



**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**

**Quebec**

**K1A0S5**

**Bid Fax: (819) 997-9776**

**REQUEST FOR PROPOSAL  
DEMANDE DE PROPOSITION**

**Proposal To: Public Works and Government  
Services 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, services, and construction listed herein and on any attached sheets at the price(s) set out therefor.

**Proposition aux: Travaux Publics et Services  
Gouvernementaux 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, services et construction énumérés ici sur toute feuille ci-annexée, au(x) prix indiqué(s).

**Comments - Commentaires**

**Vendor/Firm Name and Address**

**Raison sociale et adresse du**

**fournisseur/de l'entrepreneur**

**Issuing Office - Bureau de distribution**

Marine Emergency Response Division/Division des  
Interventions en cas d'urgence maritime

Centennial Towers 7th Floor - 7W11

200 Kent Street

Ottawa

Ontario

K1A0S5

<b>Title - Sujet</b> EREP:SelfPropelled Advancing Skimme		
<b>Solicitation No. - N° de l'invitation</b> F7047-160032/D	<b>Date</b> 2019-06-21	
<b>Client Reference No. - N° de référence du client</b> F7047-160032		
<b>GETS Reference No. - N° de référence de SEAG</b> PW-\$ERD-005-27372		
<b>File No. - N° de dossier</b> 005erd.F7047-160032	<b>CCC No./N° CCC - FMS No./N° VME</b>	
<b>Solicitation Closes - L'invitation prend fin</b> <b>at - à 02:00 PM</b> <b>on - le 2019-07-31</b>		<b>Time Zone</b> <b>Fuseau horaire</b> Eastern Daylight Saving Time EDT
<b>F.O.B. - F.A.B.</b> Specified Herein - Précisé dans les présentes <b>Plant-Usine:</b> <input type="checkbox"/> <b>Destination:</b> <input type="checkbox"/> <b>Other-Autre:</b> <input checked="" type="checkbox"/>		
<b>Address Enquiries to: - Adresser toutes questions à:</b> Richards, Shazia		<b>Buyer Id - Id de l'acheteur</b> 005erd
<b>Telephone No. - N° de téléphone</b> (613) 614-2383 ( )		<b>FAX No. - N° de FAX</b> ( ) -
<b>Destination - of Goods, Services, and Construction:</b> <b>Destination - des biens, services et construction:</b> See herein		

**Instructions: See Herein**

**Instructions: Voir aux présentes**

<b>Delivery Required - Livraison exigée</b>	<b>Delivery Offered - Livraison proposée</b>
<b>Vendor/Firm Name and Address</b> <b>Raison sociale et adresse du fournisseur/de l'entrepreneur</b>	
<b>Telephone No. - N° de téléphone</b> <b>Facsimile No. - N° de télécopieur</b>	
<b>Name and title of person authorized to sign on behalf of Vendor/Firm</b> <b>(type or print)</b> <b>Nom et titre de la personne autorisée à signer au nom du fournisseur/</b> <b>de l'entrepreneur (taper ou écrire en caractères d'imprimerie)</b>	
<b>Signature</b>	<b>Date</b>

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F7047-160032/D  
Client Ref. No. - N° de réf. du client  
F7047-160032

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

Buyer ID - Id de l'acheteur  
005erd  
CCC No./N° CCC - FMS No./N° VME

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## **PART 1 - GENERAL INFORMATION**

### **1.1 Introduction**

The bid solicitation is divided into seven parts plus attachments and annexes, as follows:

- Part 1 General Information: provides a general description of the requirement;
- Part 2 Bidder Instructions: provides the instructions, clauses and conditions applicable to the bid solicitation;
- Part 3 Bid Preparation Instructions: provides Bidders with instructions on how to prepare their bid;
- Part 4 Evaluation Procedures and Basis of Selection: indicates how the evaluation will be conducted, the evaluation criteria that must be addressed in the bid, and the basis of selection;
- Part 5 Certifications and Additional Information: includes the certifications and additional information to be provided;
- Part 6 Security, Financial and Other Requirements: includes specific requirements that must be addressed by Bidders; and
- Part 7 Resulting Contract Clauses: includes the clauses and conditions that will apply to any resulting contract.

The Annexes include the Statement of Work, Technical Statement of Requirements the Basis of Payment, the Electronic Payment Instruments, the Federal Contractors Program for Employment Equity - Certification, the Insurance Requirements, the Task Authorization Form 572 and any other annexes.

### **1.2 Summary**

The CCG requires a proven, purpose-built vessel, whose integrated design allows the independent recovery, temporary storage, and offloading of spilled oil. The Self-Propelled Advancing Skimmer will be used in calm and protected waters (such as bays and harbours) to recover spilled oil ranging in viscosity from diesel to heavy fuel oil. During emergency response situations, the Self-propelled Advancing Skimmer will be rapidly deployed and function without logistical support (e.g., external skimmers, pumps, or storage tanks) for prolonged periods of time.

The period of the resulting contract will be from date of contract award to March 31, 2022 (inclusive). Delivery destinations include various locations across Canadian provinces and territories, and are identified in Schedule B – Deliveries and Milestones. The resulting contract may also be utilized for deliveries to other federal, provincial, territorial, and municipal government organizations and Crown corporations

This procurement is part of the Environmental Response Equipment (ERE) Program for the CCG, and forms part of the Oceans Protection Plan announced in November 2016. Under the ERE Program, CCG is renewing its suite of environmental response (ER) equipment, ensuring a robust and strategic national response capability. The ERE Program will replace aging ER equipment and introduce some new technologies to over 80 locations across the country through approximately 50-100 unique procurements for different types of equipment.

The requirement is subject to the provisions of the North American Free Trade Agreement (NAFTA) and Canadian Free Trade Agreement (CFTA).

This procurement is subject to the Tsawwassen First Nation Final Agreement and may be subject to the Huron-Wendat Nation, Mohawks of Quebec, Regroupement Petapan Land Claim Agreements. At the

time when the task authorization is issued, the Contracting/Project Authority will discuss with the Contractor to determine if there is an opportunity to include an Indigenous Benefits Plan which generates socio-economic benefits (employment, training and subcontracting) for Indigenous people or businesses.

The Federal Contractors Program (FCP) for employment equity applies to this procurement; refer to Part 5 – Certifications and Additional Information, Part 7 - Resulting Contract Clauses and the annex titled Federal Contractors Program for Employment Equity - Certification.

Bidders intending to submit bids should obtain solicitation documents from the Government Electronic Tendering System (GETS) at <http://BuyAndSell.gc.ca>. Solicitation amendments, if and when issued, will be available on GETS. It is the responsibility of the Bidder to ensure that all amendments issued during the solicitation period have been obtained and addressed in the submitted bid. Bidders basing their submissions on solicitation documents obtained from other sources do so at their own risk.

Businesses interested in learning more about selling to the Government of Canada are encouraged to review <https://BuyAndSell.gc.ca/for-businesses/selling-to-the-government-of-canada>. The Office of Small and Medium Enterprises (OSME) offers free seminars to businesses interested in learning about the general procurement process and how to sell goods and services to the government. Refer to <http://www.tpsgc-pwgsc.gc.ca/app-acq/pme-sme/index-eng.html> for more information about OSME's seminars and other services.

Enquiries regarding this bid solicitation must be directed only to the Contracting Authority identified in the bid solicitation.

### **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 Phased Bid Compliance Process**

The Phased Bid Compliance Process applies to this requirement.

### **1.5 Reissue of Bid Solicitation**

This bid solicitation cancels and supersedes previous bid solicitation number F7047-160032/B dated 2017-09-13 with a closing of 2017-10-13 at 14:00 EDT. A debriefing or feedback session will be provided upon request to bidders/offerors/suppliers who bid on the previous solicitation.

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## 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) (<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](#) (2019-03-04) Standard Instructions - Goods or Services - Competitive Requirements, are incorporated by reference into and form part of the bid solicitation.

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 the **Public Works and Government Services Canada (PWGSC) Bid Receiving Unit** indicated in the top left corner of the cover page of the bid solicitation by the date and time indicated in the bid solicitation.

**Due to the nature of the bid solicitation, bids transmitted by facsimile, e-mail, or the epost Connect service to PWGSC will not be accepted.**

### 2.3 Bid Solicitation

All enquiries must be submitted in writing to the Contracting Authority no later than ten (10) calendar 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.

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

### **3.1 Bid Preparation Instructions**

#### **3.1.1 Bid Structure**

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

Section I: Technical Bid (3 hard copies and 2 electronic copies on CDs, DVDs, or USB storage devices)

Section II: Financial Bid (1 hard copy and 1 electronic copy on CD, DVD, or USB storage device)

Section III: Certifications (1 hard copy and 1 electronic copy on CD, DVD, or USB storage device).

If there is a discrepancy between the wording of the electronic copy and the hard copy, the wording of the hard copy will have priority over the wording of the soft copy.

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

#### **3.1.2 Bid Format**

Canada requests that bidders follow the format instructions described below in the preparation of hard copy 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](https://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=32573) (<https://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=32573>). 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.

#### **3.1.3 No Conditional Bids**

The Bidder's bid must not be made conditionally. Any condition imposed by the Bidder will render the bid nonresponsive and the bid will be given no further consideration.

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

In their technical bid, Bidders should demonstrate their understanding of the requirements contained in the bid solicitation and explain how they will meet these requirements. Bidders should demonstrate their capability in a thorough, concise and clear manner for carrying out the work.

The technical bid should address clearly and in sufficient depth the points that are subject to the evaluation criteria against which the bid will be evaluated. Simply repeating the statement contained in the bid solicitation is not sufficient. In order to facilitate the evaluation of the bid, Canada requests that Bidders address and present topics in the order of the evaluation criteria under the same headings. To avoid duplication, Bidders may refer to different sections of their bids by identifying the specific paragraph and page number where the subject topic has already been addressed.

#### **3.1.4.1 Substantial Information**

Bidders must demonstrate their compliance with the bid solicitation by providing substantial information by describing completely and in detail how the requirement is met or addressed.

Bidders must provide with their technical bid, a document indicating clearly where the substantial information can be found for each of the mandatory criterion identified in the Technical Bid Evaluation Plan (Annex 1 to Part 4 of the Bid Solicitation).

Bidders must sign the Certification of Compliance (Annex 2 to Part 4 of the Bid Solicitation). A signed Certification of Compliance (Annex 2 to Part 4 of the Bid Solicitation) will be interpreted as meaning full agreement with the requirement, whereas a non-signed Certification of Compliance (Annex 2 to Part 4 of the Bid Solicitation) will be interpreted as meaning not in full agreement with the requirement and the Bid will be deemed non-responsive and not given any further consideration.

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

##### **3.1.5.1 Pricing Submission**

Bidders must submit their financial bid in accordance with Schedule A. The Bid must address each of the cost elements in Schedule A.

Bidders are requested to insert "\$0.00" for any of the cost elements for which it does not intend to charge.

The Bid must be submitted in Canadian currency.

##### **3.1.5.2 Electronic Payment of Invoices – Bid**

If you are willing to accept payment of invoices by Electronic Payment Instruments, complete Annex 1 to Part 3 of the Bid Solicitation to identify which ones are accepted.

If Annex 1 to Part 3 of the Bid Solicitation is not completed, it will be considered as if Electronic Payment Instruments are not being accepted for payment of invoices.

Acceptance of Electronic Payment Instruments will not be considered as an evaluation criterion.

##### **3.1.5.3 Delivery Dates**

Bidders must submit their delivery dates in accordance with Schedule B – Deliveries and Milestones.

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

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

##### **3.1.7 Bidder's Checklist**

Bidders should refer to Annex 2 to Part 3 of the Bid Solicitation (Bidder's Checklist).



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

### **4.1 Evaluation Procedures**

- (a) Bids will be assessed in accordance with the entire requirement of the bid solicitation including the technical and financial evaluation criteria.
- (b) An evaluation team composed of representatives of Canada will evaluate the bids.
- (c) Canada will use the Phased Bid Compliance Process described below.

#### **4.1.1 Phased Bid Compliance Process**

##### **4.1.1.1 General**

- (a) Canada is conducting the PBCP described below for this requirement.
- (b) Notwithstanding any review by Canada at Phase I or II of the PBCP, Bidders are and will remain solely responsible for the accuracy, consistency and completeness of their Bids and Canada does not undertake, by reason of this review, any obligations or responsibility for identifying any or all errors or omissions in Bids or in responses by a Bidder to any communication from Canada.

THE BIDDER ACKNOWLEDGES THAT THE REVIEWS IN PHASE I AND II OF THIS PBCP ARE PRELIMINARY AND DO NOT PRECLUDE A FINDING IN PHASE III THAT THE BID IS NON-RESPONSIVE, EVEN FOR MANDATORY

REQUIREMENTS WHICH WERE SUBJECT TO REVIEW IN PHASE I OR II AND NOTWITHSTANDING THAT THE BID HAD BEEN FOUND RESPONSIVE IN SUCH EARLIER PHASE. CANADA MAY DEEM A BID TO BE NON-RESPONSIVE TO A MANDATORY REQUIREMENT AT ANY PHASE.

THE BIDDER ALSO ACKNOWLEDGES THAT ITS RESPONSE TO A NOTICE OR A COMPLIANCE ASSESSMENT REPORT (CAR) (EACH DEFINED BELOW) IN PHASE I OR II MAY NOT BE SUCCESSFUL IN RENDERING ITS BID RESPONSIVE TO THE MANDATORY REQUIREMENTS THAT ARE THE SUBJECT OF THE NOTICE OR CAR, AND MAY RENDER ITS BID NON-RESPONSIVE TO OTHER MANDATORY REQUIREMENTS.

- (c) Canada may, in its discretion, request and accept at any time from a Bidder and consider as part of the Bid, any information to correct errors or deficiencies in the Bid that are clerical or administrative, such as, without limitation, failure to sign the Bid or any part or to checkmark a box in a form, or other failure of format or form or failure to acknowledge; failure to provide a procurement business number or contact information such as names, addresses and telephone numbers; inadvertent errors in numbers or calculations that do not change the amount the Bidder has specified as the price or of any component thereof that is subject to evaluation. This shall not limit Canada's right to request or accept any information after the bid solicitation closing in circumstances where the bid solicitation expressly provides for this right. The Bidder will have the time period specified in writing by Canada to provide the necessary documentation. Failure to meet this deadline will result in the Bid being declared non-responsive.
- (d) The PBCP does not limit Canada's rights under Standard Acquisition Clauses and Conditions (SACC) 2003 (2018-05-22) Standard Instructions – Goods or Services – Competitive Requirements nor Canada's right to request or accept any information during the solicitation period or after bid solicitation closing in circumstances where the bid solicitation expressly

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provides for this right, or in the circumstances described in subsection (c).

- (e) Canada will send any Notice or CAR by any method Canada chooses, in its absolute discretion. The Bidder must submit its response by the method stipulated in the Notice or CAR. Responses are deemed to be received by Canada at the date and time they are delivered to Canada by the method and at the address specified in the Notice or CAR. An email response permitted by the Notice or CAR is deemed received by Canada on the date and time it is received in Canada's email inbox at Canada's email address specified in the Notice or CAR. A Notice or CAR sent by Canada to the Bidder at any address provided by the Bidder in or pursuant to the Bid is deemed received by the Bidder on the date it is sent by Canada. Canada is not responsible for late receipt by Canada of a response, however caused.

#### 4.1.1.2 Phase I: Financial Bid

- (a) After the closing date and time of this bid solicitation, Canada will examine the Bid to determine whether it includes a Financial Bid and whether any Financial Bid includes all information required by the solicitation. Canada's review in Phase I will be limited to identifying whether any information that is required under the bid solicitation to be included in the Financial Bid is missing from the Financial Bid. This review will not assess whether the Financial Bid meets any standard or is responsive to all solicitation requirements.
- (b) Canada's review in Phase I will be performed by officials of the Department of Public Works and Government Services.
- (c) If Canada determines, in its absolute discretion that there is no Financial Bid or that the Financial Bid is missing all of the information required by the bid solicitation to be included in the Financial Bid, then the Bid will be considered non-responsive and will be given no further consideration.
- (d) For Bids other than those described in c), Canada will send a written notice to the Bidder ("Notice") identifying where the Financial Bid is missing information. A Bidder, whose Financial Bid has been found responsive to the requirements that are reviewed at Phase I, will not receive a Notice. Such Bidders shall not be entitled to submit any additional information in respect of their Financial Bid.
- (e) The Bidders who have been sent a Notice shall have the time period specified in the Notice (the "Remedy Period") to remedy the matters identified in the Notice by providing to Canada, in writing, additional information or clarification in response to the Notice. Responses received after the end of the Remedy Period will not be considered by Canada, except in circumstances and on terms expressly provided for in the Notice.
- (f) In its response to the Notice, the Bidder will be entitled to remedy only that part of its Financial Bid which is identified in the Notice. For instance, where the Notice states that a required line item has been left blank, only the missing information may be added to the Financial Bid, except that, in those instances where the addition of such information will necessarily result in a change to other calculations previously submitted in its Financial Bid, (for example, the calculation to determine a total price), such necessary adjustments shall be identified by the Bidder and only these adjustments shall be made. All submitted information must comply with the requirements of this solicitation.

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- (g) Any other changes to the Financial Bid submitted by the Bidder will be considered to be new information and will be disregarded. There will be no change permitted to any other Section of the Bidder's Bid. Information submitted in accordance with the requirements of this solicitation in response to the Notice will replace, in full, **only** that part of the original Financial Bid as is permitted above, and will be used for the remainder of the bid evaluation process.
- (h) Canada will determine whether the Financial Bid is responsive to the requirements reviewed at Phase I, considering such additional information or clarification as may have been provided by the Bidder in accordance with this Section. If the Financial Bid is not found responsive for the requirements reviewed at Phase I to the satisfaction of Canada, then the Bid shall be considered non-responsive and will receive no further consideration.
- (i) Only Bids found responsive to the requirements reviewed in Phase I to the satisfaction of Canada, will receive a Phase II review.

#### **4.1.1.3 Phase II: Technical Bid**

- (a) Canada's review at Phase II will be limited to a review of the Technical Bid to identify any instances where the Bidder has failed to meet any Eligible Mandatory Criterion. This review will not assess whether the Technical Bid meets any standard or is responsive to all solicitation requirements. Eligible Mandatory Criteria are all mandatory technical criteria that are identified in this solicitation as being subject to the PBCP. Mandatory technical criteria that are not identified in the solicitation as being subject to the PBCP, will not be evaluated until Phase III.
- (b) Canada will send a written notice to the Bidder (Compliance Assessment Report or "CAR") identifying any Eligible Mandatory Criteria that the Bid has failed to meet. A Bidder whose Bid has been found responsive to the requirements that are reviewed at Phase II will receive a CAR that states that its Bid has been found responsive to the requirements reviewed at Phase II. Such Bidder shall not be entitled to submit any response to the CAR.
- (c) A Bidder shall have the period specified in the CAR (the "Remedy Period") to remedy the failure to meet any Eligible Mandatory Criterion identified in the CAR by providing to Canada in writing additional or different information or clarification in response to the CAR. Responses received after the end of the Remedy Period will not be considered by Canada, except in circumstances and on terms expressly provided for in the CAR.
- (d) The Bidder's response must address only the Eligible Mandatory Criteria listed in the CAR as not having been achieved, and must include only such information as is necessary to achieve such compliance. Any additional information provided by the Bidder which is not necessary to achieve such compliance will not be considered by Canada, except that, in those instances where such a response to the Eligible Mandatory Criteria specified in the CAR will necessarily result in a consequential change to other parts of the Bid, the Bidder shall identify such additional changes, provided that its response must not include any change to the Financial Bid.

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- (e) The Bidder's response to the CAR should identify in each case the Eligible Mandatory Criterion in the CAR to which it is responding, including identifying in the corresponding section of the original Bid, the wording of the proposed change to that section, and the wording and location in the Bid of any other consequential changes that necessarily result from such change. In respect of any such consequential change, the Bidder must include a rationale explaining why such consequential change is a necessary result of the change proposed to meet the Eligible Mandatory Criterion. It is not up to Canada to revise the Bidder's Bid, and failure of the Bidder to do so in accordance with this subparagraph is at the Bidder's own risk. All submitted information must comply with the requirements of this solicitation.
- (f) Any changes to the Bid submitted by the Bidder other than as permitted in this solicitation, will be considered to be new information and will be disregarded. Information submitted in accordance with the requirements of this solicitation in response to the CAR will replace, in full, **only** that part of the original Bid as is permitted in this Section.
- (g) Additional or different information submitted during Phase II permitted by this section will be considered as included in the Bid, but will be considered by Canada in the evaluation of the Bid at Phase II only for the purpose of determining whether the Bid meets the Eligible Mandatory Criteria. It will not be used at any Phase of the evaluation to increase or decrease any score that the original Bid would achieve without the benefit of such additional or different information. For instance, an Eligible Mandatory Criterion that requires a mandatory minimum number of points to achieve compliance will be assessed at Phase II to determine whether such mandatory minimum score would be achieved with such additional or different information submitted by the Bidder in response to the CAR. If so, the Bid will be considered responsive in respect of such Eligible Mandatory Criterion, and the additional or different information submitted by the Bidder shall bind the Bidder as part of its Bid, but the Bidder's original score, which was less than the mandatory minimum for such Eligible Mandatory Criterion, will not change, and it will be that original score that is used to calculate any score for the Bid.
- (h) Canada will determine whether the Bid is responsive for the requirements reviewed at Phase II, considering such additional or different information or clarification as may have been provided by the Bidder in accordance with this Section. If the Bid is not found responsive for the requirements reviewed at Phase II to the satisfaction of Canada, then the Bid shall be considered non-responsive and will receive no further consideration.
- (i) Only Bids found responsive to the requirements reviewed in Phase II to the satisfaction of Canada, will receive a Phase III evaluation.

#### **4.1.1.4 Phase III: Final Evaluation of the Bid**

- (a) In Phase III, Canada will complete the evaluation of all Bids found responsive to the requirements reviewed at Phase II. Bids will be assessed in accordance with the entire requirement of the bid solicitation including the technical and financial evaluation criteria.
- (b) A Bid is non-responsive and will receive no further consideration if it does not meet all mandatory evaluation criteria of the solicitation.

#### 4.1.2 Technical Evaluation

The Technical Bid Evaluation Plan and mandatory technical evaluation criteria are included in the Technical Bid Evaluation Plan (Annex 1 to Part 4 of the Bid Solicitation).

Where the requirement for method of compliance is the "Certification of Compliance", the evaluation team will consider a bid compliant if the Bidder provides a completed and signed "Certification of Compliance (Annex 2 to Part 4 of the Bid Solicitation)" document.

##### 4.1.2.1 Mandatory Technical Criteria

All mandatory technical evaluation criteria are included in the Technical Bid Evaluation Plan (Annex 1 to Part 4 of the Bid Solicitation).

**The Phased Bid Compliance Process will apply to all mandatory technical criteria.**

#### 4.1.3 Financial Evaluation

##### 4.1.3.1 Evaluation of Price

The price of the bid will be evaluated in Canadian dollars, Applicable Taxes excluded, Delivered Duty Paid (DDP) (specified destination) Incoterms 2010, Canadian customs duties and excise taxes included.

##### 4.1.3.2 Evaluation Price Equation

1. The following "Evaluated Price" equation will be used to determine the evaluated price of the bid based on the prices of all required and optional goods and services inserted by the Bidder in its bid Schedule A (Basis of Payment):

<b>Total of Firm Prices provided for all Required Goods and Services (Items 1 to 3)</b>
<b>+</b>
<b>Unit Price DDP Destination of Item 4</b>
<b>+</b>
<b>Total of Firm Prices provided for all Optional Goods and Services (Items 5 to 7)</b>
<b>+</b>
<b>Labour rate (See Schedule A, Section 5.1 – Per diem) x 100 days</b>
<b>=</b>
<b>Evaluated Total Price</b>

2. The quantities used in the "Evaluation Price" equation are for bid evaluation purposes only. There is no guarantee that the quantities of the optional items used in the "Evaluation Price" equation will be procured.

#### 4.2 Basis of Selection

##### 4.2.1 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.

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## 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 Integrity Provisions of the Standard Instructions, all bidders must provide with their bid, **if applicable**, the Integrity declaration form available on the [Forms for the Integrity Regime](http://www.tpsgc-pwgsc.gc.ca/ci-if/declaration-eng.html) website (<http://www.tpsgc-pwgsc.gc.ca/ci-if/declaration-eng.html>), to be given further consideration in the procurement process.

#### 5.1.2 Certification of Compliance

The Bidder must provide the Contracting Authority with a signed and completed Certification of Compliance (Annex 2 to Part 4 of the Bid Solicitation) to be given further consideration in the procurement process.

### 5.2 Certifications Precedent to Contract Award and Additional Information

The certifications and additional information listed below should be submitted with the bid but may be submitted afterwards. If any of these required certifications or additional information is not completed and submitted as requested, the Contracting Authority will inform the Bidder of a time frame within which to provide the information. Failure to provide the certifications or the additional information listed below within the time frame specified will render the bid non-responsive.

#### 5.2.1 Integrity Provisions – Required Documentation

In accordance with the section titled Information to be provided when bidding, contracting or entering into a real procurement agreement of 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](https://www.canada.ca/en/employment-social-development/canada/esdc/labour's) website (<https://www.canada.ca/en/employment-social-development/programs/employment-equity/federal-contractor-program.html#>).

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.

Canada will also have the right to terminate the Contract for default if a Contractor, or any member of the Contractor if the Contractor is a Joint Venture, appears on the "FCP Limited Eligibility to Bid" list during the period of the Contract.

The Bidder must provide the Contracting Authority with a completed annex titled Federal Contractors Program for Employment Equity - Certification, before contract award. If the Bidder is a Joint Venture, the Bidder must provide the Contracting Authority with a completed annex Federal Contractors Program for Employment Equity - Certification, for each member of the Joint Venture.

### **5.2.3 Additional Certifications Precedent to Contract Award**

#### **5.2.3.1 Welding Certification**

1. All aluminum welding must be performed:

(a) in accordance with the Standards of the Canadian Standards Association (CSA) and the Canadian Welding Bureau (CWB):

- i. The Contractor must demonstrate that the firm, their facilities, processes, and welders are certified to CSA W47.2-11 (R2015), Certification of Companies for Fusion Welding of Aluminum, Division 1 or 2; and
- ii. The welding workmanship must satisfy CSA W59.2-18, Welded Aluminum Construction;

**-OR-**

(b) by a company that is certified by the international standard ISO 3834-2:2005. Certification to the same elements in ISO 3834-2:2005, Quality Requirements for Fusion Welding of Metallic Materials will be considered equivalent if performed by an International Institute of Welding Authorized National Body for Company Certification (IIW-ANBCC)

2. Before contract award and within 21 calendar days of the written request by the Contracting Authority, the successful Bidder must submit evidence demonstrating its and its subcontractor's certification by CWB in accordance with the CSA welding standards or certification by the international standard ISO 3834-2:2005.

#### **5.2.3.2 Workers Compensation Certification- Letter of Good Standing**

The Bidder must have an account in good standing with the applicable provincial or territorial Workers' Compensation Board.

