maximum depth of 42 msw using a DND owned 10 mm synthetic line with 10 cm soft eyes.

**3.1.31** The AGS and BOV are for personal safety therefore high design construction and workmanship is crucial.. These two items are used in direct support of diving and is considered Life Support Critical, which means if they were to fail, would immediately jeopardize the health or safety of CAF Divers.

**3.1.32** AGS and BOV must provide personnel with adequate performance, unimpeded movement, and comfort to achieve optimum effectiveness under adverse climatic and operational conditions worldwide.

**3.1.33** Divers must not interrupt their normal breathing pattern when switching to the BOV or connecting to AGS.

**3.1.34** The AGS must be negatively buoyant throughout the dive cycle even when AGS gases have been consumed. The AGS must be capable to be lowered to depth of 42 msw.

**3.1.35** It is highly desirable for the supplied BOV to meet the low Magnetic Signature requirements in accordance with Non-Magnetic Equipment that is manufactured to meet the Standards relating to non-magnetic equipment detailed in accordance with Reference A, Section 2. Every attempt should be made for the BOV to have similar non-magnetic characteristics as the current in service CUMA V2 diving equipment.

**3.1.36** The BOV must not present any potential hazard from entry to egress of the water.

**3.1.37** The BOV should allow for easy donning or doffing.

**3.1.38** The BOV must allow sufficient freedom of movement and flexibility to enable personnel to conduct work.

**3.1.39** Other than in emergency situation the BOV must not generate noise by itself as consequence of the individual's equipment.

**3.1.40** Mechanisms used to switch, connect or adjust the AGS and BOV should minimize the collection of dirt, sand or other items that could degrade the functioning of the systems.

**3.1.41** Mechanisms used to close or adjust the BOV must minimize catching on foreign objects and must be operable by a single gloved hand CAF issued dry suits gloves or wet suit, 3-finger, nominal 7mm (but not less than 6 mm) neoprene nylon two-sides protective mitts.

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**3.1.42** The BOV which is connected to onboard bailout cylinder must provide a minimum of 1450 litres of Bailout Gas mix. The BOV Open Circuit (OC) Low Pressure (LP) hose attachment to 2<sup>nd</sup> stage must be from left side of the diver.

**3.1.43** The onboard bailout cylinder first stage regulator must be fitted with a mini (button type) Submersible Pressure Gauge (SPG) and must be readable with normal visual acuity in normal visibility.

**3.1.44** As a minimum, the AGS must have highly visible two 2701 litres cylinders secured together each with its own 1<sup>st</sup> stage regulator. The “Decompression Gas” gas cylinder must be clearly labelled as “Decompression Gas mix”. The second gas cylinder must be clearly labelled as “OXYGEN”. The AGS cylinders must be joined together by a set of tank bands.

**3.1.45** A Quick Connect (QC) Hose System must be integral between the BOV and AGS. The QC fittings must be certified for diving systems. The AGS cylinders must be fitted with two (2) QC hoses each of length of  $2 \pm 0.5$  metres rigged to respective cylinder for rapid deployment or an integrated gas switching block. Both BOV and AGS hoses must be of different colour that is visually different in reduced visibility at depth of 42 msw.

**3.1.46** The QC fittings must be double-ended shut-off (DESO) not restricting gas flow in accordance with Reference B, Section 2 STANAG 1410, Standard Unmanned Test Procedures and Acceptance Criteria for Underwater Breathing Apparatus.

**3.1.47** AGS metric SPG must be readable by distressed diver with normal visual acuity when in reduced underwater visibility. Each metric SPG should be clearly identified as “DECO” and “O2” The SPG hoses must have a length of 30 cm (12 inches)  $\pm$  15 cm (6 inches).

**3.1.48** The AGS and BOV should provide robust components, resistant against sharp objects.

### 3.2 Constraints

**3.2.1** Clearance Divers can dive at water temperatures from -2°C to +40 °C. The AGS and BOV must be able to operate at water temperatures from -2°C to +40 °C.

**3.2.2** The AGS and BOV may be exposed to air temperatures from -20°C to +40 °C. The AGS and BOV must remain functional in air temperatures from -20 °C to +40 °C.