The Bidder must provide, within **5 calendar days** following a request from the Contracting Authority, a certificate or letter from the applicable Workers' Compensation Board confirming the Bidder's good standing account. Failure to comply with the request may result in the bid being declared non-responsive.



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## PART 6 - SECURITY, FINANCIAL AND OTHER REQUIREMENTS

### 6.1 Security Requirements

There is no security requirement applicable to this Contract.

### 6.2 Financial Capability

A9033T (2012-07-16) Financial Capability

### 6.3 Insurance Requirements - Proof of Availability Prior to Contract Award

The Bidder must provide a letter from an insurance broker or an insurance company licensed to operate in Canada stating that the Bidder, if awarded a contract as a result of the bid solicitation, can be insured in accordance with the Insurance Requirements specified in **Part 7 - Resulting Contract Clause 7.14.**

If the information is not provided in the bid, the Contracting Authority will so inform the Bidder and provide the Bidder with a time frame within which to meet the requirement. Failure to comply with the request of the Contracting Authority and meet the requirement within that time period will render the bid non-responsive.



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## PART 7 - RESULTING CONTRACT CLAUSES

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

### 7.1 Requirement

The Contractor must provide the goods, services or both described in the Contract, including all the Annexes, Schedules, Appendices, and any other identified documents, to Canada in accordance with, and at the prices and/or rates stated in the Contract.

#### 7.1.1 Optional Goods and/or Services

The Contractor grants to Canada the irrevocable options to acquire goods, services or both described in the Contract, including all the Annexes, Schedules, Appendices, and any other identified documents, under the same conditions and at the prices and/or rates stated in the Contract. The option may only be exercised by the Contracting Authority and will be evidenced, for administrative purposes only, through a contract amendment.

The Contracting Authority may exercise the option at any time before the expiry of the Contract by sending a written notice to the Contractor.

#### 7.1.2 Additional Work Requirement (AWR)

Additional work that is not described in the Statement of Work but that is required to support the requirement and that would fall within the overall scope of the Work, may be incorporated into the Contract in accordance with Schedule A, Basis of Payment and will be authorized via a Task Authorization.

#### 7.1.3 Task Authorization

The Work or a portion of the Work to be performed under the Contract will be on an "as and when requested basis" using a Task Authorization (TA). The Work described in the TA must be in accordance with the scope of the Contract.

##### 7.1.3.1 Task Authorization Process

1. The Project Authority will provide the Contractor with a description of the task using the "Task Authorization" form specified in Annex C.
2. The Task Authorization (TA) will contain the details of the activities to be performed, a description of the deliverables, and a schedule indicating completion dates for the major activities or submission dates for the deliverables. The TA will also include the applicable basis (bases) and methods of payment as specified in the Contract.
3. The Contractor must provide the Project Authority, within 7 calendar days of its receipt, the proposed total estimated cost for performing the task and a breakdown of that cost, established in accordance with the Basis of Payment specified in the Contract.
4. The Contractor must not commence work until a TA authorized by the Project Authority has been received by the Contractor. The Contractor acknowledges that any work performed before a TA has been received will be done at the Contractor's own risk.

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### 7.1.3.2 Task Authorization Limit

The Project Authority may authorize individual task authorizations up to a limit of \$5000.00, Applicable Taxes included, inclusive of any revisions.

Any task authorization to be issued in excess of that limit must be authorized by the Project Authority and Contracting Authority before issuance.

### 7.1.3.3 Canada's Obligation - Portion of the Work - Task Authorizations

Canada's obligation with respect to the portion of the Work under the Contract that is performed through task authorizations is limited to the total amount of the actual tasks performed by the Contractor.

### 7.1.3.4 Periodic Usage Reports - Contracts with Task Authorizations

The Contractor must compile and maintain records on its provision of services to the federal government under authorized Task Authorizations issued under the Contract.

The Contractor must provide this data in accordance with the reporting requirements detailed below. If some data is not available, the reason must be indicated. If services are not provided during a given period, the Contractor must still provide a "nil" report.

The data must be submitted on a quarterly basis to the Contracting Authority.

The quarterly periods are defined as follows:

- 1st quarter: April 1 to June 30;
- 2nd quarter: July 1 to September 30;
- 3rd quarter: October 1 to December 31; and
- 4th quarter: January 1 to March 31.

The data must be submitted to the Contracting Authority no later than 21 calendar days after the end of the reporting period.

### Reporting Requirement - Details

A detailed and current record of all authorized tasks must be kept for each contract with a task authorization process. This record must contain:

For each authorized task:

- i. the authorized task number or task revision number(s);
- ii. a title or a brief description of each authorized task;
- iii. the total estimated cost specified in the authorized Task Authorization (TA) of each task, exclusive of Applicable Taxes;
- iv. the total amount, exclusive of Applicable Taxes, expended to date against each authorized task;
- v. the start and completion date for each authorized task; and
- vi. the active status of each authorized task, as applicable.

For all authorized tasks:

- i. the amount (exclusive of Applicable Taxes) specified in the contract (as last amended, as applicable) as Canada's total liability to the contractor for all authorized TAs; and
- ii. the total amount, exclusive of Applicable Taxes, expended to date against all authorized TAs.

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## 7.2 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.

### 7.2.1 General Conditions

[2030](#) (2018-06-21), General Conditions - Higher Complexity - Goods, apply to and form part of the Contract,  
[1031-2](#) (2012-07-16), Contract Cost Principles, apply to and form part of the Contract.

### 7.2.2 Supplemental General Conditions

[4010](#) (2012-07-16) Supplemental General Conditions - Higher Complexity - Services, apply to and form part of the Contract.

## 7.3 Security Requirements

There is no security requirement applicable to the Contract.

## 7.4 Term of Contract

### 7.4.1 Period of the Contract

The period of the Contract is from Date of Contract to March 31, 2022 inclusive.

### 7.4.2 Delivery Date

All the deliverables must be received on or before the dates indicated in Schedule B, Deliveries and Milestones.

### 7.4.3 Comprehensive Land Claims Agreements (CLCAs)

This procurement may be subject to the Tsawwassen First Nation Agreement and Huron-Wendat Nation (2008) Mohawks of Quebec (1975) Regroupement Petapan.

At the time when the task authorization is issued, the Contracting/Project authority will discuss with the Contractor to determine if there is an opportunity to include an Indigenous Benefits Plan which generates socio-economic benefits (employment, training and subcontracting) for Indigenous people or businesses.

The Contractor should consult the following business directories for assistance in the delivery of the goods and services to the final destinations in the Comprehensive Land Claims Agreement (CLCA) areas:

- a. Tsawwassen First Nation Final Agreement: <http://tfnedc.com/tfnedc-joint-ventures/>

The Contract with Task Authorizations is to establish the delivery of the requirement detailed under the Contract, to the Identified Users across Canada, including areas subject to Comprehensive Land Claims Agreements.

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#### 7.4.4 Delivery Points

Delivery of the requirement will be made to delivery point(s) specified at Schedule B (Deliveries and Milestones) of the Contract.

#### 7.5 Authorities

##### 7.5.1 Contracting Authority

Name: Shazia Richards  
Title: Supply Specialist  
Public Works and Government Services Canada  
Acquisitions Branch  
Directorate: Marine Charter Services Directorate  
Address: 200 Kent Street, Ottawa ON

Telephone: 613-614-2383  
E-mail address: shazia.richards@tpsgc-pwgsc.gc.ca

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.

##### 7.5.2 Project Authority *(information will be provided at contract award)*

The Project Authority for the Contract is:

Name: \_\_\_\_\_  
Title: \_\_\_\_\_  
Organization: \_\_\_\_\_  
Address: \_\_\_\_\_

Telephone: \_\_\_\_ - \_\_\_\_ - \_\_\_\_  
Facsimile: \_\_\_\_ - \_\_\_\_ - \_\_\_\_  
E-mail address: \_\_\_\_\_

The Project Authority 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 Project Authority; however, the Project 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.

##### 7.5.3 Technical Authority *(information will be provided at contract award)*

The Technical Authority for the Contract is:

Name: \_\_\_\_\_  
Title: \_\_\_\_\_  
Organization: \_\_\_\_\_  
Address: \_\_\_\_\_

Telephone: \_\_\_\_ - \_\_\_\_ - \_\_\_\_  
Facsimile: \_\_\_\_ - \_\_\_\_ - \_\_\_\_

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

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.

#### 7.5.4 Contractor's Representative

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

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

Organization: \_\_\_\_\_

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

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

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

#### 7.6 Payment

##### 7.6.1 Basis of Payment – Firm Price (for Required Items 1-3)

In consideration of the Contractor satisfactorily completing all of its obligations under the Contract, the Contractor will be paid a firm price, as specified in Schedule A, Basis of Payment for a cost of \$to be inserted 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.

##### 7.6.2 Limitation of Expenditure - Cumulative Total of all Task Authorizations

1. Canada's total liability to the Contractor under the Contract for all authorized Task Authorizations (TAs), inclusive of any revisions, must not exceed the sum of \$(to be announced at contract award). Customs duties are included and Applicable Taxes are extra.
2. No increase in the total liability of Canada will be authorized or paid to the Contractor unless an increase has been approved, in writing, by the Contracting Authority.
3. The Contractor must notify the Contracting Authority in writing as to the adequacy of this sum:
  - a. when it is 75 percent committed, or
  - b. four (4) months before the contract expiry date, or
  - c. as soon as the Contractor considers that the sum is inadequate for the completion of the Work required in all authorized TAs, inclusive of any revisions, whichever comes first.
4. If the notification is for inadequate contract funds, the Contractor must provide to the Contracting Authority, a written estimate for the additional funds required. Provision of such information by the Contractor does not increase Canada's liability.

### 7.6.3 Milestone Payments - Subject to holdback

1. Canada will make milestone payments in accordance with the Schedule of Milestones detailed in the Contract and the payment provisions of the Contract, up to 97% of the amount claimed and approved by Canada if:
  - a. an accurate and complete claim for payment using form PWGSC-TPSGC 1111, Claim for Progress Payment, and any other document required by the Contract have been submitted in accordance with the invoicing instructions provided in the Contract;
  - b. the total amount for all milestone payments paid by Canada does not exceed 97% percent of the total amount to be paid under the Contract;
  - c. all the certificates appearing on form PWGSC-TPSGC 1111 have been signed by the respective authorized representatives;
  - d. all work associated with the milestone and as applicable any deliverable required have been completed and accepted by Canada.
2. The balance of the amount payable ("Holdback") will be paid in accordance with the payment provisions of the Contract and as detailed in paragraph 7.6.4 below.

### 7.6.4 Schedule of Milestones

1. The schedule of milestones and milestone payments are detailed in Schedule B, Deliveries and Milestones.
2. The milestones shown in Schedule B must be included and identified in all production schedules.
3. The Holdback from a particular SPAS will be released and paid in accordance with the payment provisions of the Contract at the end of that SPAS warranty period (as set out in Schedule B – Deliveries and Milestones), provided that there are no outstanding and unresolved warranty claims for that SPAS, and that all Work required under the Contract for that SPAS has been completed and accepted by Canada. In the event there are outstanding and unresolved warranty claims for a SPAS, Canada may apply the Holdback from that SPAS to the cost of any work undertaken by Canada to repair any defects.

### 7.6.5 Travel and Living Expenses - National Joint Council Travel Directive

The Contractor will be reimbursed its authorized travel and living expenses reasonably and properly incurred in the performance of the Work, at cost, without any allowance for profit and/or administrative overhead, in accordance with the meal, and private vehicle allowances specified in Appendices B, C and D of the [National Joint Council Travel Directive](#), and with the other provisions of the directive referring to "travellers", rather than those referring to "employees". Canada will not pay the Contractor any incidental expense allowance for authorized travel.

All travel must have the prior authorization of the Contracting Authority.

All payments are subject to government audit.

Estimated Cost: \$ TBD.

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#### **7.6.6 Outstanding Work and Acceptance**

1. The Technical Authority, in conjunction with the Contractor, will prepare a list of outstanding work items at the end of the work period for each SPAS. This list will form the annexes to the formal acceptance document for the vessel. A contract completion meeting will be convened by the Technical Authority on the work completion date to review and sign off the form PWGSC-TPSGC 1205, Acceptance. In addition to any amount held under the Warranty Holdback Clause, a holdback of twice the estimated value of outstanding work will be held until that work is completed.
2. The Contractor must complete the above form in four (4) copies, which will be distributed by the Technical Authority as follows:
  - a. original to the Contracting Authority;
  - b. one copy to the Technical Authority;
  - c. one copy to the Project Authority;
  - d. one copy to the Contractor.

#### **7.6.7 Taxes - Foreign-based Contractor (if applicable)**

Unless specified otherwise in the Contract, the price includes no amount for any federal excise tax, state or local sales or use tax, or any other tax of a similar nature, or any Canadian tax whatsoever. The price, however, includes all other taxes. If the Work is normally subject to federal excise tax, Canada will, upon request, provide the Contractor a certificate of exemption from such federal excise tax in the form prescribed by the federal regulations.

Canada will provide the Contractor evidence of export that may be requested by the tax authorities. If, as a result of Canada's failure to do so, the Contractor has to pay federal excise tax, Canada will reimburse the Contractor if the Contractor takes such steps as Canada may require to recover any payment made by the Contractor. The Contractor must refund to Canada any amount so recovered.

All payments are subject to government audit.

#### **7.6.8 Payment for Fuels, Oils and Lubricants**

The Contractor is responsible for the supply and cost of all fuel, lubricating oil, hydraulic oil, and other lubricants sufficient for fully charging all systems as required for operating the machinery and other equipment and for performing all tests and trials.

#### **7.6.9 Field Engineering and Supervisory Services**

If Field Service Representatives (FSR) and/or Supervisory Services are required for the Work, the cost of all such services is to be included in the price for the Work.

#### **7.6.10 Electronic Payment of Invoices – Contract**

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

- a. Visa Acquisition Card;
- b. MasterCard Acquisition Card;
- c. Direct Deposit (Domestic and International);
- d. Electronic Data Interchange (EDI);

- e. Wire Transfer (International Only);
- f. Large Value Transfer System (LVTS) (Over \$25M)

#### **7.6.11 Discretionary Audit**

1. The following are subject to government audit before or after payment is made:
  - a. The amount claimed under the Contract, as computed in accordance with the Basis of Payment, including time charged.
  - b. The accuracy of the Contractor's time recording system.
  - c. The estimated amount of profit in any firm-priced element, firm time rate, firm overhead rate, or firm salary multiplier, for which the Contractor has provided the appropriate certification. The purpose of the audit is to determine whether the actual profit earned on a single contract if only one exists, or the aggregate of actual profit earned by the Contractor on a series of negotiated contracts containing one or more of the prices, time rates or multipliers mentioned above, during a particular period selected, is reasonable and justifiable based on the estimated amount of profit included in earlier price or rate certification(s).
  - d. Any firm-priced element, firm time rate, firm overhead rate, or firm salary multiplier for which the Contractor has provided a "most favoured customer" certification. The purpose of such audit is to determine whether the Contractor has charged anyone else, including the Contractor's most favoured customer, lower prices, rates or multipliers, for like quality and quantity of goods or services.
2. Any payments made pending completion of the audit must be regarded as interim payments only and must be adjusted to the extent necessary to reflect the results of the said audit. If there has been any overpayment, the Contractor must repay Canada the amount found to be in excess.

#### **7.6.12 Price Support**

The Bidder must provide, on Canada's request, one or more of the following price support, if applicable:

- a. a current published price list indicating the percentage discount available to Canada; or
- b. copies of paid invoices for the like quality and quantity of the goods, services or both sold to other customers; or
- c. a price breakdown showing the cost of direct labour, direct materials, purchased items, engineering and plant overheads, general and administrative overhead, transportation, etc., and profit; or
- d. price or rate certifications; or
- e. any other supporting documentation as requested by Canada.



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## 7.7 Invoicing Instructions

1. The Contractor must submit a claim for payment using form [PWGSC-TPSGC 1111](#), Claim for Progress Payment.

Each claim must show:

- a. all information required on form [PWGSC-TPSGC 1111](#);
- b. all applicable information detailed under the section entitled "Invoice Submission" of the general conditions;
- c. the description and value of the milestone claimed as detailed in the Contract.

As applicable, each claim must be supported by:

- a. a copy of time sheets to support the time claimed;
  - b. a copy of the invoices, receipts, vouchers for all direct expenses, travel and living expenses;
2. Applicable Taxes must be calculated on the total amount of the claim before the holdback is applied. At the time the holdback is claimed, there will be no Applicable Taxes payable as it was claimed and payable under the previous claims for progress payments.
  3. The Contractor must prepare and certify the claim on form PWGSC-TPSGC 1111, and e-mail it to the Contracting Authority for review. The Contracting Authority will then forward the claim to the Project Authority for certification and onward submission to the client's payment Office for the remaining certification and payment action.
  4. The Contractor must not submit claims until all work identified in the claim is complete and must only submit one claim per month.

## 7.8 Certifications and Additional Information

### 7.8.1 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.

### 7.8.2 Federal Contractors Program for Employment Equity - Default by the Contractor

The Contractor understands and agrees that, when an Agreement to Implement Employment Equity (AIEE) exists between the Contractor and Employment and Social Development Canada (ESDC)-Labour, the AIEE must remain valid during the entire period of the Contract. If the AIEE becomes invalid, the name of the Contractor will be added to the "[FCP Limited Eligibility to Bid](#)" list. The imposition of such a sanction by ESDC will constitute the Contractor in default as per the terms of the Contract.

### 7.8.3 Workers Compensation

The Contractor must maintain its account in good standing with the applicable provincial or territorial Workers' Compensation Board for the duration of the Contract.

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#### 7.8.4 Welding Certification

1. All aluminum welding must be performed:
  - (a) in accordance with the Standards of the Canadian Standards Association (CSA) and the Canadian Welding Bureau (CWB):
    - i. The Contractor must demonstrate that the firm, their facilities, processes, and welders are certified to CSA W47.2-11 (R2015), Certification of Companies for Fusion Welding of Aluminum, Division 1 or 2; and
    - ii. The welding workmanship must satisfy CSA W59.2-18, Welded Aluminum Construction;
  - OR-**
  - (b) by a company that is certified by the international standard ISO 3834-2:2005. Certification to the same elements in ISO 3834-2:2005, Quality Requirements for Fusion Welding of Metallic Materials will be considered equivalent if performed by an International Institute of Welding Authorized National Body for Company Certification (IIW-ANBCC)
2. In addition, welding must be done in accordance with the requirements of the applicable drawings and specifications.
3. Before the commencement of any fabrication work, and upon request from the Contracting Authority, the Contractor must provide approved welding procedures and/or a list of welding personnel they intend to use in the performance of the Work. The list must identify the CWB welding procedure qualifications attained by each of the personnel listed and must be accompanied by a copy of each person's current CWB certification to CSA welding standards or certification by the international standard ISO 3834-2:2005.

#### 7.9 Applicable Laws

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

#### 7.10 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 including Schedule A, Basis of Payment and Schedule B, Deliveries and Milestones;
- (b) the supplemental general conditions 4010 (2012-07-16), Services - Higher Complexity;
- (c) the general conditions 2030 (2018-06-21), General Conditions - Higher Complexity - Goods;
- (d) Annex A, Statement of Work;
- (e) Annex B, Technical Statement of Requirement;
- (f) the signed Task Authorizations (including all of its annexes, if any)
- (g) the Contractor's bid dated \_\_\_\_\_.

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## 7.11 Foreign Nationals *(as applicable)*

### Foreign Nationals (Canadian Contractor)

The Contractor must comply with Canadian immigration requirements applicable to foreign nationals entering Canada to work temporarily in fulfillment of the Contract. If the Contractor wishes to hire a foreign national to work in Canada to fulfill the Contract, the Contractor should immediately contact the nearest Service Canada regional office to enquire about Citizenship and Immigration Canada's requirements to issue a temporary work permit to a foreign national. The Contractor is responsible for all costs incurred as a result of non-compliance with immigration requirements.

**- OR -**

### Foreign Nationals (Foreign Contractor)

The Contractor must comply with Canadian immigration legislation applicable to foreign nationals entering Canada to work temporarily in fulfillment of the Contract. If the Contractor wishes to hire a foreign national to work in Canada to fulfill the Contract, the Contractor should immediately contact the nearest Canadian Embassy, Consulate or High Commission in the Contractor's country to obtain instructions, information on Citizenship and Immigration Canada's requirements and any required documents. The Contractor is responsible to ensure that foreign nationals have the required information, documents and authorizations before performing any work under the Contract in Canada. The Contractor is responsible for all costs incurred as a result of non-compliance with immigration requirements.

## 7.12. Delivery and Unloading

1. Delivery trucks must be equipped with an unloading device which will permit unloading at sites with no hydraulic, stationary or other type of unloading facility.
2. When making deliveries, sufficient personnel must be provided to permit unloading of any type of vehicle without the assistance of federal government personnel.
3. At some sites, the delivery truck must be unloaded while parked at the curb. When material is placed on the sidewalk, it must be placed in proximity to the designated entrance so as to be readily accessible to transport by mechanical handling equipment utilized by site personnel.

## 7.13 Lien - Section 427 of the Bank Act

1. If any lien under section 427 of the [Bank Act](#), S.C.. 1991, c. 46, exists in respect to any materials, parts, work-in-process, or finished work for which the Contractor intends to claim payment, the Contractor agrees to inform the Contracting Authority without delay and agrees, unless instructed otherwise by the Contracting Authority, either:
  - a. to cause the bank to remove such lien and to provide the Contracting Authority with written confirmation from the bank; or,
  - b. to provide to the Contracting Authority an undertaking from the bank that the bank will not make any claim under section 427 of the [Bank Act](#) on materials, parts, work-in-process, or finished work in respect of which payment is made to the Contractor under the Contract.

2. Failure to inform the Contracting Authority of such lien or failure to implement paragraph 1(a) or (b) above will constitute default under the default section of the general conditions and will entitle Canada to terminate the Contract.

#### **7.14 Insurance - Specific Requirements**

1. The Contractor must comply with the insurance requirements specified in **Articles 7.14.1 and 7.14.2** below. The Contractor must maintain the required insurance coverage for the duration of the Contract. Compliance with the insurance requirements does not release the Contractor from or reduce its liability under the Contract.
2. The Contractor is responsible for deciding if additional insurance coverage is necessary to fulfill its obligation under the Contract and to ensure compliance with any applicable law. Any additional insurance coverage is at the Contractor's expense, and for its own benefit and protection.
3. The Contractor must forward to the Contracting Authority within 10 days after the date of award of the Contract, a Certificate of Insurance evidencing the insurance coverage and confirming that the insurance policy complying with the requirements is in force. Coverage must be placed with an Insurer licensed to carry out business in Canada. The Contractor must, if requested by the Contracting Authority, forward to Canada a certified true copy of all applicable insurance policies.

##### **7.14.1 Marine Liability Insurance**

1. The Contractor must obtain protection and indemnity insurance that must include excess collision liability and pollution liability. The insurance must be placed with a member of the International Group of Protection and Indemnity Associations or with a fixed market in an amount of not less than the limits determined by the [Marine Liability Act](#), S.C. 2001, c. 6. Coverage must include crew liability, if it is not covered by Worker's Compensation as detailed in paragraph (2.) below.
2. The Contractor must obtain worker's compensation insurance covering all employees engaged in the Work in accordance with the statutory requirements of the territory or province or state of nationality, domicile, employment, having jurisdiction over such employees. If the Contractor is subject to an additional contravention, as a result of an accident causing injury or death to an employee of the Contractor or subcontractor, or due to unsafe working conditions, then such levy or assessment must be paid by the Contractor at its sole cost.
3. The protection and indemnity insurance policy must include the following:
  - a. Additional insured: Canada is added as an additional insured, but only with respect to liability arising out of the Contractor's performance of the Contract. The interest of Canada as additional insured should read as follows: Canada, represented by Public Works and Government Services Canada.
  - b. Waiver of subrogation rights: Contractor's Insurer to waive all rights of subrogation against Canada as represented by The Canadian Coast Guard and Public Works and Government Services Canada for any and all loss of or damage to the watercraft however caused.
  - c. Notice of cancellation: The Contractor will provide the Contracting Authority thirty (30) days prior written notice of policy cancellation or any changes to the insurance policy.

- d. Cross liability and separation of insureds: Without increasing the limit of liability, the policy must protect all insured parties to the full extent of coverage provided. Further, the policy must apply to each Insured in the same manner and to the same extent as if a separate policy had been issued to each.
- e. Litigation rights: Pursuant to subsection 5(d) of the [Department of Justice Act](#), R.S.C. 1985, c. J-2, s.1, if a suit is instituted for or against Canada which the Insurer would, but for this clause, have the right to pursue or defend on behalf of Canada as an Additional Named Insured under the insurance policy, the Insurer must promptly contact the Attorney General of Canada to agree on the legal strategies by sending a letter, by registered mail or by courier, with an acknowledgement of receipt.

**For the province of Quebec, send to:**

*Director Business Law Directorate,  
Quebec Regional Office (Ottawa),  
Department of Justice,  
284 Wellington Street, Room SAT-6042,  
Ottawa, Ontario, K1A 0H8*

**For other provinces and territories, send to:**

*Senior General Counsel,  
Civil Litigation Section,  
Department of Justice  
234 Wellington Street, East Tower  
Ottawa, Ontario K1A 0H8*

A copy of the letter must be sent to the Contracting Authority. Canada reserves the right to co-defend any action brought against Canada. All expenses incurred by Canada to co-defend such actions will be at Canada's expense. If Canada decides to co-defend any action brought against it, and Canada does not agree to a proposed settlement agreed to by the Contractor's insurer and the plaintiff(s) that would result in the settlement or dismissal of the action against Canada, then Canada will be responsible to the Contractor's insurer for any difference between the proposed settlement amount and the amount finally awarded or paid to the plaintiffs (inclusive of costs and interest) on behalf of Canada.

#### **7.14.2 Marine Hull Insurance**

1. The Contractor must obtain Hull & Machinery insurance covering the watercraft, its equipment and appurtenances, and maintain it in force for the duration of the contract for an amount of not less than the agreed value of the watercraft as described below. Coverage must conform to the American Institute Hull Clauses (June 2, 1977) or an agreed equivalent.

Self-Propelled Advancing Skimmer Agreed Value \$(to be inserted at Contract Award)

2. The policy must include the following endorsements:
  - a. Waiver of Subrogation Rights: Contractor's Insurer to waive all rights of subrogation against Canada as represented by The Canadian Coast Guard and Public Works and

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Government Services Canada for any and all loss of or damage to the watercraft, however caused.

- b. Notice of Cancellation: The Contractor will provide the Contracting Authority thirty (30) days prior written notice of policy cancellation or any changes to the insurance policy.

## **7.15 Access to Government Site, Facility, or Equipment**

### **7.15.1 Government Site Regulations**

The Contractor must comply with all regulations, instructions and directives in force on the site where the Work is performed.

### **7.15.2 Access to Facilities and Equipment**

Canada's facilities, equipment, documentation and personnel are not automatically at the disposal of the Contractor. If access to government premises, computer systems (micro computer network), working space, telephones, terminals, documentation and personnel for consultation is required by the Contractor to perform the Work, the Contractor must advise the Contracting Authority of the need for such access in a timely fashion. If the Contractor's request for access is approved by Canada and arrangements are made to provide access to the Contractor, the Contractor, its subcontractors, agents and employees must comply with all the conditions applicable at the Work site. The Contractor must further ensure that the facilities and equipment are used solely for the performance of the Contract.