**3.2.3** The AGS and BOV must provide trouble-free operation in all climatic conditions referred in paragraphs 3.2.1 and 3.2.2. Additionally, BOV must provide trouble-free operation to depths of 81 msw using single gloved hand. AGS must provide trouble-free operation to depths of 42 msw using gloved hands.

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**3.2.4** Divers must not interrupt their normal breathing pattern when switching to the BOV or connecting to AGS.

**3.2.5** Unless specified by OEM, CAF must be able to thoroughly clean and disinfect the facemasks and mouthpieces (breathing hoses and one-way mushroom valves) with ANTEC® DuPont® VIRKON® disinfectant 1% solution for 10 minutes in order to kill all bacterial, viral and fungal organisms and rinsed with fresh water. The BOV should be capable of being decontaminated by the user from all currently known chemicals and contaminants

**3.2.6** The BOV must be resistant to the effects of all types of contamination from:

- a) Salt water; and
- b) Cleaning products;

### **4.0 Deliverables**

**4.1.1** The contractor must provide the required AGS and BOV systems in accordance with the specifications in this SOW.

**4.1.2** There is a post contract award requirement to conduct a bidder's training course for operating and maintaining the AGS and operating and maintaining the BOV for up to ten (10) students for each system at EDUG Toronto, Ontario, FDU (A) Shearwater, Nova Scotia and FDU (P) Esquimalt, British Columbia. Based on their expert knowledge of the system, the contractor or his representative shall recommend a course duration and format, providing a full outline of topics to be covered, identifying class room/hands on laboratory times, and expected learning outcomes. A full set of training materials in the English language (hard copy and MS Word electronic format) shall be provided to each student.

**4.1.3** At least 60 days prior to the start of FDU training sessions, the contractor shall provide a draft copy of the training syllabus for Technical Authority review and comment. Any such comments shall be incorporated into the training plan prior to course execution.

**4.1.4** The training dates shall be mutually agreed upon by the contractor and the Crown after contract award subject to trainer, trainee and facility availability. These tests should occur as soon as possible but must be completed no later than 6 months after final receipt of goods.

**4.1.5** A set of Operations and Maintenance Manual for the AGS in the English language MS Word electronic format. The contractor must provide a draft copy of the Operations and Maintenance manual to CA and must be included with bid. Technical Drawings and Manuals delivery will be agreed at the Kick-off meeting held after Contract Award at DRDC (T).