### **7.15.3 Identification Badge**

Any person assigned to the performance of any part of the Work that is performed on government premises must wear in a conspicuous place the identification badge issued to that person by Canada.

When a person is required to wear a safety helmet, the Contractor, if requested to do so by the Contracting Authority, must paint the number appearing on the badge on the front of the safety helmet.

## **7.16 Shipping Instructions**

### **7.16.1 Delivery Instructions**

1. Goods must be consigned to the destination specified in the Contract and delivered: Delivered Duty Paid (DDP) (specified destination) Incoterms 2010.
2. The Contractor is responsible for all delivery charges, administration, costs and risks of transport and customs clearance, including the payment of customs duties and Applicable Taxes.
3. The Contractor must deliver the goods by appointment only. The Contractor or its carrier must arrange delivery appointments by contacting the designated contact person. The consignee may refuse deliveries when prior arrangements have not been made.
4. Refer to Schedule B for additional instructions.

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## 7.16.2 Wood Packaging Materials

All wood packaging materials used in shipping must conform to the International Standards for Phytosanitary Measures No. 15: Regulation of Wood Packaging Material in International Trade (ISPM 15) (<https://www.ippc.int/en/core-activities/standards-setting/ispms/>).

Pertinent additional information on Canada's import and export programs is provided in the following Canadian Food Inspection Agency policy directives:

D-98-08 - Entry Requirements for Wood Packaging Materials Produced in All Areas Other Than the Continental United States (<http://www.inspection.gc.ca/plants/plant-protection/directives/forestry/d-98-08/eng/1323963831423/1323964135993>)

D-13-01 – Canadian Heat Treated Wood Products Certification Program (HT Program) (<http://www.inspection.gc.ca/plants/forestry/exports/ht-program/eng/1319462565070/1319462677967>).

## 7.16.3 Dangerous Goods / Hazardous Products - Labelling and Packaging Compliance

1. The Contractor must ensure proper labelling and packaging in the supply and shipping of dangerous goods/hazardous products to the Government of Canada.
2. The Contractor will be held liable for any damages caused by improper packaging, labelling or carriage of dangerous goods/hazardous products.
3. The Contractor must clearly mark all merchandise labels with the percentage of volume that is a hazardous item. Failure to do so will result in the Contractor being held responsible for damages caused in the movement of goods/products by government vehicles or government personnel.
4. The Contractor must adhere to all applicable laws regarding dangerous goods/hazardous products.

## 7.16.4 Transportation of Dangerous Goods/Hazardous Products

The Contractor must obtain the authorization from the Department of Transport to transport dangerous goods/hazardous products before the carrier may accept a charter involving the transportation of dangerous goods/hazardous products.

## 7.16.5 Shipment of Dangerous Goods/Hazardous Products

The Contractor must label and ship dangerous goods/hazardous products falling within the Transportation of Dangerous Goods Act, 1992, c.34 (<http://laws-lois.justice.gc.ca/eng/acts/t-19.01/>) and the Hazardous Products Act, R.S.C. 1985, c. H-3 (<http://laws-lois.justice.gc.ca/eng/acts/H-3/>) and their regulation(s) in accordance with the said Acts and regulation(s) accompanied by the required safety data sheet(s) completed in both English and French.

## 7.16.6 Delivery of Dangerous Goods/Hazardous Products

1. The Contractor must mark dangerous goods/hazardous products which are classed as dangerous/hazardous as follows:
  - a. shipping container - in accordance with the Transportation of Dangerous Goods Act, 1992, c.34 (<http://laws-lois.justice.gc.ca/eng/acts/T-19.01/>); and
  - b. immediate product container - in accordance with the Hazardous Products Act, R.S., 1985, c. H-3 (<http://laws-lois.justice.gc.ca/eng/acts/H-3/>).

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2. The Contractor must provide bilingual Safety Data Sheets, indicating any applicable NATO Stock Number as follows:
  - a. two hard copies:
    - i. one copy to be enclosed with the shipment, and
    - ii. one copy to be mailed to:  
< to be provided at contract award >
  - b. one copy sent in any electronic format to the following address:  
< to be provided at contract award >.
3. The Contractor will be responsible for any damages caused by improper packaging, labelling or carriage of dangerous goods/hazardous products.
4. The Contractor must ensure they adhere to all levels of regulations regarding dangerous goods/hazardous products as set forth by federal, provincial and municipal laws and by-laws.
5. The Contractor must contact the Technical Authority at least 72 hours before shipping dangerous goods/hazardous products in order to schedule a receiving time.



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## SCHEDULE A

### BASIS OF PAYMENT

#### Instructions to Bidders:

*The Bidder must complete the fill-ins and tables in Schedule A as follows:*

- (a) All prices must be in Canadian currency;*
- (b) All prices must include customs duties;*
- (c) All prices must not include Applicable Taxes;*
- (d) The Bidder must provide firm unit prices for each item in:*
  - i. Section 3 (Required Goods and Services);*
- (e) The Bidder must provide firm unit prices for each item (except for Item 8 as this item is priced as TBN) in:*
  - ii. Section 4 (Optional Goods and/or Services) Optional Firm Pricing;*
- (f) Bidders are requested to propose a per diem rate that will be used in the pricing of any AWRs (see article 7.1.2)*
- (g) The Bidder is requested to insert "\$0.00" for any cost of the cost elements for which it does not intend to charge. If any cost element is left blank, Canada will insert "\$0.00" for that element;*
- (h) The Bidder must take into account any notes associated with a particular Item.*

*Note: These italicized Instructions to Bidders will be removed from any resulting contract.*

#### **1. General**

- a) Prices include customs duties but Applicable Taxes are extra.
- b) The price takes into account any notes associated with the Item and/or cost element.

#### **2. Currency**

All prices are in Canadian currency.

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### 3. Required Goods and Services

Item #	Item Description	Total QTY	Firm Unit Price DDP Destination	Extended Price DDP Destination
1	Supply and commissioning of Self-Propelled Advancing Skimmer (SPAS) in accordance with Annex A – Statement of Work and Annex B – Technical Statement of Requirements.  <b>Note:</b> the price for this item <u>INCLUDES</u> : Applicable DIDs: DID-PM-02, DID-PM-03, DID-SE-07, DID-DL-01, DID-IE-01 and DID-IE-02  <b>1 unit to each of the following destinations:</b> Kitsilano, BC, Victoria, BC Seal Cove, BC Richmond, BC	4		
2	Conduct Technical Maintenance Training Session  <b>Destinations:</b> Kitsilano, BC, Victoria, BC Seal Cove, BC Richmond, BC	4		
3	Conduct Operational Training Session  <b>Destinations:</b> Kitsilano, BC, Victoria, BC Seal Cove, BC Richmond, BC	4		
4	<b>Documentation</b> Generate and supply the following documents in accordance with Annex A, Statement of Work (specifically, Appendices 1 & 2, Data Item Descriptions and Contract Data Requirements List ie: DID-PM-01, DID-SE-01, DID-SE-02, DID-SE-03, DID-SE-04, DID-SE-05, DID-SE-06, DID-SE-08, DID-SE-09, DID-ETR-01, DID-ETR-02, DID-TM-01, DID-TM,02, DID-TM-03, DID-TM-04 AND DID-TM-05  <b>Note:</b> the price for this item <u>EXCLUDES</u> : Applicable DIDs: DID-PM-02, DID-PM-03, DID-SE-07, DID-DL-01, DID-IE-01 and DID-IE-02	N/A		N/A

Notes:  
N/A: Not Applicable

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#### 4. Optional Goods and/or Services

Item #	Item Description	Max total QTY <sup>1</sup>	Firm Unit Price DDP Destination
5	Supply and commissioning of Self-Propelled Advancing Skimmer (SPAS) in accordance with Annex A – Statement of Work and Annex B – Technical Statement of Requirements.  <b>Note:</b> the price for this item <b>INCLUDES:</b> Applicable DIDs: DID-PM-02, DID-PM-03, DID-SE-07, DID-DL-01, DID-IE-01 and DID-IE-02  <b>1 unit to each of the following destinations:</b> Parry Sound, ON Mount Pearl, NL Port Hastings, NS Quebec City, QC	4	
6	Conduct Technical Maintenance Training Session  <b>Destinations:</b> Parry Sound, ON Mount Pearl, NL Port Hastings, NS Quebec City, QC	4	
7	Conduct Operational Training Session  <b>Destinations:</b> Parry Sound, ON Mount Pearl, NL Port Hastings, NS Quebec City, QC	4	
8	<b>Spare Parts Kit</b> The provision of any or all spares in support of the deliverables as detailed the final Recommended Spare Parts List (CDRL item DID-TM-01), as accepted by Canada.  <b>Note:</b> 1 kit = 1 unit	10	TBN

**Notes:**

<sup>1</sup>: Optional Items may be procured on as many occasions as necessary up to the identified maximum total quantity.

TBN: To Be Negotiated  
CDRL: Contract Data Requirements List (as per the Statement of Work found at Annex A)  
DID: Data Item Description (as per the Statement of Work found at Annex A)

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## **5. Additional Work Requirement (AWR)**

### **5.1 Per diem**

The per diem rate quoted for AWRs (see article 7.1.2) must be firm, remain valid for the entire period of the Contract. The per diem rate proposed must be in accordance with the terms and conditions of this RFP (Contract Cost Principles 1031-2).

Canada reserves the right to negotiate the per diem rate.

For AWRs involving labour, the Contractor will be paid (tax and travel excluded):

a firm per diem rate of \$\_\_\_\_\_ /per 8 hour day (CAD)

### **5.2 Basis of Payment – (Firm Unit Price(s) – Task Authorizations OR Individual Task Authorizations)**

**For any tasks issued, the following will apply:**

#### **Basis of Payment – Firm Unit Price(s) - Task Authorizations**

In consideration of the Contractor satisfactorily completing all of its obligations under the authorized Task Authorization (TA), the Contractor will be paid the firm unit price(s) in accordance with the basis of payment, in Schedule A as specified in the authorized TA. 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 authorized, in writing, by the Contracting Authority before their incorporation into the Work.

**– OR –**

#### **Basis of Payment – Individual Task Authorizations**

The Contractor will be paid for the Work specified in the authorized task authorization, in accordance with the Basis of payment at Schedule A.

Canada's liability to the Contractor under the authorized task authorization must not exceed the limitation of expenditure or ceiling price specified in the authorized task authorization. Custom duties are included and Applicable Taxes are extra.

No increase in the liability of Canada or in the price of the Work specified in the authorized task authorization resulting from any design changes, modifications or interpretations of the Work will be authorized or paid to the Contractor unless these design changes, modifications or interpretations have been authorized, in writing, by the Contracting Authority before their incorporation into the Work

### **5.3 Method of Payment**

**For any tasks issued, the following will apply:**

#### **Multiple Payments**

Canada will pay the Contractor upon completion and delivery of units in accordance with the payment provisions of the Contract if:

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- a. an accurate and complete invoice and any other documents required by the Contract have been submitted in accordance with the invoicing instructions provided in the Contract;
- b. all such documents have been verified by Canada; and
- c. the Work delivered has been accepted by Canada.

– OR –

#### **Milestone Payments – Not subject to holdback**

Canada will make milestone payments in accordance with the Schedule of Milestones detailed in the Contract and the payment provisions of the Contract if:

- a. an accurate and complete claim for payment using PWGSC-TPSGC 1111, Claim for Progress Payment, and any other document required by the Contract have been submitted in accordance with the invoicing instructions provided in the Contract;
- b. all the certificates appearing on form PWGSC-TPSGC 1111 have been signed by the respective authorized representatives;
- c. all work associated with the milestone and as applicable any deliverable required has been completed and accepted by Canada.

– OR –

#### **Milestone Payments - Subject to holdback**

1. Canada will make milestone payments in accordance with the Schedule of Milestones detailed in the Contract and the payment provisions of the Contract, up to TBD percent of the amount claimed and approved by Canada if:
  - a. an accurate and complete claim for payment using form PWGSC-TPSGC 1111, Claim for Progress Payment, and any other document required by the Contract have been submitted in accordance with the invoicing instructions provided in the Contract;
  - b. the total amount for all milestone payments paid by Canada does not exceed TBD percent of the total amount to be paid under the Contract;
  - c. all the certificates appearing on form PWGSC-TPSGC 1111 have been signed by the respective authorized representatives;
  - d. all work associated with the milestone and as applicable any deliverable required have been completed and accepted by Canada.
2. The balance of the amount payable will be paid in accordance with the payment provisions of the Contract upon completion and delivery of all Work required under the Contract if the Work has been accepted by Canada and a final claim for the payment is submitted.

## SCHEDULE B

### DELIVERIES AND MILESTONES

*The Bidder must complete the fill-ins in Table 1 of Schedule B as follows:*

*The Bidder must indicate their best delivery dates for each item identified (with the exception of Documentation, which is to be delivered in accordance with Annex A, Statement of Work). While delivery is requested by March 31, 2021, the delivery must be made within the number of days identified below after an order has been made.*

#### 1. Deliveries

- a. All deliveries must be delivered DDP, Incoterms 2010.

#### 2. Schedule of Deliveries - Required Goods and Services

Item # <sup>1</sup>	Description <sup>1</sup>	Destination	QTY	Delivery Date(s) (calendar days after contract award)
1	Supply and commissioning of Self-Propelled Advancing Skimmer (SPAS) in accordance with Annex A – Statement of Work and Annex B – Technical Statement of Requirements.	Kitsilano, BC	1	
		Victoria, BC	1	
		Seal Cove, BC	1	
		Richmond, BC	1	
2	Technical Maintenance Training Session	Kitsilano, BC	1	As per the Contract
		Victoria, BC	1	As per the Contract
		Seal Cove, BC	1	As per the Contract
		Richmond, BC	1	As per the Contract
3	Operational Training Session	Kitsilano, BC	1	As per the Contract
		Victoria, BC	1	As per the Contract
		Seal Cove, BC	1	As per the Contract
		Richmond, BC	1	As per the Contract
4	Documentation	As per Annex A	As per Annex A	As per Annex A

**Notes:**

<sup>1</sup>: Refer to Schedule A for more item details.

### 3. Schedule of Milestones for Required Goods

The schedule of milestones for which payments will be made in accordance with the Contract is as follows:

	Milestone	Description of Deliverable(s)	Claim value		Holdback %	Holdback \$
			%	Firm Amount (to be entered upon contract award)		Firm Amount (to be entered upon contract award)
<b>Item #1 per Schedule A</b>  <b>SPAS 1</b> (Kitsilano, BC)	<b>1</b>	Hull materials delivered to Contractor and sustained construction commenced	35%		3%	
	<b>2</b>	Boat and technical manuals delivered and accepted by Canada	65%		3%	
<b>Item #1 per Schedule A</b>  <b>SPAS 2</b> (Victoria, BC)	<b>3</b>	Hull materials delivered to Contractor and sustained construction commenced	35%		3%	
	<b>4</b>	Boat and technical manuals delivered and accepted by Canada	65%		3%	
<b>Item #1 per Schedule A</b>  <b>SPAS 3</b> (Seal Cove, BC)	<b>5</b>	Hull materials delivered to Contractor and sustained construction commenced	35%		3%	
	<b>6</b>	Boat and technical manuals delivered and accepted by Canada	65%		3%	
<b>Item #1 per Schedule A</b>  <b>SPAS 4</b> (Richmond, BC)	<b>7</b>	Hull materials delivered to Contractor and sustained construction commenced	35%		3%	
	<b>8</b>	Boat and technical manuals delivered and accepted by Canada	65%		3%	
<b>Item #2 per Schedule A</b>  Technical Maintenance Training Session	<b>9</b>	Conduct (1) Technical Maintenance Training Session in Kitsilano, BC	100%		N/A	
<b>Item #2 per Schedule A</b>  Technical Maintenance Training Session	<b>10</b>	Conduct (1) Technical Maintenance Training Session in Victoria, BC	100%		N/A	

Solicitation No. - N° de l'invitation  
F7047-160032/D  
Client Ref. No. - N° de réf. du client  
F7047-160032

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

Buyer ID - Id de l'acheteur  
005erd  
CCC No./N° CCC - FMS No./N° VME

<b>Item #2 per Schedule A</b>  Technical Maintenance Training Session	<b>11</b>	Conduct (1) Technical Maintenance Training Session in Seal Cove, BC	100%		N/A	
<b>Item #2 per Schedule A</b>  Technical Maintenance Training Session	<b>12</b>	Conduct (1) Technical Maintenance Training Session in Richmond, BC	100%		N/A	
<b>Item #3 per Schedule A</b>  Operational Training Session	<b>13</b>	Conduct (1) Operational Training Session in Kitsilano, BC	100%		N/A	
<b>Item #3 per Schedule A</b>  Operational Training Session	<b>14</b>	Conduct (1) Operational Training Session in Victoria, BC	100%		N/A	
<b>Item #3 per Schedule A</b>  Operational Training Session	<b>15</b>	Conduct (1) Operational Training Session in Seal Cove, BC	100%		N/A	
<b>Item #3 per Schedule A</b>  Operational Training Session	<b>16</b>	Conduct (1) Operational Training Session in Richmond, BC	100%		N/A	
<b>Item #4 per Schedule A</b>  Documentation	<b>17</b>	Development and final acceptance by Canada of all of the following DID: DID-PM-01, DID-SE-01, DID-SE-02, DID-SE-03, DID-SE-04, DID-SE-05, DID-SE-06, DID-SE-08, DID-SE-09, DID-ETR-01, DID-ETR-02, DID-TM-01, DID-TM-02, DID-TM-03, DID-TM-04 AND DID-TM-05	100%		N/A	

**Notes:**

DID: Data Item Description (as per the Statement of Work found at Annex A)



**Annex A**  
Statement of Work

**Environmental Response Equipment Modernization/  
Mobile Incident Command Equipment Project**

*Self-Propelled Advancing Skimmer*

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## Section 1 INTRODUCTION

---

### 1.1 BACKGROUND

The Canadian Coast Guard (CCG) is the lead federal agency responsible for ensuring the clean-up of all ship-source and mystery-source pollution spills into waters under Canadian jurisdiction. In fulfillment of this legislated mandate, the CCG maintains a level of operational preparedness capacity to monitor, investigate and respond, when required, to all reports of marine pollution incidents. The objective of the Environmental Response Equipment Modernization / Mobile Incident Command Equipment (EREM/MICE) Project is to modernize CCG's initial response equipment inventory and its supporting infrastructure.

### 1.2 PURPOSE

The CCG requires a proven, purpose-built vessel, whose integrated design allows the independent recovery, temporary storage, and offloading of spilled oil. The Self-Propelled Advancing Skimmer will be used in calm and protected waters (such as bays and harbours) to recover spilled oil ranging in viscosity from diesel to heavy fuel oil. During emergency response situations, the Self-propelled Advancing Skimmer will be rapidly deployed and function without logistical support (e.g., external skimmers, pumps, or storage tanks) for prolonged periods of time.

This Statement of Work (SOW) defines the requirements of the Work and stipulates the deliverables required for the provision of the Self-Propelled Advancing Skimmer(s), hereinafter referred to as the **SPAS**.

The SPAS will consist of:

- A Transport Canada compliant vessel;
- A Transport Canada compliant trailer;
- All necessary rated rigging fittings, hoisting slings and hardware;
- A ship cradle complete with ratchet tie down straps for each cargo anchoring point;
- A Technical Maintenance Manual; and
- An Operations Manual as described in the accompanying Technical Statement of Requirements (TSOR) – Annex B.

### 1.3 SCOPE

Any requirements, specifications, and other indications in this SOW regarding the work required in the provision of "Self-propelled Advancing Skimmer(s)" also pertain to each individual components of the Self-propelled advancing skimmers (Transport Canada compliant vessel, Transport Canada compliant trailer, all necessary rated rigging fittings, hoisting slings, and hardware, a ship cradle complete with ratchet tie down straps for each cargo anchoring point, and

any other components/equipment/tools thereof) whether they are purchased together as a complete package, individual items, or in any other combinations.

Performance requirements and technical specifications are found in the accompanying TSOR – Annex B.

## Section 2 PROJECT MANAGEMENT

---

### 2.1 GENERAL

The Contractor must employ a formal organization of project management principles akin to those defined in the Project Management Institute's Project Management Body of Knowledge (PMBOK). These principles must include the methods and procedures to direct, coordinate, and control all efforts needed to deliver the SPAS(s) and realize the obligations specified in the Contract.

The Contractor must identify a Project Manager to oversee all work needed to satisfy contractual requirements (i.e., tasks, deliverables, resources, schedules, and quality). The Project Manager must be the main point of contact with Canada.

The Contractor must prepare, deliver, and maintain all project deliverables in accordance with:

- a. Appendix 1: Contract Data Requirement List (CDRL); and
- b. Appendix 2: Data Item Descriptions (DIDs); and
- c. Annex B: Technical Statement of Requirements (TSOR).

### 2.2 PROJECT MANAGEMENT PLAN

The Contractor must provide a Project Management Plan (PMP) in accordance with **CDRL item DID-PM-01**, for review and approval by Canada.

The Contractor must manage the project in accordance with the PMP, as accepted by Canada.

### 2.3 PROJECT REVIEW AND CONTROL

The Contractor must convene and co-chair all meetings required by this SOW at the Contractor's own facilities, unless otherwise agreed to by Canada, or otherwise noted herein. Teleconference and videoconference may be acceptable at the discretion of Canada.

#### 2.3.1 Meeting Structure and Recording

The Contractor must provide Canada with a Meeting Agenda for each scheduled meeting before it is set to occur, as per **CDRL item DID-PM-02**.

The Contractor must provide Canada with a comprehensive Record of Decisions after each meeting (scheduled and unscheduled) has occurred, as per **CDRL item DID-PM-03**.

Canada reserves the right to review, revise, and ultimately reject or accept Meeting Agendas and Record of Decisions provided by the Contractor.

### 2.3.2 Contract Kick-off Meeting

The Contractor must convene and co-chair a two-day, Contract Kick-off Meeting within 14 calendar days of Contract Award. At a minimum, the following documents will be reviewed:

- a. Contract (including Annex A and Annex B);
- b. Draft Project Management Plan (as per **CDRL item DID-PM-01**)
- c. Draft Concept Design Package (as per **CDRL item DID-SE-01**)
- d. Quality management system documentation (as per Section 3.2) of the Contractor and any entity performing any part of the Work, detailing at a minimum, the processes and procedures in place specifically for:
  - i. Design and development;
  - ii. Material certification;
  - iii. Testing and inspection;
  - iv. Equipment calibration;
  - v. Nonconformity and corrective action; and
  - vi. Risk mitigation.

To facilitate review of the documentation and foster discussion, the Contractor must provide one soft copy of the documents identified above (only b-e), at least three business days prior to the scheduled Contract Kick-off Meeting.

The Contractor must provide representatives of Canada with a tour of all facilities that will be used in the manufacture and integration of the SPAS. Unless otherwise specified by Canada, the tour (s) will take place as part of the Contract Kick-off Meeting and involve, at a minimum, three representatives of Canada.

### 2.3.3 Progress Review Meetings

The Contractor must convene and co-chair a Progress Review Meeting within 28 calendar days of the Contract Kick-off Meeting. The first Progress Review Meeting may be held in conjunction with the Preliminary Design Review Meeting at the discretion of Canada.

The objective of the first Progress Review Meeting is to discuss and review the following documentation, at a minimum:

- a. Final Project Management Plan (as per **CDRL item DID-PM-01**); and
- b. Draft Training Plan (as per **CDRL item DID-TR-01**).

The Contractor must also schedule regular meetings thereafter to continue to review project progress with Canada. At a minimum, regular Project Review Meetings will occur on a monthly basis via teleconference, unless otherwise specified by Canada.

### **2.3.4 Weekly Progress Report**

The Contractor must provide weekly progress reports to Canada via electronic mail (email) detailing at a minimum:

- Executive summary of week events;
- Updates to the production schedule(s);
  - Native MS Project file(s) must be provided as an attachment to the email;;
- Risks identified and associated mitigation measures;
- Any changes to project timeline; and
- Potential technical adjustments that may be required.

Unless otherwise specified by Canada, the Contractor must submit each weekly progress report by the close of business (COB) Friday, Eastern Standard Time (EST).

### **2.3.5 Cancellation of Meetings**

Canada may cancel meetings at its discretion. Rescheduling of meetings must be done only with the explicit agreement of Canada.

### **2.3.6 Unscheduled Meetings**

The Contractor must provide representation at meetings (teleconference or in person) should the need for ad hoc or unscheduled meetings be required.

### **2.3.7 Problem Reporting/Design Changes**

The Contractor must notify Canada immediately by telephone upon discovering or identifying an issue that may impact the Work. Canada will advise whether an unscheduled meeting or other action is required. The Contractor must document the issue in writing, within two calendar days of identification, and provide to Canada via email.



## **Section 3                    SYSTEM ENGINEERING MANAGEMENT**

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### **3.1            DESIGN AND INTEGRATION**

#### **3.1.1        Concept Design Review**

In preparation for the Concept Design Review, the Contractor must provide the revised Draft Concept Design Package as per **CDRL item DID SE-01**. The Contractor must convene and co-chair a Concept Design Review meeting via teleconference. The Concept Design Review must take place within 5 business days of the Contract Kick-off Meeting.

#### **3.1.2        Preliminary Design Review**

In preparation for the Preliminary Design Review, the Contractor must provide the Preliminary Design Package as per **CDRL item DID-SE-02**. The Contractor must convene and co-chair a Preliminary Design Review meeting to be held at CCG facilities in Ottawa, Ontario, Canada. The meeting location must be approved by Canada. The Preliminary Design Review must take place within 25 business days of the Contract Kick-off Meeting.

#### **3.1.3        Final Design Review**

In preparation for the Final Design Review, the Contractor must provide the Final Design Package as per **CDRL item DID-SE-03**. The Contractor must convene and co-chair a Final Design Review meeting to be held at CCG facilities in Ottawa, Ontario, Canada. The meeting location must be approved by Canada. The Final Design Review must take place no later than 20 business days following the acceptance of the Preliminary Design Package.

### **3.2            QUALITY ASSURANCE**

The Contractor and the entity or entities performing the manufacturing and integration of the SPAS must have a Quality Management System in place for:

- 1) Design and development;
- 2) Equipment calibration;
- 3) Material certification;
- 4) Testing and inspection;
- 5) Nonconformity and corrective action; and
- 6) Risk mitigation.

The Contractor and the entity or entities performing the manufacturing and integration of the SPAS must comply with their respective Quality Management Systems.

### 3.3 TESTING AND CERTIFICATION

Unless otherwise specified by Canada, all testing activities must be conducted at the Contractor's designated facility in the presence of a representative of Canada. The Contractor must notify Canada no less than three weeks prior to conducting any testing.

#### 3.3.1 Test and Certification Plan

The Contractor must develop an overall Project Test and Certification Plan as per **CDRL item DID-SE-04**, for review and approval by Canada.

##### 3.3.1.1 Certifications and Material Data Sheets

The Contractor must provide all certifications and material data sheets as per **CDRL item DID-SE-05**.

##### 3.3.1.2 First Article Testing

Prior to the initiation of mass production or manufacture of the SPAS, the Contractor must:

- a. Perform all required First Article Testing identified in the Test and Certification Plan (**CDRL item DID-SE-04**) on the first complete SPAS, demonstrating to Canada that the first SPAS and all integrated systems meets all of the technical requirements as defined in the TSOR - Annex B;
- b. Submit a First Article Test Report for the SPAS as per **CDRL item DID-SE-06**; and
- c. Obtain Canada's formal approval of the first complete SPAS and the First Article Test Report.

##### 3.3.1.3 Factory Acceptance Testing

Factory acceptance testing includes the tests and inspections conducted after the complete manufacture of SPAS and prior to delivery (with the exception of the first article which has been tested as per section 3.3.1.2).

Prior to shipping each SPAS, the Contractor must:

- a. Perform all required Factory Acceptance Testing identified in the Test and Certification Plan (**CDRL item DID-SE-04**) on the SPAS, demonstrating to Canada that the SPAS and all integrated systems are fully operational;
- b. Submit a Factory Acceptance Test Report for the SPAS as per **CDRL item DID-SE-07**; and
- c. Obtain Canada's formal approval for the SPAS and each corresponding Factory Acceptance Test Report.

### 3.4 EQUIPMENT COMMISSIONING

Equipment Commissioning is the final post-delivery acceptance and is the comprehensive process used to verify that each SPAS is complete in all respects, sea-worthy, fit for operational use, and response-ready (i.e., no further set-up or configuration is necessary, and the equipment can be deployed as is).

#### 3.4.1 Equipment Commissioning Plan

The Contractor must develop an overall Commissioning Plan as per **CDRL item DID-SE-08**, for review and approval by Canada.

#### 3.4.2 Equipment Commissioning Training

The Contractor must deliver a minimum of one equipment commissioning training session to CCG personnel to ensure they are appropriately trained on how to inspect each SPAS for damage, perform component inventory, and place into working condition following delivery receipt. It is anticipated that 4-6 participants will attend the equipment commissioning training session. Unless otherwise specified by Canada, the equipment commissioning training must be conducted at the Contractor's designated facility and is expected to be delivered in one workday (i.e., 7.5 hrs).

The Contractor must provide an Equipment Commissioning Instructor Manual as per **CDRL item DID-SE-09**, for review and approval by Canada.

The Equipment Commissioning Instructor Manual must be written such that it enables CCG personnel, who have read the associated plan and participated in an equipment commissioning training session, to successfully conduct the equipment commissioning of each SPAS following delivery receipt. Unless otherwise specified by Canada, equipment commissioning will take place at CCG facilities and be conducted by CCG personnel.

STATEMENT OF WORK  
**System Engineering Management**

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## Section 4      STORAGE AND DELIVERY LOGISTICS

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### 4.1      STORAGE

The Contractor may be requested to secure facilities suitable for the storage of multiple SPAS. The storage facility must comply with the original equipment's manufacturer-recommended storage conditions/requirements.

### 4.2      DELIVERY

A signed Certificate of Conformity as per **CDRL item DID-DL-01**, must be provided with each SPAS at the time of delivery. The Certificate of Conformity is a signed verification that the SPAS meets all of the requirements defined in the TSOR - Annex B.

## Section 5                      EQUIPMENT TRAINING AND FAMILIARIZATION

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### 5.1            GENERAL

The Contractor must provide two different types of equipment training and familiarization sessions to ensure CCG personnel are appropriately trained on the safe operation and maintenance practices of the SPAS:

- a. Technical Maintenance Equipment Training; and
- b. Operational Equipment Training.

The Contractor must provide an Equipment Training and Familiarization Plan as per **CDRL item DID- ETR-01**, and submit it to Canada for review and approval. The Equipment Training and Familiarization Plan must include the recommended duration of each type of training session as well as the analysis used to support these recommendations.

Unless otherwise specified by Canada, all equipment training and familiarization sessions must be conducted at CCG facilities in locations identified in Schedule B - Deliveries and Milestones.

All training materials must be provided in both English and Canadian French. Individual equipment training and familiarization sessions may be conducted in either official language; Canada will confirm the required language of each session prior to delivery.

### 5.2            TECHNICAL MAINTENANCE EQUIPMENT TRAINING

#### 5.2.1        Objective

The objective of the technical maintenance training session is to provide participants an understanding of the SPAS system structure and its equipment, the safe manner of operation, appropriate maintenance practices, and associated limitations of the SPAS. Unless otherwise specified by Canada, the Contractor must deliver the equipment training and familiarization session using a combination of classroom (theoretical) and in-field (practical) training.

#### 5.2.2        Class Size and Participants

Each technical maintenance equipment training session will be attended by certified CCG ER trainers, with the potential of additional personnel of varying experience and knowledge of ER

equipment. It is anticipated that 6-10 participants will attend each technical maintenance equipment training session. Training materials must be supplied to all participants.

### **5.2.3 Scheduling and Duration**

Unless otherwise specified by Canada, the technical maintenance equipment training session must be scheduled to occur one week after delivery receipt and within normal business hours of the identified facility. Unless otherwise specified by Canada, the technical maintenance equipment training session is expected to be delivered in one workday (i.e., 7.5 hrs).

## **5.3 OPERATIONAL TRAINING**

### **5.3.1 Objective**

The objective of each operational equipment training session is to provide participants a working knowledge of the SPAS and all integrated systems, the safe manner of operation, and limitations of all the equipment. Unless otherwise specified by Canada, the Contractor must deliver the operational equipment training session using a combination of classroom (theoretical) and in-field (practical) training.

### **5.3.2 Class Size and Participants**

Each operational equipment training session will be attended by certified CCG ER trainers, with the potential of additional personnel of varying experience and knowledge of ER equipment. It is anticipated that 6-10 participants will attend each operational equipment training session. Training materials must be supplied to all participants.

### **5.3.3 Scheduling and Duration**

Unless otherwise specified by Canada, the operational equipment training session must be scheduled to occur one week after delivery receipt and within normal business hours of the identified facility. Unless otherwise specified by Canada, the operational equipment training session is expected to be delivered in one workday (i.e., 7.5 hrs).

## **5.4 TRAIN-THE-TRAINER**

The Contractor must provide Canada with an Equipment Training Instructor Manual as per **CDRL item DID-ETR-02**, for review and approval by Canada. The Equipment Training Instructor Manual must be written such that it enables certified CCG Trainers, participants of the equipment training and familiarization sessions, to administer the same type of equipment training in the future to CCG personnel without additional Contractor support.

## Section 6 TECHNICAL MANAGEMENT

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### 6.1 SPARES AND SPECIAL TOOLS

The Contractor must provide a Recommended Spare Parts and Tools List as per **CDRL item DID-TM-01**, for review and approval by Canada. Canada may, at its discretion, exercise the option(s) for the provision of some or all of the spares parts and special tools identified in the accepted RSPTL.

Spare parts for specific equipment or assemblies must be kitted, separately packaged, and identified accordingly. All spare parts and special tools supplied by the Contractor must be packaged, clearly marked, and identified with the manufacturer's name, item name, description, and part number on an adhesive label secured to the package.

Parts must be properly preserved and packaged for long term storage as determined by the equipment or item's original manufacturer.

### 6.2 TECHNICAL DATA

The Contractor must provide the following:

- a. **Technical Maintenance Manual** for the SPAS as per **CDRL item DID-TM-02**, for review and approval by Canada.
- b. **Operations Manual** for the SPAS as per **CDRL item DID-TM-03**, for review and approval by Canada.
- c. Original Equipment Manufacturer (OEM) Manuals for all applicable systems and equipment comprised within the SPAS (to be determined following First Article Testing).

All OEM manuals must be provided in both native file digital format without password protection using Microsoft Office, and Adobe Acrobat searchable portable document format (pdf). OEM manuals existing in hardcopy only must be scanned into digital format using Adobe Acrobat X, or later, incorporating a full search capability with book marking.

All OEM manuals must be provided in both English and Canadian French. Where English or French are not readily available commercially, unilingual versions in either of Canada's official languages will be accepted provided the Contractor provides written evidence from the supplier that the prescribed manuals are not commercially available in the other official language.

- d. **As-Built Drawing Package** for the SPAS as per **CDRL item DID-TM-04**, for review and approval by Canada.
- e. **Master Equipment List** for the SPAS as per **CDRL item DID-TM-05**, for review and approval by Canada.



## **Section 7**                      **INDIGENOUS ENGAGEMENT**

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The Contractor must provide the following:

- a. **Canadian Indigenous Benefits Plan Report** as per **CDRL item DID-IE-01** (when applicable); and
- b. **Canadian Indigenous Subcontracting Report** as per **CDRL item DID-IE-02** (when applicable).

## **APPENDIX 1                      CONTRACT DATA REQUIREMENTS LIST**

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The following section defines the various columns of information found on the Contract Data Requirements List (CDRL). The CDRL is an all-encompassing table illustrating the submission details associated with every defined Data Item Deliverable (DID). Each DID details the content and format required for each defined deliverable of the Contract.

### **CONTRACTOR**

Identifies the Contractor(s) responsible for the delivery of the DIDs defined within the CDRL.

### **CONTRACT NUMBER (CONTRACT NO.)**

Identifies the Contract for which the CDRL applies.

### **IDENTIFICATION NUMBER (ID NO.)**

The Identification number is an alphanumeric designation to uniquely identify each individual DID. Note that the DIDs are categorized using the following designation:

- Project Management is defined with 'PM';
- System Engineering Management is defined with 'SE';
- Delivery Logistics is defined with 'DL'
- Equipment Training and Familiarization is defined with 'ETR';
- Technical Management is defined with 'TM'; and
- Indigenous Engagement is defined with 'IE'.

### **TITLE OF DATA**

Identifies the title of the DID referred to in the CDRL.

### **CONTRACT REFERENCE (CON. REF.)**

Identifies the specific paragraph number of the Contract Demand, Statement of Work, Request for Proposal, Specification, or other applicable document to assist in identifying the work effort associated with the DID.

### **REQUIRING OFFICE (REQ. OFFICE)**

Identifies the technical Office of Primary Interest (OPI) responsible for definition, review, acceptance and/or approval of the data item, and ensuring the adequacy of the delivered data.

### **APPROVAL CODE (APP. CODE)**

Identifies items of critical data requiring specific advanced written approval, such as test plans, identified by placing an 'A' in this column. These data items may require submission of a preliminary draft prior to publication of a final document. When a preliminary draft is required, column labelled 'SUBSEQ. SUB. DETAILS' must show the length of time for Government

STATEMENT OF WORK  
**Contract Data Requirements List**

---

approval/disapproval and when the final document is to be delivered. The extent of approval requirements (e.g., approval of technical content and/or format) will also be defined in the aforementioned column. If advance approval is not required, this column is marked 'N/A'.

Approval will be provided by the recipient denoted in the 'Addresses' column.

**FREQUENCY (FREQ.)**

Identifies the frequency of the delivered data. The following frequency codes are used:

ASGEN	As generated
ASREQ	As required
ONE/R	One time with revision

**LANGUAGE (LANG.)**

Identifies the language of the delivered data. All draft documents will be provided in English. 'Bilingual' indicates the data item must be delivered in both the official English and Canadian French languages. Following acceptance of the Final English document by Canada, the Contractor must provide the Final French document.

**DATE OF FIRST SUBMISSION (DATE OF 1ST SUB.)**

Indicates the initial submission date or associated constraint for the first submission of the data item.

**SUBSEQUENT SUBMISSION DETAILS (SUBSEQ. SUB. DETAILS)**

Indicates the date(s) of subsequent submission(s) or associated constraint(s) of the data item. If no subsequent submission or associated constraint are required, this column is marked 'N/A'.

**DISTRIBUTION AND ADDRESSES**

Identifies the addresses and the respective number of 'COPIES' (hard [H] copies and soft [S] copies separately), for the draft (sub column 'DRAFT' [DR.]), and for the final submissions (sub column 'FINAL'), for which the data item is required.

All draft documents must be provided in a format compatible with Microsoft Office 2010, soft copy to facilitate review.

The 'ADDRESS' column indicates the recipient of each Draft and Final copies of the data item.

STATEMENT OF WORK  
Contract Data Requirements List

CONTRACTOR			CONTRACT NO.									
SUBMISSION DETAILS												
ID NO.	TITLE OF DATA	CON. REF.	REQ. OFFICE	APP. CODE	FREQ.	LANG.	DATE OF 1ST SUB.	SUBSEQ. SUB. DETAILS	DISTRIBUTION			
									ADDRESS	COPIES		
										DR.	FINAL	
Project Management												
DID-PM-01	Project Management Plan	SOW 2.2	CCG ER ITS	A	ONE/R	English	3 business days prior to the Contract Kick-Off meeting	Canada will provide comments on the Project Management Plan and return it to the Contractor for revision and resubmission. The Contractor must provide a revised copy within 5 business days. The Final version must be submitted and approved prior to the initiation of manufacturing.	Canada	1		1
DID-PM-02	Meeting Agenda	SOW 2.3.1	CCG ER ITS	A	AS REQ	English	3 business days prior to any meeting scheduled with Canada	Canada will review and provide comment on, or accept all agendas within 2 business days. If revision is required, the Contractor must resubmit the revised agenda with changes included to the satisfaction of Canada within 1 business day.	Canada	1		1
DID-PM-03	Record of Decisions	SOW 2.3.1	CCG ER ITS	A	AS REQ	English	3 business days after any meeting scheduled with Canada	Canada will review and provide comment on, or accept all RODs within 5 business days. If revision is required, the Contractor must resubmit the revised ROD with changes included to the satisfaction of Canada within 2 business days.	Canada	1		1

STATEMENT OF WORK  
Contract Data Requirements List

CONTRACTOR			CONTRACT NO.		SUBMISSION DETAILS								
ID NO.	TITLE OF DATA	CON. REF.	REQ. OFFICE	APP. CODE	FREQ.	LANG.	DATE OF 1ST SUB.	SUBSEQ. SUB. DETAILS	ADDRESS	DISTRIBUTION			
										DR.	COPIES		
											FINAL	H	S
System Engineering Management													
DID-SE-01	Concept Design Package	SOW 3.1.1	CCG ER ITS	A	ONE/R	English	3 business days prior to the Contract Kick-Off Meeting	Canada will review and provide comments on the Concept Design Package and return to the Contractor for revision and resubmission. The Contractor must provide the revised documents 3 business days prior to the concept design review meeting.	Canada	1	1	1	
DID-SE-02	Preliminary Design Package	SOW 3.1.2	CCG ER ITS	A	ONE/R	English	10 business days prior to Preliminary Design Review Meeting	Canada will review and provide comment on the Preliminary Design Package and return to the Contractor for revision and resubmission. The Contractor must provide the revised documents within 5 business days.	Canada	1	1	1	
DID-SE-03	Final Design Package	SOW 3.1.3	CCG ER ITS	A	ONE/R	English	10 business days prior to Final Design Review Meeting	Canada will review and provide comment on the Final Design Package and return to the Contractor for revision and resubmission. The Contractor must provide the revised documents within 5 business days. The Final version must be submitted and approved prior to the initiation of manufacturing.	Canada	1	1	1	

STATEMENT OF WORK  
Contract Data Requirements List

CONTRACTOR			CONTRACT NO.		SUBMISSION DETAILS									
ID NO.	TITLE OF DATA	CON. REF.	REQ. OFFICE	APP. CODE	FREQ.	LANG.	DATE OF 1ST SUB.	SUBSEQ. SUB. DETAILS	DISTRIBUTION					
									ADDRESS	DR.	COPIES			
											FINAL			
									H	S				
System Engineering Management														
DID-SE-04	Test and Certification Plan	SOW 3.3.1	CCG ER ITS	A	ONE/R	English	10 business days prior to the Preliminary Design Review meeting	Canada will review and provide comment on the Test and Certification Plan at the Preliminary Design Review Meeting. The Contractor must provide the revised documents within 5 business days. The Final version of the Test and Certification Plan must be submitted 10 business days prior to the Final Design Review Meeting. Canada will review and provide comments at the revised Final Test and Certification Plan must be submitted and approved 10 business days prior to First Article Testing.	Canada	1		1		
DID-SE-05	Certifications and Material Data Sheets	SOW 3.3.1.1	CCG ER ITS	A	ONE/R	English	5 business days before First Article Testing	Any Certifications and Material Data Sheets received by the Contractor after First Article Testing must be submitted to Canada within one business day upon receipt and appended to the Factory Acceptance Test Report for the applicable SPAS.	Canada	1	1	1		

STATEMENT OF WORK  
Contract Data Requirements List

CONTRACTOR				CONTRACT NO.								
SUBMISSION DETAILS												
ID NO.	TITLE OF DATA	CON. REF.	REQ. OFFICE	APP. CODE	FREQ.	LANG.	DATE OF 1ST SUB.	SUBSEQ. SUB. DETAILS	DISTRIBUTION			
									ADDRESS	DR.	COPIES	
											FINAL	H
System Engineering Management												
DID-SE-06	First Article Test Report	SOW 3.3.1.2	CCG ER ITS	A	ASGEN	English	Within 3 calendar days of completing First Article Testing	Canada will review and provide comment on the First Article Test Report within 5 business days. If a revision is required, the Contractor must resubmit the revised First Article Test Report with changes included to the satisfaction of Canada within 2 business days. The Final version must be submitted and approved prior to the initiation of manufacturing Unit 2.	Canada	1	1	
DID-SE-07	Factory Acceptance Test Report	SOW 3.3.1.3	CCG ER ITS	A	ASGEN	English	Within 3 calendar days of completing Factory Acceptance Testing for each SPAS	Canada will review and provide comment, or accept all Factory Acceptance Test Reports within 5 business days. If revision is required, the Contractor must resubmit the revised Factory Acceptance Test Report with changes included to the satisfaction of Canada within 2 business days. The Final version must be submitted and approved prior to shipping each SPAS.	Canada	1	1	

STATEMENT OF WORK  
Contract Data Requirements List

CONTRACTOR			CONTRACT NO.									
SUBMISSION DETAILS												
ID NO.	TITLE OF DATA	CON. REF.	REQ. OFFICE	APP. CODE	FREQ.	LANG.	DATE OF 1ST SUB.	SUBSEQ. SUB. DETAILS	DISTRIBUTION			
									ADDRESS	COPIES		
										DR.	FINAL	
System Engineering Management												
DID-SE-08	Equipment Commissioning Plan	SOW 3.4.1	CCG ER ITS	A	ONE/R	English	15 business days following the approval of the First Article Test Report	Canada will review and provide comment on the Equipment Commissioning Plan and return it to the Contractor for revision and resubmission. The Contractor must provide a revised copy within 5 business days. The Final version must be submitted and approved no later than 2 weeks prior to the Equipment Commissioning Training session.	Canada	1		1
DID-SE-09	Equipment Commissioning Instructor Manual	SOW 3.4.2	CCG ER ITS	A	ONE/R	English	15 business days following the approval of the First Article Test Report	Canada will review and provide comment on the Equipment Commissioning Instructor Manual and return it to the Contractor for revision and resubmission. The Contractor must provide a revised copy within 5 business days. The Final version must be submitted and approved no later than 2 weeks prior to the first shipment of goods.	Canada	1	1*	1
Delivery Logistics												
DID-DL-01	Certificate of Conformity	SOW 4.2	CCG ER ITS	A	ASREQ	English	Delivery of each SPAS	N/A	Canada		1	1

\* Unless otherwise specified by Canada, the Contractor must provide 1 hard copy to each delivery location identified in Schedule B



STATEMENT OF WORK  
Contract Data Requirements List

CONTRACTOR				CONTRACT NO.										
SUBMISSION DETAILS														
ID NO.	TITLE OF DATA	CON. REF.	REQ. OFFICE	APP. CODE	FREQ.	LANG.	DATE OF 1ST SUB.	SUBSEQ. SUB. DETAILS	ADDR ESS	DISTRIBUTION				
										DR.	COPIES			
											FINAL	H	S	
Technical Management														
DID-ETR-01	Equipment Training and Familiarization Plan	SOW 5.1	CCG ER ITS	A	ONE/R	Bilingual	3 days before the first Progress Review Meeting	Canada will review and provide comment on the Equipment Training and Familiarization Plan and return it to the Contractor for revision and resubmission. The Contractor must provide a revised copy within 5 business days. The Final version must be submitted and approved no later than 2 weeks prior to first Training Session.	Canada	1				1
DID-ETR-02	Equipment Training Instructor Manual	SOW 5.2	CCG ER ITS	A	ONE/R	Bilingual	60 calendar days prior to first shipment	Canada will review and provide comment on the Equipment Training Instructor Manual and return it to the Contractor for revision and resubmission. The Contractor must provide a revised copy within 5 business days. The Final version must be submitted and approved no later than 2 weeks prior to first shipment of goods.	Canada	1				1

STATEMENT OF WORK  
Contract Data Requirements List

CONTRACTOR				CONTRACT NO.		SUBMISSION DETAILS							
ID NO.	TITLE OF DATA	CON. REF.	REQ. OFFICE	APP. CODE	FREQ.	LANG.	DATE OF 1ST SUB.	SUBSEQ. SUB. DETAILS	DISTRIBUTION				
									ADDR ESS	DR.	COPIES		
											FINAL		
Technical Management													
DID-TM-01	Recommended Spare Parts and Tools List	SOW 6.1	CCG ER ITS	A	ONE/R	Bilingual	15 calendar days following the approval of the First Article Test Report	Canada will review and provide comment on the Recommended Spare Parts and Tools List and return it to the Contractor for revision and resubmission. The Contractor must provide a revised copy within 5 business days. The Final version must be submitted and approved no later than 2 weeks prior to first shipment of goods.	Canada	1			1
DID-TM-02	Technical Maintenance Manual	SOW 6.2 TSOR 4.34	CCG ER ITS	A	ONE/R	Bilingual	60 calendar days prior to first shipment	Canada will review and provide comment on the Technical Maintenance Manual and return it to the Contractor for revision and resubmission. The Contractor must provide a revised copy within 5 business days. The Final version must be submitted and approved no later than 2 weeks prior to first shipment of goods.	Canada	1	1**		1

\*\* Unless otherwise specified by Canada, the Contractor must provide 1 hard copy with each SPAS as detailed in Schedule A.

STATEMENT OF WORK  
Contract Data Requirements List

CONTRACTOR				CONTRACT NO.		SUBMISSION DETAILS									
ID NO.	TITLE OF DATA	CON. REF.	REQ. OFFICE	APP. CODE	FREQ.	LANG.	DATE OF 1ST SUB.	SUBSEQ. SUB. DETAILS	DISTRIBUTION						
									ADDR ESS	DR.	COPIES				
											FINAL	H	S		
Technical Management															
DID-TM-03	Operations Manual	SOW 6.2 TSOR 4.35	CCG ER ITS	A	ONE/R	Bilingual	60 calendar days prior to first shipment	Canada will review and provide comment on the Operations Manual and return it to the Contractor for revision and resubmission. The Contractor must provide a revised copy within 5 business days. The Final version must be submitted and approved no later than 2 weeks prior to first shipment of goods.	Canada	1	1**	1			
DID-TM-04	As-Built Drawing Package	SOW 6.2	CCG ER ITS	A	ONE/R	Bilingual	30 calendar days prior to first shipment	Canada will review and provide comment on the As-Built Drawing Package and return it to the Contractor for revision and resubmission. The Contractor must provide a revised copy within 5 business days. The Final version must be submitted and approved 2 weeks prior to first shipment of goods.	Canada	1	1	1			
DID-TM-05	Master Equipment List	SOW 6.2	CCG ER ITS	A	ONE/R	Bilingual	30 calendar days prior to first shipment	Canada will review and provide comment on the Mater Equipment List and return it to the Contractor for revision and resubmission. The Contractor must provide a revised copy within 5 business days. The Final version must be submitted and approved 2 weeks prior to first shipment of goods.	Canada	1		1			

\*\* Unless otherwise specified by Canada, the Contractor must provide 1 hard copy with each SPAS as detailed in Schedule A.

STATEMENT OF WORK  
Contract Data Requirements List

CONTRACTOR			CONTRACT NO.											
			SUBMISSION DETATMS											
ID NO.	TITLE OF DATA	CON. REF.	REQ. OFFICE	APP. CODE	FREQ.	LANG.	DATE OF 1ST SUB.	SUBSEQ. SUB. DETATMS	ADDRESS	DISTRIBUTION				
										DR.	COPIES			
											FINAL			
Indigenous Engagement														
DID-IE-01	Canadian Indigenous Benefits Plan Report	SOW 7	CCG ER ITS and PWGSC	N/A	ASREQ	English	Within 20 business days of it being determined that the procurement activity may result in socio-economic benefits.	N/A	Canada				1	
DID-IE-02	Canadian Indigenous Subcontracting Report	SOW 7	CCG ER ITS and PWGSC	N/A	ASREQ	English	Within 7 business days of a delivery to a location bound by a Comprehensive Land Claim agreement, and where the work is subcontracted to an indigenous business.	N/A	Canada				1	

## APPENDIX 2      DATA ITEM DESCRIPTIONS

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DATA ITEM DESCRIPTION	
<b>Title:</b> <b>Project Management Plan</b>	<b>Identification Number:</b> <b>DID-PM-01</b>
<b>Description:</b> The Project Management Plan (PMP) defines how the Contractor will execute, monitor, and control the project. The PMP provides Canada with insight as to how project objectives will be accomplished through the Contractor's project management practices and procedures.	
<b>Source Document:</b> The applicable issue of the documents cited herein, including their approval dates and dates of any applicable amendment notices and revisions must be as specified in the Contract.	
<b>Format:</b> The document may be in the Contractor's format and printable on 8.5" x 11" size paper. Final soft copies must be provided in PDF format compatible with Adobe Reader XI.	
<b>Content:</b> The PMP must, at a minimum, contain the following information: <b>Introduction</b> This section must identify the purpose and scope of the PMP. A project overview must be included with the project objectives and deliverables clearly identified. References and terminology used in the PMP must be clearly defined.  <b>Project Organization</b> An organization chart must be included to illustrate the roles and reporting relationships of all key personnel involved in the execution of the Work, including subcontractors. All key management personnel who will interface directly with Canada must be identified; their role, scope of responsibility, and authority must be described using a Responsibility Assignment Matrix.  <b>Work Plan</b> This section must identify and quantify (level of effort) the Work to be done by the Contractor in order to successfully deliver on all requirements of the Contract. A proposed Master Project Schedule must be provided as a native MS Project file, detailing at a minimum: <ol style="list-style-type: none"><li>Contract milestones (e.g., Kick-off Meeting, review meetings, construction hold points, testing, shipment, acceptance, etc.);</li><li>All tasks and all sub-tasks required for the comprehensive delivery of the complete SPAS (e.g., design, material acquisition, manufacturing, assembly, etc.) as per the Contract;</li><li>All tasks and all sub-tasks required for the comprehensive delivery of all documentation deliverables as per the Contract; and</li><li>Resource allocations, percentage complete, and target start and end dates must be identified for all tasks and sub-tasks, as applicable.</li></ol>	

STATEMENT OF WORK  
Data Item Descriptions

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DATA ITEM DESCRIPTION	
<b>Title:</b> <b>Project Management Plan</b>	<b>Identification Number:</b> <b>DID-PM-01</b>
<b>Content (continued):</b>  <i><b>Change Control</b></i> This section must identify the Contractor's change control processes. Details must be provided on how a change proposed during the project will be appropriately defined, reviewed, and approved prior to implementation.  <i><b>Risk Management</b></i> The PMP must identify the Contractor's risk management plan. Risk management responsibilities must be identified, and a detailed risk management process must be submitted that includes a risk mitigation plan. A risk mitigation matrix must be provided to effectively manage the impact of all perceived management, technical, scheduling, and logistic support risks. An issue management process must also be identified detailing the escalation process and problem reporting.  <i><b>Resource Management</b></i> This section will describe how human resources and physical resources (e.g., material) will be estimated, acquired, developed, managed and controlled by the Contractor for the successful completion of the project.  <i><b>Communications Management</b></i> This section will describe the Contractor's communications management processes, including the planning, implementation, and monitoring of communications to achieve effective information exchange between the Contractor, sub-contractor(s), and Canada throughout the duration of the project.	