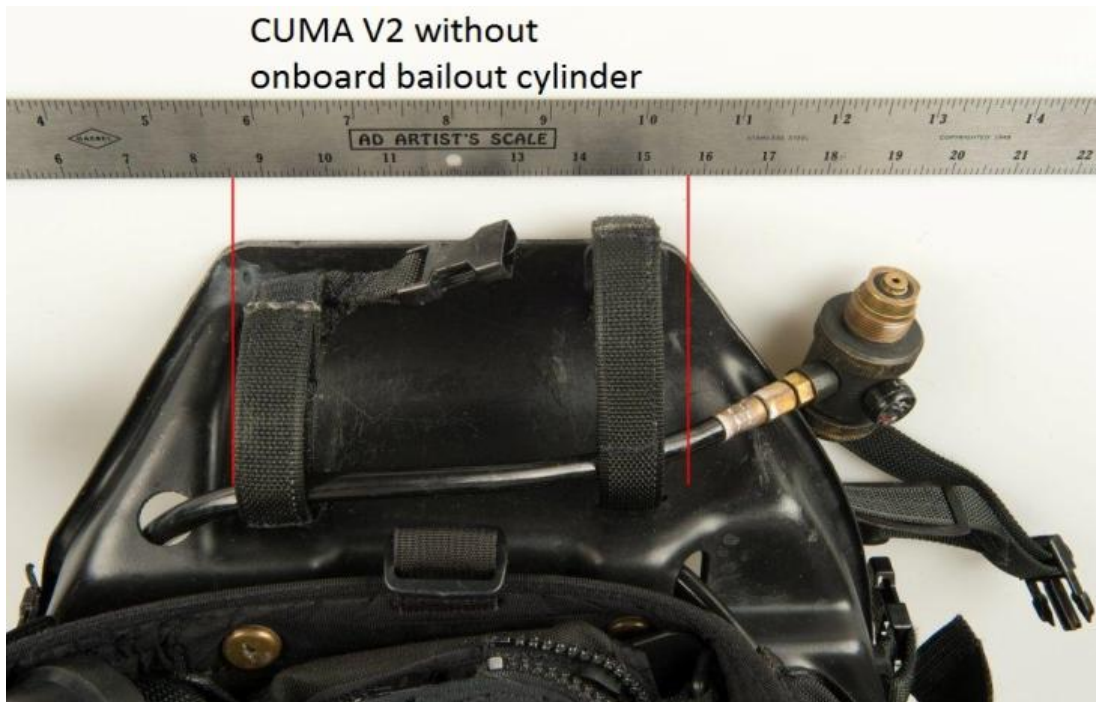
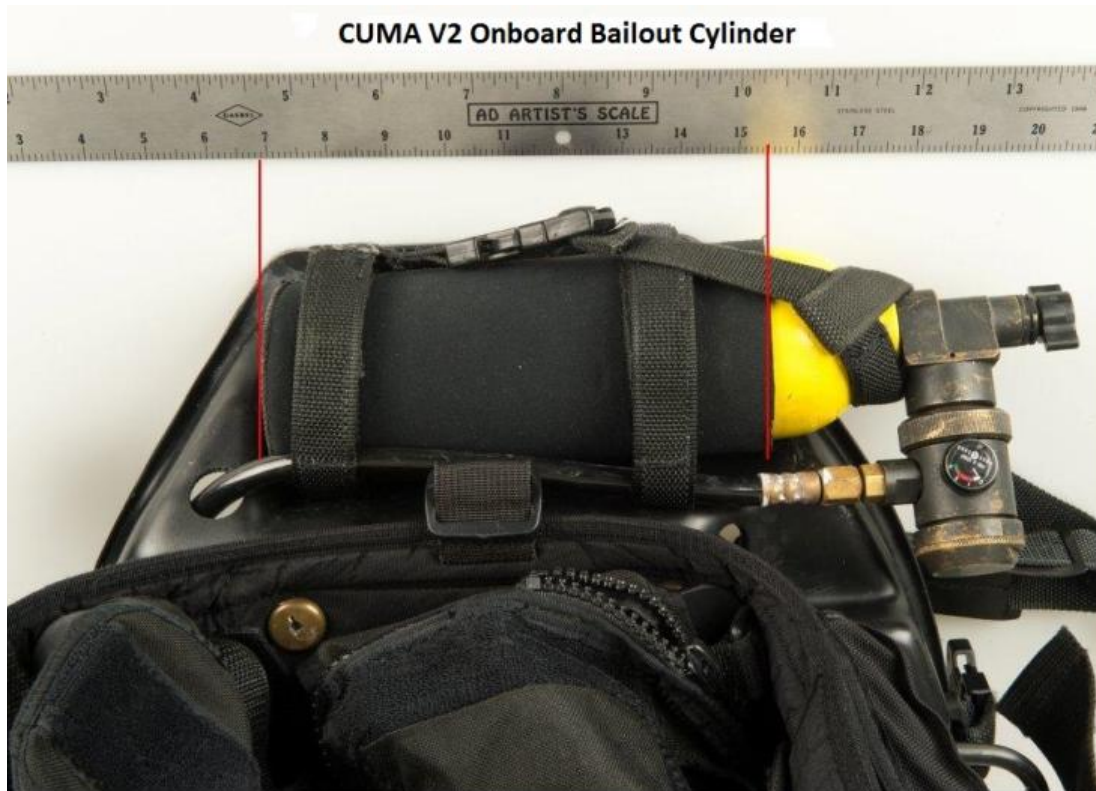
## ANNEX “A”

**4.1.6** A set of Operations and Maintenance Manual for the BOV in the English language MS Word electronic format. The contractor must provide a draft copy of the Operations and Maintenance manual to CA and must be included with bid.

### 4.1.7 Deliverables Table:

<b>Item</b>	<b>Firm Quantity</b>	<b>Unit of Issue</b>	<b>Destination</b>	<b>Description</b>
<b>1</b>	<b>3</b>	<b>Each</b>	<b>BC</b>	<b>Auxiliary Gas supply System (AGS)</b>
	<b>4</b>	<b>Each</b>	<b>NS</b>	
<b>2</b>	<b>15</b>	<b>Each</b>	<b>BC</b>	<b>Bail-out Open Circuit Valve (BOV)</b>
	<b>24</b>	<b>Each</b>	<b>NS</b>	
<b>3a</b>	<b>1</b>	<b>SU</b>	<b>BC</b>	<b>Training for Item 1</b>
<b>3a</b>	<b>1</b>	<b>SU</b>	<b>BC</b>	<b>Training for Item 2</b>
<b>3b</b>	<b>1</b>	<b>SU</b>	<b>NS</b>	<b>Training for Item 1</b>
<b>3b</b>	<b>1</b>	<b>SU</b>	<b>NS</b>	<b>Training for Item 2</b>
<b>3c</b>	<b>1</b>	<b>SU</b>	<b>TOR</b>	<b>Training for Item 1</b>
<b>3c</b>	<b>1</b>	<b>SU</b>	<b>TOR</b>	<b>Training for Item 2</b>

**APPENDIX A**  
**Pictures of CUMA V2 Backpack Fairing Onboard Bailout Cylinder**





CUMA V2 Looking forward bottom  
backpack fairing, onboard bailout



CUMA V2 Side view  
Left Hand



CUMA V2 Onboard  
Bailout, backpack fairing

**ANNEX "B"**

**Basis of Payment**

Item	Description	Destination	Unit of Issue	Firm Quantity	Total Firm Unit Price, Applicable Taxes Extra	Total Firm Price, Applicable Taxes Extra
1	Auxiliary Gas supply System (AGS)	BC	Each	3	\$	\$
		NS	Each	4	\$	
2	Bail-out Open Circuit Valve (BOV)	BC	Each	15	\$	\$
		NS	Each	24	\$	
3a	Training for Item 1	BC	SU	1	\$	\$
3a	Training for Item 2	BC	SU	1	\$	
3b	Training for Item 1	NS	SU	1	\$	\$
3b	Training for Item 2	NS	SU	1	\$	
3c	Training for Item 1	TOR	SU	1	\$	\$
3c	Training for Item 2	TOR	SU	1	\$	
<b>Sub-total</b>						<b>\$</b>
<b>Applicable Taxes</b>						<b>\$</b>
<b>Total</b>						<b>\$</b>

## ANNEX “C”

### Mandatory Technical Requirements

#### PHASE 1 - Mandatory Bidders Compliance check

**Bidder must meet all mandatory technical requirements in Phase 1 Annex “C” in order to be evaluated in Phase 2.**

Mandatory Bidders Compliance check to be submitted with Bid.

Table 1. AGS and BOV Requirements (To be evaluated in Phase 1)

"A" - The Bidder must provide a compliance statement to clearly agree that the stated work will be completed, or that the stated requirement will be met;
"W" - The Bidder must include the requested information with the bid;

Requirements:	Annex A Para No.	Test Method	Bidder's response and RFP reference	Definitions:
<b>Hardware</b>				
Onboard bailout cylinder minimum capacity 1450 litres	3.1.42	Provide bailout cylinder specifications		“W”
BOV OC feed from the left	3.1.42	Provide BOV specifications		“W”
Onboard bailout cylinder first stage regulator fitted with metric mini SPG	3.1.43	Provide SPG specifications		“W”
Onboard bailout cylinder fits to CUMA V2 backpack fairing or alternate mounting system	3.1.8	Provide bailout cylinder specifications. Provide alternate mounting system solution.		“W”
AGS cylinders minimum gas capacity 2701 litres	3.1.44	Provide AGS cylinders specifications		“W”
AGS gas cylinder fitted with metric SPG	3.1.47	Provide SPG specifications		“W”
Quick Connect hoses colour coded	3.1.45	Provide QC hose specifications		“W”
AGS QC hoses length 2 m ± 0.5	3.1.45	Provide QC hose specifications		“W”
QC fittings rated for diving	3.1.46	Conform to STANAG 1410		“A”
<b>Design Performance</b>				
BOV single glove hand operations	3.1.41	Provide BOV specifications		“W”
No interruption of normal breathing pattern when switching to BOV	3.1.12	Design to minimize single point of failure		“A”
	3.1.20			
	3.1.33	Provide draft technical drawing(s)		“W”
	3.2.4	Provide AGS specifications		