STATEMENT OF WORK  
Data Item Descriptions

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DATA ITEM DESCRIPTION	
<b>Title:</b> <b>Meeting Agenda</b>	<b>Identification Number:</b> <b>DID-PM-02</b>
<b>Description:</b> The Meeting Agenda describes all topics of discussion for the meeting, and provides all necessary logistical information.	
<b>Source Document:</b> The applicable issue of the documents cited herein, including their approval dates and dates of any applicable amendment notices and revisions must be as specified in the Contract.	
<b>Format:</b> The document may be in the Contractor's format and printable on 8.5" x 11" size paper. Final soft copies must be provided in PDF format compatible with Adobe Reader XI.	
<b>Content:</b> The Contractor must outline a list of meeting activities, denoting clear expectations for what is to occur before and during the meeting. At a minimum, the following information must be included:  <i>Logistics</i> <ul style="list-style-type: none"><li>a. Date and Time</li><li>b. Required and optional attendees; and</li><li>c. Physical location and dial-in coordinates (if applicable)</li></ul> <i>Objective</i> <ul style="list-style-type: none"><li>a. Specific meeting topics and associated time allotted to each point of discussion;</li><li>b. Individuals responsible for leading discussions and/or sharing information; and</li><li>c. Any other pertinent information required for the meeting.</li></ul>	

STATEMENT OF WORK  
Data Item Descriptions

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DATA ITEM DESCRIPTION	
<b>Title:</b> <b>Record of Decisions</b>	<b>Identification Number:</b> <b>DID-PM-03</b>
<b>Description:</b> The Record of Decisions (ROD) documents discussion topics, action items, and decisions that occur during a meeting.	
<b>Source Document:</b> The applicable issue of the documents cited herein, including their approval dates and dates of any applicable amendment notices and revisions must be as specified in the Contract.	
<b>Format:</b> The document may be in the Contractor's format and printable on 8.5" x 11" size paper. Final soft copies must be provided in PDF format compatible with Adobe Reader XI.	
<b>Content:</b> At a minimum, the following information must be included:  <i>Identification</i> This section will identify the title, Contractor identification, date, time, location of the meeting, and a list of attendees who attended the meeting the ROD is addressing.  <i>Meeting Minutes</i> Discussion topics and formal outcomes must be clearly documented and in sufficient detail to facilitate their understanding by a third party.  <i>Action items</i> All items requiring further action must be presented in an itemized list, complete with a unique number identifier, a brief description of the required action, the person(s) responsible for carrying out the action, and the anticipated completion date of the action.	



STATEMENT OF WORK  
Data Item Descriptions

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DATA ITEM DESCRIPTION	
<b>Title:</b> <b>Concept Design Package</b>	<b>Identification Number:</b> <b>DID-SE-01</b>
<b>Description:</b> The Concept Design Package defines the Contractor's technical solution, in detail, for the SPAS. The Concept Design Package will serve as a basis for the Preliminary Design Package (DID-SE-02).	
<b>Source Document:</b> The applicable issue of the documents cited herein, including their approval dates and dates of any applicable amendment notices and revisions must be as specified in the Contract.	
<b>Format:</b> The engineering drawings must be in accordance with accepted industry standards. The final soft copies must be provided as a high-resolution PDF, unless otherwise agreed to by Canada. Final soft copies of the Calculations must be presented clearly and provided in PDF format compatible with Adobe Reader XI. Final hard copies must be printed on 11"X17" size paper.	
<b>Content:</b> At a minimum, the following information must be included:  <b>The Concept Design Package must include Mechanical, Electrical and Communications Drawings.</b>  <b>At a minimum:</b> <ol style="list-style-type: none"><li>Structural drawings showing deck plan, centerline profile and frame station construction lines;</li><li>Detailed lines plan;</li><li>Drawing of fuel arrangement supply arrangement;</li><li>Drawing of hydraulic system;</li><li>Drawing of bilge pumping system;</li><li>Electrical one-line diagram; and</li><li>Drawing of oil discharge circuit(s)</li></ol> Each drawing must include: <ol style="list-style-type: none"><li>Drawing title;</li><li>Drawing number;</li><li>Revision number;</li><li>Drawing scale;</li><li>Units of measure;</li><li>All measurements and configurations of components;</li><li>Dimensioned features;</li><li>Legend (as applicable)</li><li>Assembly notes; and</li><li>Author of drawing.</li></ol> <b>All final drawings must be signed and certified by the Contractor.</b>	

STATEMENT OF WORK  
Data Item Descriptions

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DATA ITEM DESCRIPTION	
<b>Title:</b> <b>Preliminary Design Package</b>	<b>Identification Number:</b> <b>DID-SE-02</b>
<b>Description:</b> The Preliminary Design Package defines the Contractor's technical solution, in detail, for the SPAS. The Preliminary Design Package will serve as a basis for the Final Design Package (DID-SE-03).	
<b>Source Document:</b> The applicable issue of the documents cited herein, including their approval dates and dates of any applicable amendment notices and revisions must be as specified in the Contract.	
<b>Format:</b> The engineering drawings must be in accordance with accepted industry standards. The drawings and material specification data sheets must be provided as a high-resolution PDF, unless otherwise agreed to by Canada. Final soft copies of the Calculations must be presented clearly and provided in PDF format compatible with Adobe Reader XI. Final hard copies must be printed on 11"X17" size paper.	

STATEMENT OF WORK  
Data Item Descriptions

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DATA ITEM DESCRIPTION	
<b>Title:</b> <b>Preliminary Design Package</b>	<b>Identification Number:</b> <b>DID-SE-02</b>
<b>Content:</b> <p>At a minimum, the following information must be included:</p> <p>The Preliminary Design Package must include Mechanical, Electrical and Communications drawings and include the location of all assembly components and interconnection between assembly components. The Package must also include all required calculations.</p> <ul style="list-style-type: none"><li>a. At a minimum, the following drawings must be included:<ul style="list-style-type: none"><li>i. Structural drawings showing deck plan, centerline profile and frame station construction lines;</li><li>ii. Detailed lines plan;</li><li>iii. Drawing of fuel arrangement supply arrangement;</li><li>iv. Drawing of hydraulic system;</li><li>v. Drawing of bilge pumping system;</li><li>vi. Electrical one-line diagram of the complete electrical installation, reflecting the actual loads of all equipment to be fitted, block diagrams, and wiring and connection diagrams for all systems or circuits requiring electrical power, including all pertinent operational and control logic, and installation drawings for all major equipment, including main wireway routes and wireway penetration details; and</li><li>vii. Drawing of oil discharge circuit(s)</li></ul></li><li>b. Schematics of the electric power systems for the SPAS including at a minimum:<ul style="list-style-type: none"><li>i. AC configuration, distribution and loads;</li><li>ii. DC configuration, distribution and loads; and</li><li>iii. A parts list.</li></ul></li><li>c. Schematics of the communications system for the SPASs including at a minimum:<ul style="list-style-type: none"><li>i. All communications equipment;</li><li>ii. Proposed configuration;</li><li>iii. Interconnection details; and</li><li>iv. A parts list.</li></ul></li></ul>	

STATEMENT OF WORK  
Data Item Descriptions

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DATA ITEM DESCRIPTION	
<b>Title:</b> <b>Preliminary Design Package</b>	<b>Identification Number:</b> <b>DID-SE-02</b>
<b>Content (continued):</b>  Each drawing must include: <ul style="list-style-type: none"><li>a. Drawing title;</li><li>b. Drawing number;</li><li>c. Revision number;</li><li>d. Drawing scale;</li><li>e. Units of measure;</li><li>f. All measurements and configurations of components;</li><li>g. Dimensioned features;</li><li>h. Legend (as applicable)</li><li>i. Assembly notes; and</li><li>j. Author of drawing.</li></ul> At a minimum, the following calculations are required: <ul style="list-style-type: none"><li>i. Draft stability calculation of the proposed craft;</li><li>ii. Calculated lightship mass;</li><li>iii. Mass of the trailer;</li><li>iv. Hoisting design calculations;</li><li>v. Cable schedules, indicating the location, connection, size, and length of all required cables;</li><li>vi. Electrical load analysis for the installed equipment, reflecting prospective loading under summer day, winter night, and emergency conditions;</li><li>vii. A short-circuit analysis to estimate the prospective short-circuit current and main distribution points of the electrical system; and</li><li>viii. A protective device discrimination analysis to determine the trip settings for effective load disconnection under short-circuit fault conditions.</li></ul> All inputs, outputs, calculations and assumptions must be defined.	

STATEMENT OF WORK  
Data Item Descriptions

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DATA ITEM DESCRIPTION	
<b>Title:</b> <b>Final Design Package</b>	<b>Identification Number:</b> <b>DID-SE-03</b>
<b>Description:</b> The Final Design Package defines the Contractor's technical solution, in detail, for the SPAS. The Final Design Package will serve as a basis for the As-Built Drawing Package (DID-TM-05).	
<b>Source Document:</b> The applicable issue of the documents cited herein, including their approval dates and dates of any applicable amendment notices and revisions must be as specified in the Contract.	
<b>Format:</b> The engineering drawings must be in accordance with accepted industry standards. The drawings and material specification data sheets must be provided as a high-resolution PDF, unless otherwise agreed to by Canada. Final soft copies of the Calculations must be presented clearly and provided in PDF format compatible with Adobe Reader XI. Final hard copies must be printed on 11"X17" size paper.	
<b>Content:</b> At a minimum, the following information must be included:  The Final Design Package must meet all requirements detailed in the Preliminary Design Package, DID-SE-02.  The Final Design must: <ol style="list-style-type: none"><li>Incorporate any changes and rectify any issues identified during the Preliminary Design Review and any subsequent design review meetings; and</li><li>Include all drawings, calculations, and material data sheets that demonstrate a complete breakdown of all proposed features and systems of the SPAS in accordance with the functional requirements detailed in the TSOR.</li></ol>	

STATEMENT OF WORK  
Data Item Descriptions

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DATA ITEM DESCRIPTION	
<b>Title:</b> <b>Test and Certification Plan</b>	<b>Identification Number:</b> <b>DID-SE-04</b>
<b>Description:</b> The Test and Certification Plan defines all of the specific testing activities and certifications required, prior to shipment, to demonstrate compliance with the TSOR, Annex B and must incorporate the Quality Management Systems, as per Section 3.2, wof all entities involved with the Work.	
<b>Source Document:</b> The applicable issue of the documents cited herein, including their approval dates and dates of any applicable amendment notices and revisions must be as specified in the Contract.	
<b>Format:</b> The document may be in the Contractor's format and printable on 8.5" x 11" size paper. Final soft copies must be provided in PDF format compatible with Adobe Reader XI. The test criteria should be organized in a line-item checklist format to facilitate recording of test results.	

STATEMENT OF WORK  
Data Item Descriptions

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DATA ITEM DESCRIPTION	
<b>Title:</b> <b>Test and Certification Plan</b>	<b>Identification Number:</b> <b>DID-SE-04</b>
<p><b>Content:</b></p> <p>At a minimum, the following information must be included:</p> <p>The test and certification plan must identify all testing and certification that will take place:</p> <ol style="list-style-type: none"><li>Prior to first article testing;</li><li>At first article testing; and</li><li>At factory acceptance testing.</li></ol> <p>The Test and Certification Plan must detail the test procedures and criteria for all systems and system components prior to acceptance by Canada, as well as all documentation leading to meeting all requirements of Transport Canada.</p> <p><b>The Test and Certification Plan must identify the following;</b></p> <p><b>Test Items</b></p> <p>This section will include a comprehensive list of items to be tested.</p> <p>At a minimum, the Contractor must inspect and provide completed documentation for the items listed below.</p> <p>The inspections and tests performed on these items is not intended to supplant any controls, examinations, inspections, or tests normally performed by the Contractor to assure the quality of the craft:</p> <ol style="list-style-type: none"><li>Lightship mass, and mass of the trailer;</li><li>Construction and workmanship quality;</li><li>Lifting provisions and equipment;</li><li>Outboard engines (including starting);</li><li>Outboard engine controls;</li><li>Steering system;</li><li>Fuel system;</li><li>Hydraulic system;</li><li>Electrical system;</li><li>Hatch and access plates (watertight integrity);</li><li>Navigational and communications electronics;</li><li>Oil recovery module;</li><li>Sweep width extensions;</li><li>Oil Transfer Pump, valves and piping;</li><li>Oil storage tanks;</li><li>Trials (dock and sea trials)</li><li>Stability calculations (inclining experiment and stability booklet); and</li><li>Trailer (fit of SPAS, electrical connections, brakes, each Trailer must carry the National Safety Mark per TSOR item 4.31.2.2).</li></ol>	

STATEMENT OF WORK  
Data Item Descriptions

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DATA ITEM DESCRIPTION	
<b>Title:</b> <b>Test and Certification Plan</b>	<b>Identification Number:</b> <b>DID-SE-04</b>
<b>Content (continued):</b>  <i><b>Test Procedures</b></i> This section must detail the methods, safety precautions, parameters to be measured, pass/fail criteria, and procedure in case of test interruption for each test. Refer to <b>Appendix 3</b> for details on the requirements of the Test Procedures.  <i><b>Mitigation and Re-testing Strategies</b></i> The Contractor must include mitigation and re-testing strategies that will be used if any issues arise during testing.  <i><b>Test Schedule</b></i> This section will specify the proposed test date, time, and location for each test identified and will reference the Master Project Schedule included as part of the PMP.  <i><b>Certifications and Material Data Sheets</b></i> This section must list all certification and material data sheets that will be provided.  <i><b>Test Report Template</b></i> The section will outline the format to be used for the First Article Test Report and Factory Acceptance Test Report in accordance with DID-SE-06 and DID-SE-07, respectively. A draft test First Article Test Report and Factory Acceptance Test Report template must be included.	



STATEMENT OF WORK  
Data Item Descriptions

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DATA ITEM DESCRIPTION	
<b>Title:</b> <b>Certification and Material Sheets</b>	<b>Identification Number:</b> <b>DID-SE-05</b>
<b>Description:</b> The Contractor must provide all of the certifications and material data sheets required to demonstrate that the materials and processes used in the construction of the SPAS met the quality requirements as defined in the TSOR - Annex B.	
<b>Source Document:</b> The applicable issue of the documents cited herein, including their approval dates and dates of any applicable amendment notices and revisions must be as specified in the Contract.	
<b>Format:</b> The document may be in the Contractor's format and printable on 8.5" x 11" size paper. Final soft copies must be provided in PDF format compatible with Adobe Reader XI.	
<b>Content:</b> At a minimum, certification and material data sheets must be provided for: <ul style="list-style-type: none"><li>a. Weld Testing and Inspection – refer to <b>Appendix 4</b> for details of the Welding Requirements</li><li>b. Lifesaving appliances;</li><li>c. Lifting appliances;</li><li>d. Engine(s) test report;</li><li>e. Structural material certifications from the supplier (to confirm that the various forms of aluminum and stainless steel satisfy the requirements defined in sections 4.4.2.1 and 4.4.3.1 of the TSOR);</li><li>f. Electrical Load Analysis (to demonstrate that the outboard engine battery banks provide adequate capacity for all house loads, and navigational and communications electric loads);</li><li>g. Calibration certificates;</li><li>h. Navigational light certificates;</li><li>i. Fire suppression material certificates;</li><li>j. Regulatory stability compliance (e.g. TP 1332, Construction Standards for Small Vessels (04/2010) referencing ISO 12217-1:2015, Small Craft – Stability and Buoyancy Assessment and Categorization);</li><li>k. Material certificates for all elastomers (certificates must include Manufacturer's name, Batch or Lot Number, Qualification Number, Cure Date, Date of Manufacture, and Expiration date of Shelf Life);</li><li>l. Test certificates for all flexible hose assemblies (test requirements defined in SAE J1942);</li><li>m. Test certificates for discharge hose assemblies (demonstrate compliance with TSOR requirement 4.7.4.5); and</li><li>n. Pyrotechnic distress signals certificates confirming the date of manufacture (e.g. within three months of delivery).</li></ul>	

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DATA ITEM DESCRIPTION	
<b>Title:</b> <b>First Article Test Report</b>	<b>Identification Number:</b> <b>DID-SE-06</b>
<b>Description:</b> The First Article Test Report details the results of the First Article Testing and demonstrates compliance of the SPAS with the standards outlined in the Test and Certification Plan (DID-SE-04). The First Article Test Report must be certified by the Contractor as an accurate record of the test results.	
<b>Source Document:</b> The applicable issue of the documents cited herein, including their approval dates and dates of any applicable amendment notices and revisions must be as specified in the Contract.	
<b>Format:</b> All Factory Acceptance Test Reports must adhere to the accepted format outlined in DID-SE-04. The report must be printable on 8.5"x11" size paper. Final soft copies must be provided in PDF format compatible with Adobe Reader XI.	
<b>Content:</b> At a minimum, the following information must be included:  <b>Test Personnel</b> Identify, by name (must be in print and signatory) and position, all personnel involved in the conduct, supervision, and observation of the test. All signatories must be dated.  <b>Item Under Test</b> Identify, by serial number, lot number or other identification number, the item that was tested.  <b>Test Procedures</b> The 'Test Procedures' delineated in the Test and Certification Plan (DID-SE-04) will form part of each individual test report.  <b>Test Conditions</b> This section must detail the location, test equipment, calibration, operator input, and expected results of each test.  <b>Problems Encountered</b> Identify any minor and major problems encountered during the test and actions taken to rectify deficiencies. Problems encountered during testing must be reported to Canada immediately and any corrective actions must be approved by Canada before any action is taken. All communications regarding testing issues must be documented and included in the relevant First Article Test Report.  <b>Test Results</b> Identify the result of the test (PASS or FAIL) measured against the test criteria.	

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DATA ITEM DESCRIPTION	
<b>Title:</b> <b>Factory Acceptance Test Report</b>	<b>Identification Number:</b> <b>DID-SE-07</b>
<b>Description:</b> The Factory Acceptance Test Report details the results of the Factory Acceptance Testing outlined in the Test and Certification Plan (DID-SE-04) and demonstrates to Canada that each SPAS and all integrated systems are fully operational. The Factory Acceptance Test Report must be certified by the Contractor as an accurate record of the test results.	
<b>Source Document:</b> The applicable issue of the documents cited herein, including their approval dates and dates of any applicable amendment notices and revisions must be as specified in the Contract.	
<b>Format:</b> All Factory Acceptance Test Reports must adhere to the accepted format outlined in DID-SE-04. The report must be printable on 8.5"x11" size paper. Final soft copies must be provided in PDF format compatible with Adobe Reader XI.	
<b>Content:</b> At a minimum, the following information must be included:  <b>Test Personnel</b> Identify, by name (must be in print and signatory) and position, all personnel involved in the conduct, supervision, and observation of the test. All signatories must be dated.  <b>Item Under Test</b> Identify, by serial number, lot number or other identification number, the item that was tested.  <b>Test Procedures</b> The 'Test Procedures' delineated in the Test and Certification Plan (DID-SE-04) will form part of each individual test report.  <b>Test Conditions</b> This section must detail the location, test equipment, calibration, operator input, and expected results of each test.  <b>Problems Encountered</b> Identify any minor and major problems encountered during the test and actions taken to rectify deficiencies. Problems encountered during testing must be reported to Canada immediately and any corrective actions must be approved by Canada before any action is taken. All communications regarding testing issues must be documented and included in the relevant Factory Acceptance Test Report.  <b>Test Results</b> Identify the result of the test (PASS or FAIL) measured against the test criteria.	

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DATA ITEM DESCRIPTION	
<b>Title:</b> <b>Equipment Commissioning Plan</b>	<b>Identification Number:</b> <b>DID-SE-08</b>
<b>Description:</b> The Commissioning Plan defines all activities required to confirm that the delivered SPAS is complete in all respects, fit for operational use, and response-ready (i.e., no further set-up or configuration is necessary; the equipment can be deployed as is).	
<b>Source Document:</b> The applicable issue of the documents cited herein, including their approval dates and dates of any applicable amendment notices and revisions must be as specified in the Contract.	
<b>Format:</b> The document may be in the Contractor's format, and must be printable on 8.5"x11" size paper. Final soft copies must be provided in PDF format compatible with Adobe Reader XI. The commissioning criteria should be organized in a line-item checklist format to facilitate recording of equipment commissioning results.	
<b>Content:</b> At a minimum, the following information must be included:  <i>Commissioning Objectives</i> At a minimum, the following objectives must be obtained: <ol style="list-style-type: none"><li>Verification that the SPAS was delivered complete (i.e., all required components included) and damage free;</li><li>Verification that the unpacking and set-up of the SPAS (as applicable) has occurred in accordance with manufacturer recommendations;</li><li>Verification and documentation of the operation and performance of the SPAS following delivery; and</li><li>Verification that the re-packing of the SPAS has occurred to ensure it is operationally ready.</li></ol> <i>Description of Goods</i> Identify all components of the SPAS to be commissioned.  <i>References</i> Identify all associated documentation including, though not limited to drawings, unique identifiers, serial numbers, and schedule.  <i>Safety Precautions</i> Identify all safety precautions required for commissioning.  <i>Equipment Layout</i> Provide a schematic of the equipment layout and space required to facilitate the commissioning of the SPAS.  <i>Commissioning Procedures</i> Itemize each individual commissioning criterion for the SPAS, describing the procedures and associated safety precautions. The result of the commissioning activity (PASS or FAIL), date conducted, and Personnel sign-off blank fields must be included.	

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DATA ITEM DESCRIPTION	
<b>Title:</b> <b>Equipment Commissioning Instructor Manual</b>	<b>Identification Number:</b> <b>DID-SE-08</b>
<b>Description:</b> The Equipment Commissioning Instructor Manual must provide specific guidance and materials required for CCG personnel to effectively perform future equipment. This document must capture relevant topics and techniques for the safe equipment commissioning of each SPAS.	
<b>Source Document:</b> The applicable issue of the documents cited herein, including their approval dates and dates of any applicable amendment notices and revisions must be as specified in the Contract.	
<b>Format:</b> The document may be in the Contractor's format, and must printable on 8.5"x11" size paper. Final soft copies must be provided in PDF format compatible with Adobe Reader XI. The document must include colour labelled diagrams, pictograms, and illustrations, as well as sequential instructions where applicable. The document must be provided in both English and Canadian French languages.	
<b>Content:</b> At a minimum, the following information must be included: <ul style="list-style-type: none"><li>a. How to inspect the SPAS for damage;</li><li>b. How to safely remove all equipment from any packaging;</li><li>c. How to safely start-up and run all equipment;</li><li>d. How to safely put the SPAS into working condition; and</li><li>e. How to safety repackage all components and store the SPAS in a response-ready state.</li></ul>	

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DATA ITEM DESCRIPTION	
<b>Title:</b> <b>Certificate of Conformity</b>	<b>Identification Number:</b> <b>DID-DL-01</b>
<b>Description:</b> The Certificate of Conformity is a formal verification, signed by the Contractor, that the SPAS is compliant will all of the requirements defined in the TSOR – Annex B.	
<b>Source Document:</b> The applicable issue of the documents cited herein, including their approval dates and dates of any applicable amendment notices and revisions must be as specified in the Contract.	
<b>Format:</b> The document may be in the Contractor's format, and must printable on 8.5"x11" size paper. Final soft copies must be provided in PDF format compatible with Adobe Reader XI. Hard copies must be printed on 8.5"x11" size paper.	
<b>Content:</b> At a minimum, the following information must be included: <ul style="list-style-type: none"><li>a. Name of the manufacturer;</li><li>b. Item identification (Hull Identification Number, serial number, lot number or other identification number);</li><li>c. Contract number;</li><li>d. Conformity statement;</li><li>e. Name (in print) of the Contractor;</li><li>f. Signature of the Contractor; and</li><li>g. Date of signing.</li></ul>	

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DATA ITEM DESCRIPTION	
<b>Title:</b> <b>Equipment Training and Familiarization Plan</b>	<b>Identification Number:</b> <b>DID-ETR-01</b>
<b>Description:</b> The Equipment Training and Familiarization Plan must describe in detail, the topics that will be delivered as part of the equipment training sessions as well as the associated schedule and training materials required.	
<b>Source Document:</b> The applicable issue of the documents cited herein, including their approval dates and dates of any applicable amendment notices and revisions must be as specified in the Contract.	
<b>Format:</b> The document may be in the Contractor's format, and must be printable on 8.5"x11" size paper. Final soft copies must be provided in PDF format compatible with Adobe Reader XI.	
<b>Content:</b> At a minimum, the following information must be included:  <i>Objectives</i> Identify each equipment training session objectives for participants  <i>Training Materials</i> Identify all training materials and equipment required to deliver each equipment training session.  <i>Training Schedule</i> Provide an itinerary for the equipment training session, identifying all key training topics and the time allotted to each topic, including breaks for the participants. An analysis to support the estimated duration of each equipment training session must be included.  <i>Training Topics</i> At a minimum, the following topics must be addressed and described in detail:  At a minimum, the Technical Maintenance Equipment Training session must include: <ol style="list-style-type: none"><li>Fault locating and diagnostic techniques;</li><li>Preventive and Corrective maintenance procedures;</li><li>Maintenance procedures for all electro-mechanical systems, including those contained in the vehicle and trailer infrastructure;</li><li>Maintenance procedures for all power distribution systems, including electrical panels, electrical distribution systems, shore power, generator components, and grounding infrastructure; and</li><li>Maintenance procedures for all communications equipment and electronics, including radios, computer networks, and audio-visual displays.</li></ol>	

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DATA ITEM DESCRIPTION	
<b>Title:</b> <b>Equipment Training and Familiarization Plan</b>	<b>Identification Number:</b> <b>DID-ETR-01</b>
<b>Content (continued):</b>  At a minimum, the Operational training session must include: <ul style="list-style-type: none"><li>a. The purpose, functions and capabilities of each of the components in the SPAS;</li><li>b. Identification of all safety checks required prior to normal operation;</li><li>c. Demonstrations of how to correctly operate all components of the equipment (deployed in the field, operated, recovered, decontaminated, and stored);</li><li>d. The safe operational limitations of the SPAS (all components);</li><li>e. The operational characteristics of all electro-mechanical systems, including trailer and power systems; and</li><li>f. The installation, set-up, and use of the communications equipment.</li></ul>	