No interruption of normal breathing pattern when connecting to AGS	3.1.12 3.1.20 3.1.33 3.2.4	Design to minimize single point of failure Provide draft technical drawing(s)		"A" "W"
Diver can turn off onboard bailout cylinder valve	3.1.13	Onboard bailout cylinder valve can be isolated with gloved hand		"A"
Maintainability				
Supportable for period of 10 years	3.1.24	Items must not be obsolete		"A"
Oxygen services	3.1.7	All components are designed and supplied to be used for 100% Oxygen diving breathing gas environment. This includes AGS Oxygen cylinder, regulators, hoses, QC and hoses.		"A"
Performance and Physical Characteristics				
AGS and BOV can operate in <u>water</u> temperatures range of -2°C to +40 °C	3.2.1	All components must be rated to be operated in specified temp range.		"A"
AGS and BOV can remain functional in <u>air</u> temperature range -20°C to +40 °C.	3.2.2	All components must remain functional in temperature range.		"A"
BOV can function in all climatic conditions to depth of 81 msw.	3.2.3	All components must remain functional in temperature range at required depth.		"A"
OEM cleaning procedures	3.2.5	Provide OEM cleaning and disinfecting procedures or concur AGS and BOV can withstand existing CAF cleaning and disinfecting procedures.		"W"
FFM				
Fits in-service Cressi-Sub FFM	3.1.18	The contractor must provide a BOV that fits to the in-service CUMA V2 Cressi-Sub Full Face Mask (FFM) Non-Mag version		"A"
Information				
Marking of AGS Cylinders	3.1.44	Cylinders labelled Oxygen and Decompression Gas		"W"
Bidder supplied information	4.1.5 4.1.6	Draft Operation and Maintenance Manuals for AGS and BOV must be included with bid		"W"
Performance Tests	3.1.5	BOV meets SCUBA Regulator performance test specified in latest version available of STANAG 1410		"W"

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**Bidder's Certification of Compliance: Name & Signature**

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***Bidder's Name (Print)***

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***Signature***



**ANNEX “D”**

**Mandatory Technical Requirements**

**PHASE 2 - Mandatory Requirements - Pre-award Samples and Supporting Documents**

**Bidder must meet all mandatory technical requirements in Phase 2 Annex “D” in order to be deemed compliant.**

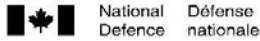
Pre-award Samples and supporting documents to be evaluated. A check mark will be placed in the final column for all items meeting the specified requirement. **Bidders shall not fill out this check list. Note:** Successful bids will receive a check mark for every item on this list.

<b>Refs In Annex “A”</b>	<b>Mandatory</b>	<b>Description</b>	<b>Pass/Fail</b>	<b>Evaluator Comments</b>
3.1.5	<b>M1</b>	<b>Performance Tests</b> BOV meets acceptance criteria for underwater breathing apparatus specified in latest edition available STANAG 1410 – 5 Feb 2015. Test to a ventilation rate from 10 to 90 l-min <sup>-1</sup> under Actual Temperature, Pressure and humidity (ATP) conditions, and must have a Work of Breathing (WOB) ≤ 1.7 J-l <sup>-1</sup> .		
3.1.7 3.1.23	<b>M2</b>	<b>Oxygen Cleaned State</b> AGS and BOV components and assemblies delivered Oxygen cleaned for Enriched Oxygen services.		
3.1.8	<b>M3</b>	<b>Fitting of bailout cylinder</b> Onboard bailout cylinder can be installed to the lower portion of the backpack fairing of the CUMA V2 or bidder has supplied a TA approved alternate onboard bailout cylinder mounting system.		
3.1.9	<b>M4</b>	<b>Integration of CUMA V2 breathing hoses</b> The BOV to be integrated to the CUMA V2 breathing hoses.		
3.1.12 3.1.20 3.1.33 3.2.4	<b>M5</b>	<b>Breathing Pattern not interrupted</b> a. Divers are not to interrupt their normal breathing pattern when switching to BOV or b. Connecting to AGS.		
3.1.13	<b>M6</b>	<b>Onboard bailout cylinder isolation</b> Diver must be capable of isolating the onboard bailout cylinders with gloved hand after connecting to AGS.		
1.2.6 3.1.15	<b>M7</b>	<b>Competition, Trials and Testing</b> Competition for trials and testing of both AGS and BOV systems to occur concurrently.		
3.1.16	<b>M8</b>	<b>Compatibility</b> a. BOV to be compatible with current in-service CUMA V2. b. AGS to be compatible with BOV without any constraints including acceptance criteria for underwater breathing apparatus specified in latest edition available STANAG 1410.		
3.1.11	<b>M9</b>	<b>Compatibility</b> AGS and BOV to be compatible for wear with all current CAF diving occupational issued Dry suits or Wet suits.		
3.1.25 3.1.32	<b>M10</b>	<b>Environment ranging</b>		

		<ul style="list-style-type: none"> <li>a. AGS and BOV to safely operate in all environments ranging from Tropical regions to Canadian Arctic and</li> <li>b. In zero underwater visibility.</li> </ul>		
3.1.27	<b>M11</b>	<p><b>Mission essential tasks</b> AGS and BOV to allow RCN Clearance Divers to perform mission-essential tasks without any performance degradation.</p>		
3.1.34	<b>M12</b>	AGS to be negatively buoyant throughout the dive cycle. AGS to be capable to be lowered to depth of 42 msw.		
3.1.39	<b>M13</b>	<p><b>Noise generation</b> Other than in emergency situation, the BOV and onboard bailout cylinder does not generate noise by itself as consequence of the individual's equipment.</p>		
3.1.42	<b>M14</b>	<p><b>Minimum capacity</b> BOV onboard bailout cylinder capacity to provide a minimum of 1450 litres of Bailout gas mix.</p>		
3.1.42	<b>M15</b>	<p><b>BOV OC Feed</b> BOV OC feed is from left</p>		
3.1.42	<b>M16</b>	<p><b>1<sup>st</sup> Stage Regulator SPG</b>  <ul style="list-style-type: none"> <li>a. Onboard bailout cylinder first stage regulator to be fitted with a button-type metric SPG and</li> <li>b. Readable with normal visual acuity in normal visibility</li> </ul> </p>		
3.1.44	<b>M17</b>	<p><b>High visibility and labelling</b>  <ul style="list-style-type: none"> <li>a. AGS cylinders capacity has a minimum of 2701 litres each.</li> <li>b. AGS gas cylinders to be highly visible in colour.</li> <li>c. AGS Decompression Gas cylinder is clearly labelled as "Decompression Gas Mix".</li> <li>d. AGS Oxygen Gas cylinder is clearly labelled as "OXYGEN".</li> <li>e. AGS Gas cylinders are joined together with set of tank bands.</li> </ul> </p>		
3.1.46	<b>M18</b>	<p><b>Quick-connect fittings</b> The QC fittings to be double-ended shut-off (DESO) not restricting gas flow IAW STANAG 1410.</p>		
3.2.1	<b>M19</b>	<p><b>Water temperatures</b> AGS and BOV to be able to operate at water temperatures from -2°C to +40°C.</p>		
3.2.2	<b>M20</b>	<p><b>Air temperatures</b> AGS and BOV to remain functional in air temperatures from -20°C to +40°C.</p>		
3.2.3	<b>M21</b>	<p><b>Climatic conditions and Depths</b>  <ul style="list-style-type: none"> <li>a. AGS and BOV to provide functionality in all climatic conditions and BOV to depths of 81 msw using single gloved hand.</li> <li>b. AGS and BOV to be able to be operated using either gloved hand.</li> </ul> </p>		
4.1.2	<b>M22</b>	<p><b>Training Material</b> Draft Operation and Maintenance manuals for the basic operation of AGS and BOV to be provided.</p>		
3.1.4	<b>M23</b>	<p><b>Proven Components</b> The AGS and BOV must be assembled from proven components, (COTS) and not be a prototype or pre-production model.</p>		
3.1.17	<b>M24</b>	<p><b>Size</b> The size of the systems delivered allow for AGS and BOV to be simultaneously deployed while performing CUMA V2 diving operations.</p>		
3.1.19	<b>M25</b>	<p><b>Independent Breathing</b> The addition of a BOV and onboard bailout cylinder for each CUMA V2 rebreather diving sets must provide the diver with an independent</p>		