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DATA ITEM DESCRIPTION	
<b>Title:</b> <b>Equipment Training Instructor Manual</b>	<b>Identification Number:</b> <b>DID-ETR-02</b>
<b>Description:</b> The Equipment Training Instructor Manual must provide specific guidance and materials required for CCG personnel to effectively deliver future equipment training sessions. This document must capture relevant topics and techniques for the safe equipment training of the SPAS.	
<b>Source Document:</b> The applicable issue of the documents cited herein, including their approval dates and dates of any applicable amendment notices and revisions must be as specified in the Contract.	
<b>Format:</b> The document may be in the Contractor's format, and must be printable on 8.5"x11" size paper. Final soft copies must be provided in PDF format compatible with Adobe Reader XI. The document must include a separate presentation with presenter notes including a combined use of text and colour labelled diagrams, pictograms, photos, and illustrations, as well as sequential instructions where applicable. The document must be provided in both English and Canadian French languages. Any video training aids must be provided in MP4 format on CD/DVD.	
<b>Content:</b> At a minimum, the following information must be included:  <i>Objectives</i> Identify the equipment training session objectives for all participants  <i>Training Materials</i> Identify all training materials and equipment required to deliver the equipment training session.  <i>Training Schedule</i> Provide an itinerary for the equipment training session, identifying all key training topics and the time allotted to each topic, including breaks for the participants.  <i>Training Topics</i> At a minimum, the following topics must be addressed and described through a combined use of text, labelled diagrams, tables, graphics, videos, and photos, in a presentation format: <ol style="list-style-type: none"><li>The purpose and function(s) of each component of the SPAS;</li><li>Any attendant safety hazards and the required personal protective equipment (PPE);</li><li>Demonstration of how to deploy, operate, recover, decontaminate, and store all components of the SPAS;</li><li>Safe operational limitations of the SPAS;</li><li>Fault location and diagnostic techniques; and</li><li>Preventive and corrective maintenance procedures.</li></ol>	

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DATA ITEM DESCRIPTION	
<b>Title:</b> <b>Recommended Spare Parts and Tools Lists</b>	<b>Identification Number:</b> <b>DID-TM-01</b>
<b>Description:</b> The Recommended Spare Parts and Tools List (RSPTL) identifies all items that the Contractor recommends to support ongoing maintenance activities (i.e., preventive and corrective) for the SPAS. Canada will use these recommendations to support the decision to procure spare parts and tools and to facilitate the lifecycle management process of the SPAS.	
<b>Source Document:</b> The applicable issue of the documents cited herein, including their approval dates and dates of any applicable amendment notices and revisions must be as specified in the Contract.	
<b>Format:</b> The RSPTL data must be provided in a Microsoft Excel 2010 spreadsheet, unless otherwise specified by Canada. Final soft copies must be provided in PDF format compatible with Adobe Reader XI. The document must be provided in English and Canadian French languages.	
<b>Content:</b> At a minimum, the following information must be provided for each identified recommended spare part or tool: <ul style="list-style-type: none"><li>a. Item Name;</li><li>b. Manufacturer;</li><li>c. Manufacturer model number;</li><li>d. Manufacturer part number;</li><li>e. Quantity recommended to support a single SPAS over two years of operation;</li><li>f. Expiry (if applicable);</li><li>g. Price per unit;</li><li>h. Lead time when ordering;</li><li>i. NATO Stock Number (if applicable)</li><li>j. Warranty (extended, if applicable);</li><li>k. Recommended storage requirements and conditions (special conditions included);</li><li>l. Recommended maintenance (if applicable);</li><li>m. Identification as a spare for the SPAS; and</li><li>n. Identification as a critical spare (as/if applicable).</li></ul>	

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DATA ITEM DESCRIPTION	
<b>Title:</b> <b>Technical Maintenance Manual</b>	<b>Identification Number:</b> <b>DID-TM-02</b>
<b>Description:</b> The Technical Maintenance Manual must define all the necessary information to permit safe performance testing, servicing, inspections, and adjustment of the SPAS for preventive and corrective maintenance activities. This information will ensure the SPAS maintains its original level of operational capability.	
<b>Source Document:</b> The applicable issue of the documents cited herein, including their approval dates and dates of any applicable amendment notices and revisions must be as specified in the Contract.	
<b>Format:</b> The document must meet the specifications as described in TSOR Section 4.34. Final soft copies must be provided in PDF format compatible with Adobe Reader XI. Final hard copies must be printed on multiple, double sided 8.5"x11" sheets and must be collated and bound, unless otherwise specified by Canada. The document must include colour labelled diagrams, pictograms, and illustrations, as well as sequential instructions where applicable. The document must be provided in English and Canadian French languages.	

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DATA ITEM DESCRIPTION	
<b>Title:</b> <b>Technical Maintenance Manual</b>	<b>Identification Number:</b> <b>DID-TM-02</b>
<b>Content:</b> <p>At a minimum, the following information must be included:</p> <p><b><i>Preventive maintenance</i></b></p> <p>The Contractor must establish preventive maintenance guidance for all contractor supplied equipment. This guidance must establish routine maintenance intervals and the associated tasks to comply with warranty obligations. This guidance must also account for in-field (i.e., during a spill response) maintenance considerations.</p> <p>The Contractor must provide the accompanying procedure(s) to perform each recommended maintenance activity. While not an exhaustive list, each maintenance procedure must identify:</p> <ol style="list-style-type: none"><li>List the number of personnel and the estimated time to perform the activity;</li><li>Identify the potential hazards and personal protective equipment (PPE) to use when performing the activity;</li><li>Identify all parts, consumables, tools or equipment required to perform the maintenance activity;</li><li>Define the sequential steps to perform the activity safely (including pictograms);</li><li>Identify any subsequent verification effort required to verify that the activity was properly executed;</li><li>Maintenance dictated by regulatory or warranty requirements (e.g., safety equipment); and</li><li>Calibrations (if required).</li></ol> <p><b><i>Corrective maintenance</i></b></p> <p>The Contractor must establish corrective maintenance guidance for all supplied and furnished critical equipment. While not an exhaustive list, the Contractor must:</p> <ol style="list-style-type: none"><li>Delineate troubleshooting instructions to properly identify, isolate, and rectify faults; and</li><li>Indicate how to verify that the equipment has been returned to an operational state.</li></ol> <p><b><i>Specialized Maintenance</i></b></p> <p>The Contractor must, at a minimum, identify any maintenance activity that should be conducted by a qualified third party. Such maintenance activities would warrant specialized training to address a particular technical complexity, beyond the scope of any regular preventive and corrective maintenance.</p>	

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DATA ITEM DESCRIPTION	
<b>Title:</b> <b>Operations Manual</b>	<b>Identification Number:</b> <b>DID-TM-03</b>
<b>Description:</b> The Operations Manual must define all necessary information required to safely operate the SPAS.	
<b>Source Document:</b> The applicable issue of the documents cited herein, including their approval dates and dates of any applicable amendment notices and revisions must be as specified in the Contract.	
<b>Format:</b> The document must meet the specifications as described in TSOR Section 4.35. Final soft copies must be provided in PDF format compatible with Adobe Reader XI. Final hard copies must be printed on multiple, double sided 8.5"x11" sheets and must be collated and bound, unless otherwise specified by Canada. The document must include colour labelled diagrams, pictograms, and illustrations, as well as sequential instructions where applicable. The document must be provided in English and Canadian French languages.	
<b>Content:</b> At a minimum, the following information must be included: <ul style="list-style-type: none"><li>a. How to operate the complete system including all known hazards and safety measures to mitigate risk;</li><li>b. All steps required to render the system fully operational;</li><li>c. How to install and remove components of the system;</li><li>d. How to trouble-shoot the system;</li><li>e. How to trouble-shoot the system in the field;</li><li>f. How to safely clean and decontaminate the system; and</li><li>g. How to safely handle and store the system including the identification of cautions and warnings to prevent crew and equipment from damage.</li></ul> The Contractor must also provide pre- and post-operational checklists for all supplied and furnished equipment. The Pre-Operational Checklist must define all indicators needed to ensure that the equipment is operationally ready prior to deployment. The Post-Operational Checklist must supplement its counterpart with decontamination procedures and recommended storage practices, as well as return-to-service instructions.	

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DATA ITEM DESCRIPTION	
<b>Title:</b> <b>As-Built Drawing Package</b>	<b>Identification Number:</b> <b>DID-TM-04</b>
<b>Description:</b> The As-Built Drawing Package must include all engineering drawings for the SPAS that reflect any revisions or changes that occurred during the manufacturing process. All drawings must detail the key components of each assembly, and the respective interconnection(s) with other assembly components.	
<b>Source Document:</b> The applicable issue of the documents cited herein, including their approval dates and dates of any applicable amendment notices and revisions must be as specified in the Contract.	
<b>Format:</b> The engineering drawings must be in accordance with accepted industry standards. The final soft copies must be provided as a high-resolution PDF, unless otherwise agreed to by Canada. Final hard copies must be printed on 11”X17” size paper. The document must be provided in English and Canadian French languages.	
<b>Content:</b> At a minimum, the following information must be included:  As-Built Drawing Package for each the SPAS must reflect all changes made in the final design during the construction process, and show the exact dimensions, geometry, and location of all work completed under the contract. The As-Built drawing package must include at craft particulars including bilge, fuel, electrical, propulsion, hydraulic, and oil recovery installations  Each drawing must include: <ul style="list-style-type: none"><li>• Drawing title;</li><li>• Drawing number;</li><li>• Revision number;</li><li>• Drawing scale;</li><li>• Units of measure;</li><li>• All measurements and configurations of components;</li><li>• Dimensioned features;</li><li>• Assembly notes; and</li><li>• Author of drawing.</li></ul> Each drawing must be accompanied by a bill of materials that must include: <ul style="list-style-type: none"><li>a. All parts and sub-assemblies used listed;</li><li>b. All quantities required for each identified part and sub-assembly; and</li><li>c. All material(s) of construction for each identified part and sub-assembly.</li></ul> <b>All final drawings must be signed and certified by the Contractor.</b>	

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DATA ITEM DESCRIPTION	
<b>Title:</b> <b>Master Equipment List</b>	<b>Identification Number:</b> <b>DID-TM-05</b>
<b>Description:</b> The Master Equipment List (MEL) identifies and summarizes key administrative and operational information for all components of the SPAS. This list is integral to planning and tracking of asset and maintenance data.	
<b>Source Document:</b> The applicable issue of the documents cited herein, including their approval dates and dates of any applicable amendment notices and revisions must be as specified in the Contract.	
<b>Format:</b> The MEL data must be provided in a Microsoft Excel 2010 spreadsheet, unless otherwise specified by Canada. Final soft copies must be provided in PDF format compatible with Adobe Reader XI. The document must be provided in English and Canadian French languages.	
<b>Content:</b> At a minimum, the following information must be provided for each identified component of the SPAS: <ul style="list-style-type: none"><li>a. Item Name</li><li>b. Item Description;</li><li>c. Manufacturer name and address;</li><li>d. Manufacturer model name or number;</li><li>e. Manufacturer part number;</li><li>f. Supplier name, address, and telephone number;</li><li>g. Mass;</li><li>h. Capacity and/or rating;</li><li>i. Quantity;</li><li>j. NATO Stock Number (if applicable);</li><li>k. Warranty information (i.e., coverage after acceptance by Canada); and</li><li>l. Identification of software licenses (if applicable).</li></ul>	

STATEMENT OF WORK  
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DATA ITEM DESCRIPTION	
<b>Title:</b> <b>Canadian Indigenous Benefits Plan Report</b>	<b>Identification Number:</b> <b>DID-IE-01</b>
<b>Description:</b> The Canadian Indigenous Benefits Plan Report must summarize information regarding actual benefits of the Canadian Indigenous Benefits Plan with respect to Employment Indigenous Labour; On-the-Job Training, Skills Development, Apprenticeship; and Sub-Contract - Service Requirement.	
<b>Source Document:</b> The applicable issue of the documents cited herein, including their approval dates and dates of any applicable amendment notices and revisions must be as specified in the Contract.	
<b>Format:</b> The document may be in the Contractor's format, and must be printable on 8.5"x11" size paper. Final soft copies must be provided in PDF format compatible with Adobe Reader XI.	
<b>Content:</b> At a minimum, the following information must be included: <ul style="list-style-type: none"><li>a. <b><i>Employment Indigenous Labour</i></b> Employee, Rate of Pay, Hours Worked, Total Salary, Job Category;</li><li>b. <b><i>On-the-Job Training, Skills Development, Apprenticeship</i></b> Employee, Rate of Pay, Hours Worked, Total Salary, Job Category;</li><li>c. <b><i>Sub-Contract - Service Requirement</i></b> Employee/Firm, Value, Hours Worked, Total Salary, Service Category.</li></ul>	



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DATA ITEM DESCRIPTION	
<b>Title:</b> <b>Canadian Indigenous Subcontracting Report</b>	<b>Identification Number:</b> <b>DID-IE-02</b>
<b>Description:</b> The Canadian Indigenous Subcontracting Report must summarize information regarding the award of subcontract(s) to indigenous business(es) in areas with Comprehensive Land Claim Agreements (CLCAs).	
<b>Source Document:</b> The applicable issue of the documents cited herein, including their approval dates and dates of any applicable amendment notices and revisions must be as specified in the Contract.	
<b>Format:</b> The document may be in the Contractor's format, and must be printable on 8.5"x11" size paper. Final soft copies must be provided in PDF format compatible with Adobe Reader XI.	
<b>Content:</b> At a minimum, the following information must be included: <ul style="list-style-type: none"><li>a. The name of the applicable CLCA;</li><li>b. Name of the subcontractor;</li><li>c. Subcontract or requisition number;</li><li>d. Subcontract award date;</li><li>e. Subcontract expiry date;</li><li>f. The value of the Subcontract; and</li><li>g. A short description of the subcontracted goods or services.</li></ul>	

## **APPENDIX 3    TEST PROCEDURES – DOCK AND SEA TRIALS**

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### ***Dock Trials***

Dock trials must be carried out by the Contractor on each SPAS prior to sea trials to demonstrate the satisfactory fit, finish, and operation of all new components and equipment.

At a minimum, the following components and equipment must be inspected or tested as part of the dock trials:

- 1) Fuel system;
- 2) Electrical system;
- 3) Bilge system;
- 4) Hydraulic system;
- 5) Oil recovery, transfer, and storage systems;
- 6) Navigational and communications equipment;
- 7) Safety equipment;
- 8) Hoisting fittings and sling(s);
- 9) Recess covers, hatches, wheelhouse fabric door, and windows; and
- 10) Railings and deck canopy.

General requirements for the dock trials are outlined below:

- Flushing and hydrostatic testing of all fitted systems designed to hold pressure, must have no subsequent leak(s) or deformation(s) in any of the components. Fresh water must be used as the test media for all oil recovery, transfer, and storage systems (including discharge hose assemblies) in lieu of recovered oil products; hydraulic oil must only be used to test hydraulic runs and hydraulically-driven equipment;
- Start-up, shutdown, and operation of equipment must be performed throughout its complete operating range (including reverse directions, if applicable) to demonstrate smooth operation. Switches must energize equipment with no faults or shorts; controls and gauges must affect and monitor the equipment as intended. If applicable, equipment must function as per OEM specifications;
- Components designed to open, close, or articulate must do so without interference or binding; and
- Inventories and locations of safety equipment and on board spares must correspond to the Master Equipment List (CDRL item DID-TM-05).

### ***Sea Trials***

The Contractor must carry out a sea trial program for each SPAS prior to acceptance of the craft by Canada, and must ensure that sufficient fuel, equipment, and personnel are available to complete the program to the satisfaction of Canada.

All sea trial instrumentation and equipment (including necessary hardware and fittings) must be furnished and operated by the Contractor. Trial instrumentation (where applicable) must not replace instruments fitted to the craft (e.g., engine tachometers, pressure gauges, thermometers), and must not be invasive (e.g. holes drilled into surfaces). After satisfactory completion of the trials, all instrumentation and equipment must be removed, and all systems must be restored to their original condition. The Contractor must provide two copies of the calibration data that certifies the accuracy of the instrumentation for the tests and trials; this data must be included in the test plan as per CDRL item DID-SE-04.

As an element of the trials, the Contractor must run the vessel until the engine(s) have accumulated the operational hours (as recommended by the engine manufacturer) sufficient for the initial service by the engine manufacturer service agent. The Contractor must perform this initial service, and provide a report as per 3.2.1.2 detailing the work conducted and any pertinent finding(s).

For the purpose of the sea trials, normal load conditions will comply with the following definitions:

- **Normal load (skimming operations) condition**, Lightship displacement of the vessel, in addition to full gasoline and diesel fuel tanks, four personnel on board (400 kg total), 50 kg of deck gear, and 4.0 m<sup>3</sup> of recovered product, with a specific gravity of 1.0 in the recovered oil storage tanks.; and
- **Normal load (transit) condition**, Lightship displacement of the vessel, in addition to full gasoline and diesel fuel tanks, four personnel on board (400 kg total), 50 kg of deck gear, and empty recovered oil storage tanks.

As a minimum, the following trials must be conducted with the craft in both the normal load (transit) and normal load (skimming operations) conditions, unless otherwise specified by Canada:

- 1) Speed trials;
- 2) Endurance trials;
- 3) Astern propulsion; and
- 4) Steering gear.

### ***Speed Trials***

The speed trials must be carried out on a course that measures at least one nautical mile in length. Two runs must be conducted for each full load condition, with one run conducted in each direction. The speeds of the two runs (for a given full load condition) must be averaged; note that the use of GPS data (averaged) is acceptable. Under Normal Load (Transit) condition, the Self-Propelled Advancing Skimmer must have a maximum speed of at least fifteen knots.

### ***Endurance Trial***

For each normal load condition the craft must operate at maximum speed for three ten minute intervals. Each interval operating at maximum speed will be followed by a ten minute rest period.

The endurance trial will be performed over a one hour period considering the break-in procedures of the equipment as defined by the Contractor. All systems must be operated to check for proper lubrication, control, and alignment. Fuel consumption must be recorded for each 1 hour trial.

### ***Astern Propulsion***

The vessel must be operated and manoeuvred using astern propulsion to establish the astern performance. During the backing performance tests, the throttles must be set to provide one third of the rated engine horsepower. The engines must be subjected to two stops from full power ahead at maximum speed to dead in the water using reverse thrust. These astern propulsion tests must be conducted for both full load conditions to demonstrate astern engine performance in an emergency stop, and test the strength of the foundations. The time required to perform each trial must be recorded.

### ***Steering Gear***

Tests must be conducted on the steering gear to demonstrate the adequacy of the steering system under all operations. Manoeuvring tests must be performed to verify that the steering system can be operated from hard over to hard over in five to seven complete revolutions of the steering wheel. In addition, the turning radius at both skimming speed(s) and full throttle must be quantified. Manoeuvring trials must be conducted in both full load conditions.

At the conclusion of sea trials, the craft must be thoroughly cleaned and inspected. The cooling system for each engine must be flushed with fresh water. Any damage to the craft (or ancillary equipment) resulting from sea trials must be repaired by the Contractor (to the satisfaction of Canada).

## APPENDIX 4 WELD TESTING AND INSPECTION

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- A.1. All welds must be subjected to 100% visual inspection. Visual inspection must precede examinations by any other methods required herein.
- A.2. All visual inspection must be performed, and the results reported, by an individual certified by CWB to CSA W178.2-2018, Certification of Welding Inspectors, Level 2 or 3.
- A.3. The Contractor must make provisions to perform penetrant and radiographic examinations in accordance with Table 1.

**Table 1: Weld inspection requirements for new construction vessels (<12 m LOA)**

Method	Number of examinations required
	Aluminum vessels
<b>Penetrant testing (PT)</b> 1000 mm	$0.50 \times (L+B+D)$
<b>Radiographic testing (RT)</b> 440 mm – butts or seams 300 mm × 300 mm – intersecting butts and seams	$1.00 \times (L+B+D)$
where: <b>L</b> is the overall length [m]; <b>B</b> is the greatest moulded breadth [m] and <b>D</b> is the moulded depth at side, measured at L/2 [m].	

- A.4. When access does not permit the use of a 300 mm by 300 mm film size at intersecting butts and seams, a series of films must be positioned to offer examination of 150 mm of the weld in all directions.
- A.5. Penetrant and radiographic examination personnel must be certified by Natural Resources Canada (NRCan) as meeting the qualification requirements of CAN/CGSB 48.9712-2014, Non-Destructive Testing (NDT): Qualification and Certification of Personnel, Level 2 or 3. A company located outside of Canada may propose certification by other national certifying bodies to equivalent national standards (in lieu of CAN/CGSB 48.9712-2014), for review and acceptance by Canada. Visual inspection procedures must comply with the requirements of ASME BPVC.V-2017: Non-Destructive Examination, and CSA W59.2-18, Welded Aluminum Construction.
- A.6. Penetrant and radiographic examination procedures must comply with the requirements of ASME BPVC.V-2017: Non-Destructive Examination, and CSA W59.2-18, Welded Aluminum Construction.
- A.7. A company located outside of Canada may propose visual inspection and non-destructive examination procedures written to other equivalent national standards (in lieu of ASME BPVC.V-2017 and CSA W59.2-2018), for review and acceptance by Canada. Inspection procedures and personnel qualification certificates must be filed with Canada prior to performing inspections of any type.

STATEMENT OF WORK  
**Weld Testing and Inspection**

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- A.8. The acceptance criteria for visual inspection and penetrant and radiographic examination must be in accordance with CSA W59.2-2018, Welded Aluminum Construction, with the following exceptions:
- a. Pores open to the surface are not permitted in any weld; and
  - b. Undercut is not permitted in any weld.
- A.9. A company located outside of Canada may propose weld acceptance criterion to other equivalent national standards for review and acceptance by Canada.
- A.10. The selection of the locations of the PT and RT inspections must be of the butts and seams of the plating of the primary ship structure being taken at the sole discretion and direction of Canada. The primary ship structure is taken as the part of the vessel hull structure which forms the primary hull girder, including structure to resist ice loadings. It consists of strength decks, platforms and shell plating and their supporting framing, tank top, vertical keel, and longitudinal and main transverse bulkheads. In addition to the primary hull girder, water-, oil-, and gas-tight bulkheads must be considered part of the primary hull structure. Radiographic inspection developed wet film and digital images must be provided to and become the property of Canada.
- A.11. For each inspection method, a copy of the current year qualification certificate of the examining individual must be attached to the initial interpretation or verification report supplied to Canada. If a new validation year is entered or if a different individual is used, new qualification certificates must be supplied, with any subsequent interpretation report being submitted.
- A.12. Inspection procedures and techniques are to be prepared by Level 3 personnel for each inspection method required herein, and submitted to Canada prior to performing any inspections of completed work.
- A.13. Procedures for radiographic inspection must follow the requirements of ASME BPVC.V-2017, Non-Destructive Examination, Article 2, or equivalent.
- A.14. Digital Image Acquisition and evaluation is the preferred technique; however:
- a. Procedures may be for the use of imaging plates (CR) or direct (DR) digital (no analog conversion).
  - b. When imaging plates or direct digital is not possible or available, film radiography must be used.
  - c. When film radiographic techniques are used, all cassettes (film holders) must be double loaded (minimum) with film of same type or class.
- A.15. For PT and RT inspections, weld profiles and contours must be sufficiently smooth to ensure that geometric conditions do not cause false indications. Transitions from weld reinforcement (root or cap) must transition smoothly into the base metal so as to not produce indications which could lead to misinterpretation of indications.
- A.16. Prior to inspection by any method, welds and adjacent areas must be cleaned so as to be free from all primer, paint, weld spatter, and other foreign matter to enable accurate interpretation of the area of interest (weld zone).
- A.17. Staging and lighting must be provided to permit safe access for inspection.

STATEMENT OF WORK  
**Weld Testing and Inspection**

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- A.18. Welds to be examined by liquid penetrant and radiographic test methods must be subjected to third party visual inspection first. A formal report must then be issued by the certified inspector.
- A.19. If the surfaces and geometric conditions of the weld to be examined by any inspection method is such that it may or would interfere with the interpretation of the area of interest (weld zone), welds must be dressed smooth or flush to the satisfaction of the NDT certified inspector and Canada prior to the weld inspections being carried out.
- A.20. All linear and volumetric indications (acceptable, unacceptable, or otherwise) must be characterized and described on the original inspection interpretation report by the certified examiner that performed the original examination.
- A.21. All indications of defects must be categorized as to type (i.e., porosity, inclusion, lack of fusion, or crack).
- A.22. All surface indications must be categorized as to type and dimensioned for size (i.e., porosity diameter, crack length). Position relative to weld centreline must be noted.
- A.23. All repairs must be documented fully indicating the dimensional size (i.e., length, depth, and width of excavation) and position using the same reference as the originally recorded position.
- A.24. All repaired areas must be re-inspected using the same inspection method as the original inspection. Where the indications were detected with surface methods (PT), the repair area must undergo additional inspection utilizing volumetric methods (RT)
- A.25. All excavations for repairs must be inspected after excavation and prior to re-welding to ensure complete removal of the indication.
- A.26. When a discontinuity extends to either or both ends of a location being inspected, additional overlapping inspection must be required. The overlapping inspection must show a portion of the original end.
- A.27. When an overlapping inspection displays unacceptable discontinuities at either or both ends, the entire weld length must be considered unacceptable unless proven otherwise by the Contractor. Under this condition, welds must be repaired to the extent required by Canada.
- A.28. All overlapping inspections must be taken prior to repair of the originally rejected location. If repair has occurred prior to overlapping inspections and the entire weld length has not been repaired, the overlapping inspections must be placed to overlap the start and finish of the repair.
- A.29. When an unacceptable discontinuity fails to extend to either or both ends of a location being inspected, additional inspection of the same length within the same weld at a position as designated by Canada must be inspected.
- A.30. When an unacceptable discontinuity is detected in the additional inspection length, the entire weld must be considered unacceptable until proven otherwise.
- A.31. For each failed location, one new location must be examined. All new locations must be selected by Canada. Each new location must be considered in addition to the requirements herein. Unacceptable welds must be removed, and the joint re-welded and re-inspected by the same

original testing method. Care must be taken to ensure that the inspection of the repaired area is accurately located, so that it measures the original location that was rejected.

- A.32. When an entire weld, base material, entire part, or entire section contains unacceptable discontinuities as specified herein, no corrective action must be taken until the repair procedure has been agreed to by Canada.
- A.33. Inspection reports must be prepared and filed by the Quality Department of the Contractor and made available to Canada. At a minimum, reports must record the date of inspection; Builder or Contractor's name; vessel type and hull number; Owner's name; name of the inspection organization; inspection procedure number; interpretation report number; item; location; all discontinuities (including single and accumulated indications); weld acceptance criteria; location of discontinuities; and the name, qualification, level, and signature of the individual(s) performing the inspection and interpretation. Inspection reports must reference material type, thickness, joint type, and geometry.
- A.34. When a portion of a weld is to be inspected by liquid penetrant or radiographic methods, the location must be subjected to visual inspection in advance of the other inspection method. Interpretation reports are required for both inspection methods.
- A.35. The Contractor must implement a system of documentation which links the initial inspection report (individual serialization) to the excavation report (individual serialization) to the re-inspection report (individual serialization):

Original inspection: PT (Weld ID) XXX-1

Original inspection: UT (Weld ID) XXX-1

If repair is required:

PT (Weld ID) XXX-G1 PT (G=Grind/Gouge): PT inspected and cleared

RT (Weld ID) XXX-R1 RT (R= Re-inspect RT): Re-weld and re-inspect RT

- A.36. The Contractor must prepare five non-destructive inspection arrangement drawings and sketches that accurately document the location of the inspections.
- A.37. The inspection method, weld identification number, and abbreviations for each inspection must be accurately recorded on a progressive basis. A legend detailing the identification symbols used by the Contractor must appear on each arrangement drawing.
- A.38. The Contractor must supply updated NDT arrangement drawings to Canada on a regular basis throughout the contract period. The final drawings must be supplied to Canada electronically at contract completion.



**Annex B**  
Technical Statement of Requirements

**Environmental Response Equipment Modernization/  
Mobile Incident Command Equipment Project**

*Self-Propelled Advancing Skimmer*

TECHNICAL STATEMENT OF REQUIREMENTS  
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## LIST OF ACRONYMS AND ABBREVIATIONS

ABYC	American Boat and Yacht Council
AFT	Assigned formal tonnage
AIS	Automatic identification system
ANBCC	Authorized National Body for Company Certification
ASME	American Society of Mechanical Engineers
ASTM	Formerly known as the American Society for Testing and Materials
BOA	Beam overall
BPVC	Boiler and Pressure Vessel Code
CCA	Cold cranking amperage
CCG	Canadian Coast Guard
CGSB	Canadian General Standards Board
ConOps	Concept of Operations
C.R.C	Consolidated Regulations of Canada
CSA	Canadian Standards Association
CWB	Canadian Welding Bureau
DC	Direct current
DWL	Design waterline
EMI	Electromagnetic interference
EPIRB	Emergency position indicating radio beacon
ER	Environmental response
GFE	Government furnished equipment
GPS	Global position system
GSA	General Services Administration
GVWR	Gross vehicle weight rating
HID	High-intensity discharge
HPU	Hydraulic power unit
IEC	International Electrotechnical Commission
IIW	International Institute of Welding
ISO	International Organization for Standardization
LED	Light-emitting diode
LOA	Length overall
MBS	Minimum breaking strength
MMSI	Marine Mobile Service Identity
NACM	National Association of Chain Manufacturers
NDT	Non-destructive testing
NMEA	National Marine Electronics Association
NRCan	Natural Resources Canada

TECHNICAL STATEMENT OF REQUIREMENTS  
**Acronyms and Abbreviations**

NSM	National Safety Mark
OEM	Original equipment manufacturer
PA	Public announcement
PT	Penetrant testing
RT	Radiographic testing
SAE	Society of Automotive Engineers
SOR	Statutory Orders and Regulations
SPAS	Self-Propelled Advancing Skimmer
SS	Stainless steel
TP	Transport Publications (Transport Canada)
TSOR	Technical Statement of Requirements
UHF	Ultra-high frequency
US	United States
USB	Universal serial bus
USCG	United States Coast Guard
UV	Ultraviolet
VHF	Very-high frequency



# 1 INTRODUCTION

## 1.1. PURPOSE

The Canadian Coast Guard (CCG) requires a proven, purpose-built vessel, whose integrated design allows the independent recovery, temporary storage, and offloading of spilled oil. Fulfillment of this requirement will help to augment the existing response capability in calm and protected waters, as well as support the CCG Environmental Response (ER) Concept of Operations (ConOps). This Technical Statement of Requirements (TSOR) document defines the functional- and performance-based requirements for the Self-Propelled Advancing Skimmer (hereinafter referred to as the “SPAS”).

## 1.2. DOCUMENT CONVENTION

The following conventions apply to this TSOR:

- a) The term **MUST** is used to identify mandatory requirements that are to be satisfied by the Contractor and approved by Canada.
- b) The term **SHOULD** is used to identify a requirement that is not mandatory; however, the fulfillment of such a requirement will augment the overall fit, form, function, quality, or any combination thereof of the overall SPAS.

## 1.3. DEFINITIONS

The following definitions apply to this TSOR:

<b>Dissimilar metals</b>	Two metal specimens electrically connected to each other in a conductive solution, and capable of generating an electric current.
<b>Heavy-duty</b>	A quality of a product designed to withstand the stresses of demanding or abnormal use.
<b>Lightship displacement</b>	Vessel complete and ready for service in all respects, including outfit and liquids in machinery at operating levels, less crew and items of variable load.
<b>Marine-grade</b>	A quality of a product specially formulated or treated to withstand use at sea.
<b>Normal load (road transport)</b>	Lightship displacement of the vessel, full gasoline and diesel fuel tanks, 50 kilograms (kg) of deck gear, empty recovered oil storage tanks, and a 10% margin for growth.

**Introduction**

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<b>Normal load (skimming)</b>	Lightship displacement of the vessel, in addition to full gasoline and diesel fuel tanks, four personnel on board (400 kg total), 50 kg of deck gear, and 4.0 m <sup>3</sup> of recovered product, with a specific gravity of 1.0, in the recovered oil storage tanks.
<b>Normal load (transit)</b>	Lightship displacement of the vessel, in addition to full gasoline and diesel fuel tanks, four personnel on board (400 kg total), 50 kg of deck gear, and empty recovered oil storage tanks.
<b>Proven</b>	Demonstrated operational efficacy through both iterative design testing and repeated, successful deployment in real-world, oil spill recovery events.
<b>Recovery rate</b>	Volume of oil recovered per unit of time.
<b>Safety factor</b>	Number of times that a load can be increased before failure occurs.
<b>Stowage</b>	A dedicated location, mount, or bracket, complete with securing device, that provides optimum safety for both the vessel and the cargo, and facilitates access to the cargo.

## **2 REFERENCE DOCUMENTATION**

### **2.1. CANADIAN REGULATIONS AND TRANSPORT CANADA PUBLICATIONS**

The following Canadian Acts, Regulations, and Transport Canada Publications (TP) apply to the SPAS:

- a) Canadian Shipping Act, 2001;
- b) Consolidated Regulations of Canada (C.R.C.), c. 1038, Motor Vehicle Safety Regulations;
- c) C.R.C., c. 1416, Collision Regulations;
- d) Statutory Orders and Regulations (SOR)/2005-32, Off-Road Compression Ignition Engine Emission Regulations;
- e) SOR/2007-128, Cargo, Fumigation, and Tackle Regulations;
- f) SOR/2010-91, Small Vessel Regulations;
- g) SOR/2010-120, Maritime Occupational Health and Safety Regulations;
- h) SOR/2011-10, Marine Spark Ignition Engine, Vessel, and Off Road Recreational Vehicle Emission Regulations;
- i) TP 1332, Construction Standards for Small Vessels (04/2010);
- j) TP 13430, Standard for the Tonnage Measurement of Vessels (10/2012); and
- k) TP 14117, Trailers: Federal Lighting Equipment Location Requirements (2007).

Failure to list a Canadian Act, Regulation, or Transport Canada Publication herein does not relieve the Contractor of their responsibility to comply with any applicable legal requirement for a vessel operating in Canada under the role defined.

### **2.2. APPLICABLE STANDARDS AND SPECIFICATIONS**

To the extent specified herein, the following standards and specifications apply to the vessel:

- a) American Boat and Yacht Council (ABYC) Standards, as applicable;
- b) American Society of Mechanical Engineers (ASME), B30.26-2015: Rigging Hardware;
- c) ASME, B30.9-2018: Slings;
- d) ASME, Boiler and Pressure Vessel Code (BPVC)-2017, Section V: Non-Destructive Examination;
- e) ASTM A153/A153M-16a, Standard Specification for Zinc Coating (Hot Dip) on Iron and Steel Hardware;

- f) ASTM A413/A413M-07 (2012), Standard Specification for Carbon Steel Chain;
- g) ASTM F625/F625M-94 (2017), Standard Practice for Classifying Water Bodies for Spill Control Systems;
- h) ASTM F631-15, Standard Guide for Collecting Skimmer Performance Data in Controlled Environments.
- i) ASTM F962-04 (2010), Standard Specification for Oil Spill Response Boom Connection: Z-Connector;
- j) ASTM F1166-07 (2013), Standard Practice for Human Engineering Design for Marine Systems, Equipment, and Facilities;
- k) Canadian Coast Guard (CCG), 30-000-000-EG-TE-001, Noise Measurement and Acceptance Criteria for Canadian Coast Guard Vessels (11/2003);
- l) CCG, 30-000-000-ES-TE-001, Colour Coding Standard for Piping Systems (07/2010);
- m) CCG, 70-000-000-EU-JA-001 (formerly DGTE-69), Specification for the Installation of Shipboard Electronic Equipment (08/2004);
- n) Canadian General Standards Board (CAN/CGSB)-48.9712-2014, Non-Destructive Testing (NDT): Qualification and Certification of Personnel;
- o) Canadian Standards Association (CSA) C22.2 No. 183.2-M1983 (R2013), Direct Current (DC) Electrical Installations on Boats;
- p) CSA W47.2-11 (R2015), Certification of Companies for Fusion Welding of Aluminium;
- q) CSA W59.2-18, Welded Aluminum Construction;
- r) CSA W178.2-2018, Certification of Welding Inspectors;
- s) International Organization of Standardization (ISO) 3834-2:2005, Quality Requirements for Fusion Welding of Metallic Materials, Part 2: Comprehensive Quality Requirements;
- t) ISO 12216:2002, Small Craft – Windows, Portlights, Hatches, Deadlights, and Doors: Strength and Watertightness Requirements;
- u) ISO 12217-1:2015, Small Craft – Stability and Buoyancy Assessment and Categorization, Part 1: Non-Sailing Boats of Hull Length Greater Than or Equal to 6 m;
- v) National Association of Chain Manufacturers (NACM), Welded Steel Chain Specifications (04/2010);
- w) Society of Automotive Engineers (SAE) J514, Hydraulic Tube Fittings (01/2012);
- x) SAE J1475, Hydraulic Hose Fitting for Marine Applications (06/2014);
- y) SAE J1527, Marine Fuel Hoses (02/2011);

- z) SAE J1942, Hose and Hose Assemblies for Marine Applications (06/2014);
- aa) United States (US) General Services Administration (GSA), Federal Specification A-A-59326D, General Specification for Coupling Halves, Quick Disconnect, Cam Locking Type; and
- bb) US GSA, Federal Specification RR-C-271F, Chains and Attachments, Carbon and Alloy Steel.

## **2.3. SUPERSEDEENCE**

Unless otherwise specified by Canada, reference documents specified in 2.1 must reflect the version in effect on the date of Contract award.

## **2.4. ORDER OF PRECEDENCE**

In the event of a discrepancy between this TSOR and the documents referenced herein, the Contractor must adhere to the following order of precedence:

- a) Canadian Acts, Regulations, and Transport Canada Publications (and any standards referenced directly therein);
- b) This TSOR; and
- c) Industry and other applicable standards and specifications not referenced directly in the identified Canadian Acts, Regulations, and Transport Canada Publications.

### **3 DELIVERABLES**

The Contractor must provide the following deliverables for each SPAS:

**a) Transport Canada compliant vessel, complete with:**

- i. Four discharge hose assemblies, complete with cam-locking coupling halves;
- ii. One anchor and rope-chain anchor rode, complete with all attachments and hardware;
- iii. Four mooring lines;
- iv. One boat hook;
- v. One pike pole;
- vi. One hoisting sling for the vessel itself, complete with all attachments and hardware;
- vii. Two spare propellers;
- viii. One Type A, first aid kit;
- ix. Four adult-sized, life jackets;
- x. One lifebuoy and buoyant heaving line;
- xi. Two marine-certified, fire extinguishers (i.e., Type 2A:10B:C and Type 10B:C);
- xii. One metal fire bucket with line;
- xiii. One fire axe;
- xiv. Two heavy-duty, flashlights;
- xv. Twelve pyrotechnic distress signals; and
- xvi. One emergency position indicating radio beacon.

**b) Transport Canada compliant trailer, complete with:**

- i. One full-size spare tire on rim;
- ii. Ratchet tie down straps for each cargo anchoring point;
- iii. One turnbuckle; and
- iv. One lug wrench, one spare winch strap, and one spare wheel hub.

**c) Ship cradle, complete with ratchet tie down straps for each cargo anchoring point**

**Deliverables**

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- d) **Technical Maintenance Manual** – as described in the accompanying Statement of Work (SOW)  
- Annex A
- e) **Operations Manual** – as described in the accompanying Statement of Work - Annex A.

## **4 REQUIREMENTS**

### **4.1. PHYSICAL CHARACTERISTICS**

#### **4.1.1. VESSEL PARTICULARS**

- 4.1.1.1.** The overall length (LOA) of the SPAS must be between 9.0 metres (m) and 10.7 m.
- 4.1.1.2.** The overall beam (BOA) of the SPAS must be between 2.6 m and 3.05 m.
- 4.1.1.3.** The overall draft of the SPAS must be no greater than 1.7 m in a normal load (skimming) condition, with the outboard engines and oil recovery subsystem lowered.
- 4.1.1.4.** The height of the SPAS must be no greater than 4.15 m when placed on its trailer, and after all hinged or collapsible items are lowered.
- 4.1.1.5.** The gross tonnage of the SPAS must not exceed the assigned formal tonnage (AFT) defined in TP 13430, Standard for the Tonnage Measurement of Vessels (10/2012) for the corresponding LOA. All tonnage measurements must be performed by a Transport Canada appointed Tonnage Measurer.

### **4.2. OPERATIONAL REQUIREMENTS**

#### **4.2.1. ENVIRONMENTAL CONDITIONS**

- 4.2.1.1.** The SPAS must be suitable for service in the following environmental conditions:
  - a) Ambient air temperatures ranging from -10 degrees to +35 degrees Celsius (°C);
  - b) Water temperatures ranging from -2°C to +30°C;
  - c) Exposure to direct sunlight, rain, hail, sleet, snow, freezing spray, wind, fog, and any combination thereof;
  - d) Deployment in both fresh and salt waters, either of which may contain slush ice (although the SPAS is not required to serve in any ice breaking capacity); and
  - e) Deployment in debris laden waters (e.g., contaminated organic debris and flotsam).
- 4.2.1.2.** The SPAS must withstand ambient air temperatures ranging from -40°C to +60°C during storage without incurring any damage.

#### **4.2.2. CREW COMPLEMENT**

- 4.2.2.1.** The SPAS must be able to be safely operated and navigated by a crew of two persons. The SPAS must accommodate an additional complement of up to two persons during transit.



#### **4.2.3. SPEED**

- 4.2.3.1.** The SPAS must recover oil between 0 knots to 2 knots in the normal load (skimming) condition; i.e., both stationary and while making way.
- 4.2.3.2.** The maximum speed of the SPAS must be at least 15 knots in the normal load (transit) condition.

#### **4.2.4. SEAKEEPING AND MANOEUVRABILITY**

- 4.2.4.1.** The SPAS must be fully operational in Type II–Protected Waters (i.e., wave heights  $\leq 1$  m) as per ASTM F625/F625M-94 (2017), Standard Practice for Classifying Water Bodies for Spill Control Systems.
- 4.2.4.2.** The SPAS must be able to transit safely in Design Category C conditions as per ISO 12217-1:2015, Small Craft – Stability and Buoyancy Assessment and Categorization, Part 1: Non Sailing Boats of Hull Length Greater Than or Equal to 6 m.

#### **4.2.5. VESSEL DESIGN**

- 4.2.5.1.** The SPAS must incorporate design features that facilitate its decontamination after use. The Contractor should eliminate surface configurations and crevices that can trap or retain recovered oil. The Contractor must provide access to those areas susceptible to contamination or where contamination cannot be prevented.
- 4.2.5.2.** The hull form must efficiently direct water flow to and from the oil recovery system while minimizing entrainment failure.
- 4.2.5.3.** The hull form must be optimized for low speed operation in shallow and narrow waterways.

#### **4.2.6. OIL RECOVERY**

- 4.2.6.1.** The fitted oil recovery system must be a commercially proven design, with a minimum of 1,000 cumulative operating hours in real-world, oil spill recovery events.
- 4.2.6.2.** The nameplate recovery rate of the fitted oil recovery system must be at least 1 m<sup>3</sup> per hour for each of the following oil types:
  - a) Light oils, such as diesel or jet fuel; and
  - b) Medium oils, such as lube or fresh crude oil.
- 4.2.6.3.** All oil recovery performance data must be collected as per the general procedure defined in ASTM F631, Standard Guide for Collecting Skimmer Performance Data in Controlled Environments.

#### **4.2.7. OIL TRANSFER PUMP**

- 4.2.7.1. The pumping capacity of the fitted oil transfer pump must be at least 20 m<sup>3</sup> per hour.
- 4.2.7.2. The total discharge head of the oil transfer pump must be at least 10 m.

#### **4.2.8. WASHDOWN PUMP**

- 4.2.8.1. The pumping capacity of the fitted washdown pump must be at least 4 m<sup>3</sup> per hour.
- 4.2.8.2. The suction lift of the fitted washdown pump must be at least 3 m.

#### **4.2.9. MISSION DURATION**

- 4.2.9.1. The endurance of the SPAS must be at least 8 hours without requiring replenishment of fuel(s). A typical mission profile would consist of 2 hours making way in the normal load (transit) condition, and 6 hours of recovery and offloading operations in the normal load (skimming) condition.

#### **4.2.10. NOISE**

- 4.2.10.1. The Contractor must keep airborne noise levels on the forward deck and in the wheelhouse as low as possible. Sound pressure levels must be measured in accordance with 30-000-000-EG-TE-001, Noise Measurement and Acceptance Criteria for Canadian Coast Guard Vessels, as far as applicable.
- 4.2.10.2. Acoustic insulation must be installed on the machinery space deckhead to help abate airborne noise levels.
- 4.2.10.3. The Contractor must post a warning sign near all sources of sound that exceed 85 decibels A-weighted (dB<sub>A</sub>). Each posted sign must contain the sound hazard information prescribed in SOR/2010-120, Maritime Occupational Health and Safety Regulations.

#### **4.2.11. EMISSIONS**

- 4.2.11.1. The gasoline outboard engines must satisfy the applicable emission standards referenced in SOR/2011-10, Marine Spark Ignition Engine, Vessel, and Off Road Recreational Vehicle Emission Regulations.
- 4.2.11.2. The diesel engine in the hydraulic power unit (HPU) must satisfy the applicable Tier 4 emission standards referenced in SOR/2005-32, Off Road Compression Ignition Engine Emission Regulations.

#### **4.2.12. LAUNCHING, RECOVERY, AND TRANSPORTATION**

- 4.2.12.1. The SPAS must be readily road transportable on the trailer specified herein, using a tow vehicle with a minimum gross vehicle weight rating (GVWR) of 3,850 kg.

**Requirements**

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- 4.2.12.2.** The SPAS must be launchable and recoverable using the trailer and tow vehicle specified herein.
- 4.2.12.3.** The SPAS must be transportable on the deck of a ship using the cradle specified herein.
- 4.2.12.4.** The SPAS must be easily launched and recovered using an overhead crane.

**4.2.13. MAINTAINABILITY**

- 4.2.13.1.** The Contractor must standardize the selection of equipment, fasteners, hardware, attachments, fittings, and fabrication methods used in the SPAS to minimize the number of unique spares.
- 4.2.13.2.** All disconnects, mounting, and wiring provisions must be designed and labelled to prevent erroneous connections.
- 4.2.13.3.** The use of specialized tools and equipment must be restricted to infrequent and complex service work, such as engine overhauls and rebuilds.

**4.3. DESIGN AND CONSTRUCTION**

**4.3.1. REGULATIONS AND STANDARDS**

- 4.3.1.1.** The Contractor must ensure that each SPAS complies with all applicable construction requirements defined in the following documents:
  - a) TP 1332, Construction Standards for Small Vessels (04/2010), and all ABYC Standards referenced therein;
  - b) CSA C22.2 No.183.2-M1983 (R2013), Direct Current (DC) Electrical Installations on Boats, and all ABYC ‘E’ Electrical Standards referenced therein;
  - c) 70-000-000-EU-JA-001 (formerly DGTE69), CCG Specification for the Installation of Shipboard Electronic Equipment, August 2004; and
  - d) 30-000-000-ES-TE-001, CCG Colour Coding Standard for Piping Systems, July 2010.

**4.3.2. STABILITY**

- 4.3.2.1.** The Contractor must conduct a stability examination in accordance with ISO 12217-1:2015, Small Craft – Stability and Buoyancy Assessment and Categorization, Part 1: Non-Sailing Boats of Hull Length Greater Than or Equal to 6 metres.
- 4.3.2.2.** The Contractor must provide Canada with an Inclining Experiment Report and Stability Booklet for the first of class SPAS.

#### **4.3.3. WELDING**

- 4.3.3.1.** All aluminum welding must be performed in accordance with the Standards of the Canadian Standards Association (CSA) and the Canadian Welding Bureau (CWB) or, the international standard ISO 3834-2:2005 as described below. Canada's preference is that aluminum welding be performed in accordance with CSA and CWB Standards. The Contractor must demonstrate that the firm, their facilities, processes, and welders are certified to CSA W47.2-11 (R2015), Certification of Companies for Fusion Welding of Aluminum, Division 1 or 2; welding workmanship must satisfy CSA W59.2-18, Welded Aluminum Construction. Certification to the same elements in ISO 3834-2:2005, Quality Requirements for Fusion Welding of Metallic Materials will be considered equivalent if performed by an International Institute of Welding Authorized National Body for Company Certification (IIW-ANBCC).
- 4.3.3.2.** The Contractor must demonstrate access to a welding engineer.
- 4.3.3.3.** All testing and inspection of welds must comply with the requirements defined in Annex A, DID-SE-05.

#### **4.3.4. ERGONOMIC DESIGN**

- 4.3.4.1.** The SPAS must be designed and outfitted in accordance with those practices defined in ASTM F1166-07 (2013), Standard Practice for Human Engineering Design for Marine Systems, Equipment, and Facilities.

#### **4.3.5. VIBRATION**

- 4.3.5.1.** The Contractor must fit all rotating machinery with suitable, resilient mounts to minimize vibratory effects. Flexible connections must be interposed on all piping to resiliently mounted equipment.

#### **4.3.6. EQUIPMENT CARE AND PROTECTION**

- 4.3.6.1.** All parts and equipment must be kept clean and protected against dust, moisture, rapid temperature changes, extreme temperatures, and foreign matter during manufacture, storage, pre-installation staging, assembly or installation, and post-installation.
- 4.3.6.2.** All pieces of equipment subject to freezing temperatures must be kept drained, except during testing and trials.

#### **4.3.7. WORKMANSHIP**

- 4.3.7.1.** Each SPAS must be constructed and finished with a high degree of workmanship. At a minimum, the Contractor must ensure:
- a) Surfaces are free from blemishes, burrs, defects, irregularities, sharp edges, and other conditions that would be deleterious to the finish component;
  - b) Component dimensions are accurate and conform to the required tolerances defined in the provided drawing(s);
  - c) Parts are properly aligned to preclude binding and deformation as a result of assembly or operation; and
  - d) All welds and coatings are uniform, complete, and free of cracks, porosity, and scratches.

### **4.4. CONSTRUCTION MATERIALS**

#### **4.4.1. GENERAL CONSIDERATIONS**

- 4.4.1.1.** All materials used in the construction and outfitting of the SPAS must be of marine-grade quality and inherently resist corrosion under the environmental conditions specified herein. The use of wood products or similar hygroscopic material is prohibited.
- 4.4.1.2.** All materials used in the construction and outfitting of the SPAS must be chemically compatible with recovered oil products.
- 4.4.1.3.** All materials used in the construction and outfitting of the SPAS must be resistant to ultraviolet (UV) degradation.
- 4.4.1.4.** All materials used in the construction and outfitting of the SPAS must conform to the requirements defined in an internationally recognized Standard, such as, but not limited to ASTM, ISO, International Electrotechnical Commission (IEC), or SAE Standards. Canada reserves the right to request samples of any proposed material.
- 4.4.1.5.** All materials used in the SPAS must not adversely affect the health of crew when used for their intended purpose. The use of materials and equipment containing functional mercury and asbestos is prohibited.

#### **4.4.2. ALUMINUM**

- 4.4.2.1.** Unless otherwise specified by Canada, the Contractor must use the following marine-grade, aluminum alloys for all structural and non-structural applications:
- a) 5083-H32 or 5086-H116 for plate thicknesses  $\geq 3/16$  inch;
  - b) 5052-H32 for plate thicknesses  $< 3/16$  inch; and
  - c) 6061-T6 for all extrusions, tubing, and piping, with Type 5356 filler alloy.

#### **4.4.3. STEEL**

- 4.4.3.1. Unless otherwise specified by Canada, the Contractor must use Type 316L stainless steel in all non-welded and welded applications. The Contractor may propose other stainless or high alloy steel(s) for consideration by Canada.

#### **4.4.4. OLEOPHILIC MATERIALS**

- 4.4.4.1. Unless otherwise specified by Canada, the Contractor must use polyethylene or polyurethane to serve as the oleophilic surface(s) in the oil recovery system. The Contractor may propose other synthetic materials, with an affinity for oil, for consideration by Canada.
- 4.4.4.2. Each oil roller or scraper must be manufactured from synthetic material(s) that have low adhesion properties and a high resistance to abrasion.

#### **4.4.5. CORROSION PROTECTION**

- 4.4.5.1. The Contractor must supply and fit sacrificial anodes to the hull, each outboard engine, and the HPU to protect against corrosion.
- 4.4.5.2. The quantity and distribution of sacrificial anodes must be sufficient to protect the entire wetted surface area for a minimum of 24 months.

#### **4.4.6. DISSIMILAR METALS**

- 4.4.6.1. The Contractor must avoid direct contact between dissimilar metals expected to cause galvanic corrosion. If such contact cannot be avoided, an insulating material must be installed between the dissimilar metals to minimize the corrosive effect. The Contractor may propose alternate methods to minimize galvanic corrosion for consideration by Canada.

### **4.5. FASTENERS AND HARDWARE**

#### **4.5.1. GENERAL CONSIDERATIONS**

- 4.5.1.1. Unless otherwise specified by Canada, all fasteners, nuts, and similar hardware used by the Contractor must be Type 316 stainless steel. The Contractor may propose other stainless or high alloy steel(s) for consideration by Canada.
- 4.5.1.2. Fasteners must be easily removable if the adjoining component requires removal or permits access for maintenance.
- 4.5.1.3. Unless otherwise specified by Canada, all threaded fasteners must be paired with a corresponding nylon-insert, lock nut to resist loosening due to shock and vibration loading.

**Requirements**

- 4.5.1.4.** Unless otherwise specified by Canada, the Contractor must not make threaded connections by tapping aluminum structural components. Similarly, the Contractor must not make threaded connections by tapping steel structural components whose thickness is less than one bolt diameter. Where direct threading is required in these circumstances, the Contractor must use helical coil, galvanically-compatible, threaded inserts.
- 4.5.1.5.** All nuts that will become inaccessible after construction must be captured (or anchored) to prevent them from backing off if the threaded fastener is later removed.
- 4.5.1.6.** All fasteners used in a deck traffic area must be flush-mounted to eliminate tripping and snagging hazards.
- 4.5.1.7.** All threaded connections must be correctly torqued.