		breathing source to safely ascend from the bottom through the water column to the AGS or surface on an open circuit.		
3.1.36	<b>M26</b>	<b>Egress of water</b> The BOV must not present any potential hazard from entry to egress of the water.		
3.2.6	<b>M27</b>	<b>Contamination</b> The BOV must be resistant to the effects of all types of contamination from salt water and cleaning products.		

**ANNEX "G"**



**REQUEST FOR WAIVER or DEVIATION  
DEMANDE D'EXEMPTION ou DÉVIATION**

<b>REQUEST FOR WAIVER or DEVIATION DEMANDE D'EXEMPTION ou DÉVIATION</b>				4. Waiver or Deviation No. N° Exemption ou Déviation		
				5. PWGSC Contract No. TPSGC N° du contrat		
1.	<input type="checkbox"/> Waiver Exemption	<input type="checkbox"/> Deviation Déviation		1a. Recurring Récurent	6. Contract Line Item No. N° d'inscription au contrat	
2.	<input type="checkbox"/> Technical Technique	<input type="checkbox"/> Contractual Contractuel		<input type="checkbox"/> yes / oui <input type="checkbox"/> no / non		
3.	<input type="checkbox"/> Major Majeur	<input type="checkbox"/> Minor Secondaire	<input type="checkbox"/> Critical Critique	7. Prime Contractor Name Nom de l'entrepreneur principal		
9. Item Description / Description de l'article :				8. Originating Date (dd/mm/yyyy) Date d'introduction (jj/mm/aaaa)		
9b. Primary Equipment Affected / Équipement primaire affecté				9a. Lot No. N° de lot	Batch No N° de fabrication	Item Serial No. N° de série de l'article
9c. Part or Assembly Impacted Pièce ou assemblage affectée						
9d. Impact on the Contract Impact sur le contrat						
9e. Impact on Cost Impact sur le coût						
9f. Impact on Delivery Schedule Impact sur le calendrier de livraison						
9g. Impact on other Systems (ILS, interface & software) Impact sur autres systèmes (SLI, interface & logiciel)						
10. Description of Waiver or Deviation (Non-Conformity) / Description d'exemption ou déviation (non-conformité)						
11. Reason for Waiver or Deviation (Non-Conformity) / Raison d'exemption ou déviation (non-conformité)						
12. Originator Signature Block / Bloc de signature de l'auteur						
12a. Prime Contractor / entrepreneur principal						
			Name / Nom (printed / imprimé)	Signature	Date (dd/mm/yyyy : jj/mm/aaaa)	
12b. Originator / Auteur de la demande						
(if different from 12a. / si différent de 12a.)			Name / Nom (printed / imprimé)	Signature	Date (dd/mm/yyyy : jj/mm/aaaa)	
13. Government Authorizations / Autorisations du gouvernement						
13a. Conditions to granting Waiver or Deviation / Conditions pour accorder l'exemption ou la déviation						
13b. Quality Assurance Representative / Représentant de l'assurance de la qualité						
<input type="checkbox"/> Recommended Recommandé		<input type="checkbox"/> Not Recommended Non-recommandé				
			Name / Nom (printed / imprimé)	Signature	Date (dd/mm/yyyy : jj/mm/aaaa)	
13c. Contractual Authority - PWGSC / Autorité contractuelle - TPSGC						
<input type="checkbox"/> Approved Approuvé		<input type="checkbox"/> Not Recommended Non-recommandé				
			Name / Nom (printed / imprimé)	Signature	Date (dd/mm/yyyy : jj/mm/aaaa)	
13d. Technical Authority - DND / Autorité technique - MDN						
<input type="checkbox"/> Approved Approuvé		<input type="checkbox"/> Not Approved Non-approuvé				
			Name / Nom (printed / imprimé)	Signature	Date (dd/mm/yyyy : jj/mm/aaaa)	