## **4.6. CHAIN AND ATTACHMENTS**

### **4.6.1. GENERAL CONSIDERATIONS**

- 4.6.1.1.** Unless otherwise specified by Canada, all chain and chain attachments supplied and used by the Contractor must be a suitable carbon steel grade. Chain attachments include, but are not limited to, shackles, rings, links, and swivels.
- 4.6.1.2.** All carbon steel chain and chain attachments must be hot-dip galvanized as per ASTM A153/A153M-16a, Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware.
- 4.6.1.3.** All chain supplied by the Contractor must represent a minimum Grade 30, Proof Coil designation as per ASTM A413/A413M-07 (2012), Standard Specification for Carbon Steel Chain or NACM, Welded Steel Chain Specifications (04/2010).
- 4.6.1.4.** All chain attachments supplied by the Contractor must conform to the requirements prescribed in RR-C-271F, Chains and Attachments, Carbon and Alloy Steel.

## **4.7. FLEXIBLE HOSES**

### **4.7.1. FLEXIBLE HOSE CONSTRUCTION**

- 4.7.1.1.** All hydraulic hose assemblies must conform to the applicable requirements defined in SAE J1942, Hose and Hose Assemblies for Marine Applications.
- 4.7.1.2.** All hydraulic end fittings must conform to those requirements defined in SAE J1475, Hydraulic Hose Fitting for Marine Applications.
- 4.7.1.3.** All hydraulic fittings must be fabricated from stainless steel.
- 4.7.1.4.** All fuel hoses must conform to the requirements defined for United States Coast Guard (USCG) Type A1 or A1-15 hose in SAE J1527, Marine Fuel Hoses.

**Requirements**

**4.7.1.5.** All diesel fuel hose fittings must be the field attachable, flared type defined in SAE J514, Hydraulic Hose Fittings.

**4.7.1.6.** All fuel hose fittings must be fabricated from corrosion resistant, metallic material(s).

**4.7.2. FLEXIBLE HOSE CONFIGURATION**

**4.7.2.1.** Each flexible hose assembly must be fitted clear of obstructions.

**4.7.2.2.** The length of all fitted, flexible hose assemblies must be sized to minimize response lag and pressure losses while still allowing for hose contraction.

**4.7.2.3.** The bend radius of all fitted, flexible hose assemblies must be greater than the minimum value recommended by the original equipment manufacturer (OEM).

**4.7.2.4.** Additional mechanical protection must be provided for all fitted, flexible hose assemblies susceptible to chafing.

**4.7.2.5.** Hangers and clamps must be used to support all fitted, flexible hose assemblies and prevent excessive sag.

**4.7.2.6.** The minimum rated pressure of all fitted, flexible hose assemblies must exceed the working pressure that it may be subjected to while in service.

**4.7.3. HYDRAULIC HOSE ASSEMBLIES**

**4.7.3.1.** Hydraulic hose assemblies must be permanently labelled at each end with a unique identifier that corresponds to the accompanying hydraulic system drawing(s). For example, aluminum cable tags, ferrules, or shrink tubing with mechanically-applied lettering are appropriate means of labelling.

**4.7.3.2.** All hydraulic hose assemblies must be static pressure tested at 1.5 times their rated working pressure for a minimum of 2 hours to confirm no leakage.

**4.7.4. DISCHARGE HOSE ASSEMBLIES**

**4.7.4.1.** The Contractor must supply four discharge hose assemblies with each SPAS. The Contractor must securely stow all supplied discharge hose assemblies in brackets mounted on the guardrail(s).

**4.7.4.2.** Each discharge hose assembly must comprise the non-collapsible hose construction and couplings specified herein.

**4.7.4.3.** The total nominal length of each discharge hose assembly must be 3.0 m.

**4.7.4.4.** The nominal inner diameter of each discharge hose must be 3 inches.



- 4.7.4.5.** The minimum rated working pressure of each discharge hose assembly must exceed the maximum rated output pressure of the oil transfer pump.
- 4.7.4.6.** The proof pressure of each discharge hose assembly must be at least 2 times the maximum rated output pressure of the oil transfer pump.

#### **4.7.5. DISCHARGE HOSE CONSTRUCTION**

- 4.7.5.1.** At a minimum, each discharge hose must employ the following construction:
  - a) A compounded elastomer inner tube;
  - b) A synthetic fibre reinforcement;
  - c) A stainless or coated copper electrostatic discharge wire; and
  - d) A compounded elastomer cover.
- 4.7.5.2.** Each layer of the discharge hose construction must be bonded to its adjacent layer(s) to produce a unified hose wall. Both the compounded elastomer inner tube and cover must be of uniform thickness.
- 4.7.5.3.** The compounded elastomer cover must be black in colour.

#### **4.7.6. DISCHARGE HOSE COUPLINGS**

- 4.7.6.1.** Each supplied discharge hose must terminate with the following coupling halves (whose requirements are defined in A-A-59326D, General Specification for Coupling Halves, Quick Disconnect, Cam Locking Type):
  - a) One end fitted with a Type II, Class SS, Style 1 coupling half (i.e., male, cam locking coupling half by hose shank); and
  - b) The opposing end fitted with a Type VI, Class SS, Style 1 coupling half (i.e., female, cam locking coupling half by hose shank).
- 4.7.6.2.** All male and female, cam locking coupling halves must be attached to the discharge hose using a band style, punch clamp, or a crimped sleeve.
- 4.7.6.3.** All male and female, cam-locking coupling halves must be directly connected to the electrostatic discharge wire.
- 4.7.6.4.** Each discharge hose must be supplied with the following coupling halves (whose requirements are defined in A-A-59326D, General Specification for Coupling Halves, Quick Disconnect, Cam Locking Type):
  - a) One, Type IX, Class SS, Style 1 coupling half (i.e., dust cap coupling half); and
  - b) One, Type X, Class SS, Style 1 coupling half (i.e., dust plug coupling half).

- 4.7.6.5.** All supplied cam locking coupling halves must be consistent with the hose size specified in 4.7.4.4.

#### **4.7.7. VALVES**

- 4.7.7.1.** All supplied valves must conform to the design and construction requirements defined in an internationally recognized Standard, such as, but not limited to, ASTM Standards.
- 4.7.7.2.** All valves must be suitable for the intended application and be readily accessible for inspection, operation, maintenance, and removal. Where possible, valves should be grouped in manifold form.
- 4.7.7.3.** All valves whose inadvertent operation is undesirable or could pose a risk to crew must be fitted with a locking-type handle.
- 4.7.7.4.** A quarter-turn valve must be used in all applications that require quick shutoff or isolation of the working fluid.

### **4.8. HULL STRUCTURE**

#### **4.8.1. GENERAL CONSIDERATIONS**

- 4.8.1.1.** The hull must be an all-welded, aluminum construction, complete with a dedicated compartment below deck to house machinery and equipment as specified herein.
- 4.8.1.2.** Longitudinal strength in the hull structure must be maintained by the continuity of main fore and after members. Where cuts or interruptions impair the continuity of these main structural members, effective compensation must be fitted to achieve an equivalent strength.
- 4.8.1.3.** Framing welds must be continuous in all areas subject to vibration, and all bow areas subject to impact. Structural members within the hull bottom and in other areas where water and recovered oil may collect must be joined with double continuous welds.
- 4.8.1.4.** All cut-outs in the hull structure must be circular or incorporate radiused corners. The Contractor must minimize the number of openings in watertight bulkheads.
- 4.8.1.5.** Limber holes must be fitted throughout the hull structure to allow satisfactory bilge drainage.

#### **4.8.2. HULL PENETRATIONS**

- 4.8.2.1.** All through-hull penetrations including, but not limited to, seacocks and hull drains must conform to the requirements defined in ABYC H-27 (2014), Through-Hull Fittings and Drain Plugs.
- 4.8.2.2.** Each fitted seacock must attach to the hull via an integral mounting flange.

**Requirements**

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- 4.8.2.3.** Each fitted seacock must be appropriately bonded to the hull.
- 4.8.2.4.** A minimum of one hull drain must be fitted in each void space, recovered oil storage tank, and the machinery space. Each hull drain must be located at (or near) the lowest point of the space it penetrates to facilitate drainage.
- 4.8.2.5.** Each hull drain must be mounted flush to the exterior hull surface.
- 4.8.2.6.** All fitted hull drains and drain plugs must be identical.

## **4.9. HULL OUTFIT**

### **4.9.1. HATCHES AND ACCESS PLATES**

- 4.9.1.1.** All hatches and access plates must be of flush-mount, aluminum construction. A gasket must be fitted to each hatch and access plate that matches the watertight integrity of the encompassing surface.
- 4.9.1.2.** The watertight integrity of each hatch and access plate must be tested in accordance with ISO 12216:2002, Small Craft: Windows, Portlights, Hatches, Deadlights, and Doors, Strength and Watertightness Requirements.
- 4.9.1.3.** All hatches and access plates must secure in both the open and closed positions.
- 4.9.1.4.** All hatches and access plates must be fitted with keyless latches.

### **4.9.2. GUARDRAILS**

- 4.9.2.1.** The perimeter of the deck must be fitted with aluminum stanchions and guardrails to prevent crew from falling overboard.
- 4.9.2.2.** All guardrail stanchions must be landed on and welded to structural framing members. Intermediate and top rails must be welded to the stanchions.
- 4.9.2.3.** The guardrails must extend a minimum height of 36 inches above the deck.
- 4.9.2.4.** Rail openings must be provided at the bow, amidships on both the port and starboard sides, and across the stern. Galvanized chain gates must be fitted at the bow and across both side rail openings; a removable, pipe railing must be fitted across the stern to grant access to the outboard motors.

### **4.9.3. FENDERS**

- 4.9.3.1.** The perimeter of the hull must be fitted with D-section, rubber fenders at the top of the bulwark.

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- 4.9.3.2.** All exposed ends of a fitted rubber fender must be protected from accidental tearing and removal when coming alongside.
- 4.9.3.3.** All fitted rubber fenders must be galvanically isolated from the hull.
- 4.9.3.4.** An external aluminum mid-guard must be installed on each hull side, between the design waterline and the top of the bulwark.

**4.9.4. SECURE STORAGE AREAS**

- 4.9.4.1.** The Contractor must provide secure and weathertight (as appropriate) stowage for all safety and operational equipment supplied with the SPAS.
- 4.9.4.2.** Stowage methods and locations must facilitate accessibility to equipment but not introduce crew hazards or interfere with SPAS operations. All proposed stowage methods and locations must be approved by Canada.

**4.9.5. SWEEP WIDTH EXTENSIONS**

- 4.9.5.1.** The bow must be fitted with provisions that increase the effective sweep width of the SPAS.
- 4.9.5.2.** The sweep width extensions must be located on opposite sides of the oil recovery system intake channel to efficiently guide oil towards the oleophilic recovery surface(s).
- 4.9.5.3.** The sweep width extensions must be easily deployed into and retracted from the water at the fore deck.
- 4.9.5.4.** The distance between the leading edges of the sweep width extensions must not exceed the overall beam of the SPAS.

**4.9.6. CONTAINMENT BOOM ATTACHMENT POINTS**

- 4.9.6.1.** The bow must be equipped to interface with the containment boom connector defined in ASTM F962-04 (2010), Standard Specification for Oil Spill Response Boom Connection: Z-Connector. The exception to this Standard is that toggle pin holes must be located 4.5 inches above and below the design waterline (DWL).
- 4.9.6.2.** The containment boom attachment points must allow the SPAS to be towed by the containment boom in a catenary configuration.

**4.9.7. ACCESS PLATFORM**

- 4.9.7.1.** The SPAS must allow crew to safely remove debris from the water at the intake channel of the oil recovery system.
- 4.9.7.2.** All provisions fitted to the bow or fore deck to facilitate debris removal must not interfere with the operation of the oil recovery system.

## **4.10. WHEELHOUSE**

### **4.10.1. GENERAL CONSIDERATIONS**

- 4.10.1.1.** The SPAS must be fitted with an all-welded, aluminum wheelhouse to provide temporary shelter to both crew members.
- 4.10.1.2.** The wheelhouse must be located on the aft deck and allow for the unrestricted movement of crew around its perimeter.
- 4.10.1.3.** A lightweight door must be fitted to the rear of the wheelhouse to provide access. The door must not obstruct movement around the wheelhouse when in its open position, nor impede the vision of the operator when in its closed position.
- 4.10.1.4.** The wheelhouse must be fitted with a waterproof leaning post.
- 4.10.1.5.** The entire floor of the wheelhouse must be fitted with oil resistant and non-slip, anti-fatigue matting.
- 4.10.1.6.** The interior of the wheelhouse must be fitted with a minimum of two provisions to hang foul weather outerwear. These provisions must be located such that they do not interfere with the operation of the SPAS.

### **4.10.2. WINDOWS**

- 4.10.2.1.** The wheelhouse must be fitted with the following windows in the location(s) indicated:
  - a) One, horizontal, sliding window on both the port and starboard sides, with the foremost pane fixed; and
  - b) One, fixed or top hung window on the forward side of the wheelhouse.
- 4.10.2.2.** Each window construction must comprise UV-coated, tempered safety glass in an aluminum frame.
- 4.10.2.3.** All wheelhouse windows must be installed at the same height, relative to the deck, to give the operator an unobstructed view.
- 4.10.2.4.** The Contractor must supply and install a minimum of one, top-mounted, 12 V, wiper on the exterior of the forward window.
- 4.10.2.5.** Each installed wiper must be individually controlled and allow for variable speed operation from the wheelhouse console.

### **4.10.3. ROOF**

- 4.10.3.1.** The deckhead and roof pan of the wheelhouse must be sufficiently reinforced to support the mounting and installation of up to 50 kg of equipment.

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- 4.10.3.2.** All pieces of equipment that exceed the overall height specified in 4.1.1.4, when mounted to the wheelhouse roof pan, must be hinged. Each hinged component must be fitted with a receiver, securing pin, and lanyard to lock it in place when lowered or erected.
- 4.10.3.3.** All antennas must be installed on wheelhouse roof pan as per the OEM requirements, with the proper kick pipes and ratcheting mounts, as required.

## **4.11. DECK EQUIPMENT**

### **4.11.1. ANCHOR AND RODE**

- 4.11.1.1.** The Contractor must equip the SPAS with the following ground tackle sized for the SPAS design:
  - a) One, fluke-style, patent anchor;
  - b) One, rope-chain anchor rode; and
  - c) All attachments needed to connect the anchor rode to the anchor.
- 4.11.1.2.** All ground tackle must be sized for the vessel length and intended duty.
- 4.11.1.3.** All ground tackle must be securely stowed below deck, or in a position where it does not interfere with deck operations at the bow. The ground tackle will be manually deployed into and recovered from the water, as required.
- 4.11.1.4.** The twisted polymer rope used in the anchor rode must contain a spliced eye and stainless steel thimble on the end that attaches to the chain. The bitter end must be completely heat sealed to prevent exposed rope strands or fibres.
- 4.11.1.5.** The nominal size of all shackles used in the ground tackle must be the same as the adjoining chain.
- 4.11.1.6.** Each shackle pin used in the ground tackle must be moused with stainless steel wire to prevent loosening while under load.

### **4.11.2. MOORING CLEATS AND LINES**

- 4.11.2.1.** The Contractor must fit the SPAS with six, cast aluminum, mooring cleats.
- 4.11.2.2.** The mooring cleats must be welded on the forward, middle, and aft gunwale, on both the port and starboard sides.
- 4.11.2.3.** The Contractor must supply and store a minimum of four, twisted polymer, mooring lines. The mooring lines must not be used until after SPAS acceptance.
- 4.11.2.4.** The minimum diameter of each mooring line must be 5/8 inches.
- 4.11.2.5.** Each mooring line must be a minimum of 8 m in length.

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**4.11.2.6.** Each mooring line must contain an eye splice in one end to fit over a mooring cleat. The opposing end must be completely heat sealed to prevent exposed rope strands or fibres.

**4.11.2.7.** The mooring cleats must accommodate the provided mooring lines.

**4.11.3. BOAT HOOK AND PIKE POLE**

**4.11.3.1.** The Contractor must supply the following tools to facilitate the in-water handling of containment boom and debris:

- a) One, aluminum, boat hook; and
- b) One, aluminum, pike pole.

**4.11.3.2.** The nominal reach of the boat hook must be at least 3 m.

**4.11.3.3.** The nominal reach of the pike pole must be at least 3 m.

**4.11.3.4.** The Contractor must securely stow both the boat hook and the pike pole in brackets mounted on the guardrail(s).

**4.12. TOWING AND LIFTING**

**4.12.1. BOW EYE**

**4.12.1.1.** The Contractor must incorporate one bow eye into a structural member to serve as the forward towing and trailer securement provision for the SPAS.

**4.12.1.2.** The bow eye must be fabricated from stainless steel or aluminum.

**4.12.1.3.** The bow eye must be sufficiently sized to withstand the towed resistance of the SPAS in the normal load (skimming) condition on even keel.

**4.12.2. HOISTING POINTS**

**4.12.2.1.** The Contractor must fit the SPAS with four, integral hoisting points to facilitate overhead lifting.

**4.12.2.2.** Each hoisting point must be incorporated into the below deck hull structure.

**4.12.2.3.** The above deck location of each hoisting point must not pose a safety hazard to the crew or interfere with oil recovery operations.

**4.12.2.4.** Each hoisting point must be fabricated from stainless steel or aluminum.

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- 4.12.2.5.** The minimum safety factor of all hoisting points (and the adjacent vessel structure) must be 5-to-1, based on the lightship load condition, full fuel reserves, and a 10% margin for growth. Safety factor is expressed as the ratio of the minimum breaking strength (MBS) of the affected material(s) to the resultant load at each provision. Prior to construction, the Contractor must submit hoisting design calculations to Canada for approval.

**4.12.3. LIFTING SLING AND HARDWARE**

- 4.12.3.1.** The Contractor must supply a four-leg, bridle sling (complete with all attachments and hardware) to lift the SPAS from a single, overhead point near its longitudinal centre of gravity.
- 4.12.3.2.** All supplied lifting and rigging equipment must conform to the requirements defined in the following Regulation and Standards:
- a) SOR/2007-128, Cargo, Fumigation, and Tackle Regulations;
  - b) ASME B30.26-2015: Rigging Hardware; and
  - c) ASME B30.9-2018: Slings.
- 4.12.3.3.** The four-leg, bridle sling must be permanently marked with the load rating and date of load testing. Individual legs of this bridle sling must also be clearly identified.

**4.13. PROPULSION**

**4.13.1. GASOLINE OUTBOARD ENGINES**

- 4.13.1.1.** The Contractor must supply twin (2), four-stroke, gasoline, outboard engines to propel the SPAS.
- 4.13.1.2.** The twin outboard engines must be a commercial make and model currently supported in Canada.
- 4.13.1.3.** The twin outboard engines must be sized to meet the performance and endurance requirements specified herein.
- 4.13.1.4.** The Contractor must install each outboard engine in accordance with the engine manufacturer requirements. The Contractor is responsible for the integration of all fuel, steering, trim, instrumentation, and control equipment to yield a fully operational, propulsion system.
- 4.13.1.5.** All equipment and accessories paired with the outboard engines must be approved by the engine manufacturer.

**4.13.2. PROPELLERS**

- 4.13.2.1.** The Contractor must supply four, identical, standard rotating propellers.



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- 4.13.2.2. The Contractor must install a propeller on each outboard engine. The remaining two propellers will constitute spares.
- 4.13.2.3. Each propeller must be sized and pitched to satisfy the performance requirements specified herein.
- 4.13.2.4. Each propeller must use integral provisions to absorb shocks and protect the outboard engines from damage in the event of an underwater object strike. Shear pins must not be used to achieve this protective effect.
- 4.13.2.5. Each propeller must be fabricated from cast aluminum.

**4.13.3. ENGINE GUARD**

- 4.13.3.1. The Contractor must fit a formed or welded pipe guard to the transom to protect the twin outboard engines from minor collisions.
- 4.13.3.2. The engine guard must extend a sufficient distance beyond the transom to allow the outboard engines to be freely moved into their tilted-up position.

**4.13.4. ENGINE CONTROLS**

- 4.13.4.1. The Contractor must supply and install all instrumentation and controls specified in 4.25.2.

**4.13.5. VERIFICATION OF INSTALLATION AND ENGINE BREAK-IN**

- 4.13.5.1. The Contractor must use an authorized representative of the engine manufacturer to inspect and verify the installation of the outboard engines prior to conducting sea trial(s) and delivery.
- 4.13.5.2. The Contractor (or an authorized representative of the engine manufacturer) must perform the outboard engine break-in procedure prescribed by the engine manufacturer as part of the sea trial(s).

**4.14. HYDRAULIC STEERING GEAR SYSTEM**

**4.14.1. GENERAL CONSIDERATIONS**

- 4.14.1.1. The Contractor must supply and install a remote, manual, hydraulic steering gear system.
- 4.14.1.2. The hydraulic steering gear system must be compatible with the twin configuration and total power output of the outboard engines.
- 4.14.1.3. At a minimum, the hydraulic steering gear system must comprise the following components:
  - a) A single helm pump with an integral, self-contained hydraulic oil reservoir;

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- b) A hydraulic steering cylinder to articulate each fitted outboard engine;
- c) Provisions to keep the fitted outboard engines parallel and equalize loading; and
- d) All hydraulic hoses, valves, and fittings needed to form a closed circuit and protect from undue damage.

**4.14.1.4.** The hydraulic steering gear system must be independent of all other onboard hydraulic systems.

**4.14.1.5.** The hydraulic steering gear must achieve a hard-over to hard-over response between five and seven complete revolutions of the steering wheel. All seals used in the hydraulic steering cylinders must be easily serviceable and replaceable by the end user.

## **4.15. FUEL SYSTEMS**

### **4.15.1. DESIGN AND INSTALLATION**

**4.15.1.1.** The Contractor must supply and install a complete gasoline fuel system for the outboard engines.

**4.15.1.2.** The Contractor must supply and install a complete diesel fuel system for the HPU.

**4.15.1.3.** At a minimum, each fuel system must comprise the following components:

- a) A single, non-integral fuel tank;
- b) A fuel level indicator fitted to the fuel tank;
- c) A simplex fuel filter/water separator for each engine;
- d) A manual, fuel priming bulb for each engine; and
- e) All valves, manifolds, fittings, and hoses needed to plumb the fill, vent, supply, and return (if applicable) fuel lines.

**4.15.1.4.** The Contractor must route all fuel lines clear of hot surfaces and electrical equipment.

**4.15.1.5.** The Contractor must verify the fuel supply and return (if applicable) arrangements with each engine manufacturer prior to construction.

**4.15.1.6.** The Contractor must clean and flush each fuel system following installation.

### **4.15.2. FUEL TANKS**

**4.15.2.1.** The Contractor must size the volume of each fuel tank to satisfy the endurance requirements specified herein.

**4.15.2.2.** The gasoline fuel tank must be fabricated from aluminum or roto-moulded plastic. The diesel fuel tank must be fabricated from aluminum.

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- 4.15.2.3.** Each fuel tank must be installed below the level of the main working deck and extensions.
- 4.15.2.4.** Each fuel tank must be fitted with a manual fuel shut-off valve.
- 4.15.2.5.** The diesel fuel tank must be fitted with an inspection or clean-out plate. A drainage port must also be integrated into the lowest point of the diesel fuel tank.

**4.15.3. FUEL LEVEL INDICATORS**

- 4.15.3.1.** Each fuel level indicator must employ a float-type sending unit paired with a remote, analog gauge.
- 4.15.3.2.** The Contractor must calibrate each fuel level indicator to the volume of its associated fuel tank.
- 4.15.3.3.** The Contractor must equip the diesel fuel tank with a graduated sounding rod to manually determine the fuel level, in addition to the analog gauge.

**4.15.4. FUEL FILLING AND VENTING**

- 4.15.4.1.** The Contractor must enclose each fuel fill and vent location with a spill coaming.
- 4.15.4.2.** Each coaming must be fitted with a removable drain plug.
- 4.15.4.3.** The Contractor should offset each deck fuel fill plate with a standpipe to minimize the likelihood of introducing contamination into the fuel tank.
- 4.15.4.4.** Each fuel cap must be permanently tethered to its standpipe or to the deck to prevent cap loss.

**4.15.5. FILTRATION AND PRIMING**

- 4.15.5.1.** The Contractor must install a simplex fuel filter/water separator on the fuel supply line to each outboard gasoline engine, and the diesel HPU.
- 4.15.5.2.** Each fuel filter must be sized to meet the requirements of the engine manufacturer.
- 4.15.5.3.** Each simplex fuel filter/water separator must be fitted with a metal bowl and integral water drain valve.
- 4.15.5.4.** Each simplex fuel filter/water separator must be mounted to the vessel structure. The Contractor must incorporate a drip tray under each unit, or allow for a portable container to be easily placed under each unit to collect discharge.
- 4.15.5.5.** Each simplex fuel filter/water separator must be isolated using manual valves.

- 4.15.5.6.** The Contractor must install a manual, fuel priming bulb on the fuel supply line to each outboard gasoline engine, as well as the diesel HPU.

## **4.16. BILGE SYSTEM**

### **4.16.1. GENERAL CONSIDERATIONS**

- 4.16.1.1.** The Contractor must supply and install a dedicated, submersible, electric bilge pump in each void and machinery space, complete with all float switches, piping, fittings, and valves necessary for operation.
- 4.16.1.2.** All overboard bilge discharges must comprise vented loops and anti-siphon valves located above the maximum vessel heel line.
- 4.16.1.3.** The Contractor must supply and install the bilge pump indicators and controls specified in 4.25.5.

## **4.17. HYDRAULIC POWER UNIT**

### **4.17.1. GENERAL CONSIDERATIONS**

- 4.17.1.1.** The Contractor must supply a complete HPU.
- 4.17.1.2.** The Contractor must size the output of the HPU to drive the following equipment at their maximum rated speed and power:
- a) One, variable speed, oil recovery system (as specified in 4.18);
  - b) One, submersible, oil transfer system (as specified in 4.20); and
  - c) One, seawater, washdown system (as specified in 4.21).
- 4.17.1.3.** At a minimum, the HPU must comprise the following components:
- a) A diesel engine to serve as the prime mover;
  - b) A positive displacement, hydraulic pump to pair with the diesel engine;
  - c) A hydraulic oil reservoir, complete with suction and return filtration;
  - d) An integral seawater cooling system, complete with intake strainer, engine-driven circulation pump, and heat exchanger;
  - e) All flexible hoses, valves, manifolds, and fittings required to form closed circuits with the connected equipment and protect against overpressurization; and
  - f) All instrumentation and controls needed to monitor the performance of the diesel engine and hydraulic oil.
- 4.17.1.4.** The Contractor must install the HPU below deck in the machinery space.

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- 4.17.1.5.** The Contractor must install the HPU in accordance with all OEM requirements. The Contractor is responsible for the integration of all cooling, fuel, instrumentation, and control equipment to yield a fully operational, hydraulic system.
- 4.17.1.6.** The HPU must be located on or near the centreline of the SPAS for added stability.
- 4.17.1.7.** The HPU must be skid mounted, with integral, load-rated lifting provisions on the skid to facilitate the safe removal of the HPU from the SPAS.
- 4.17.1.8.** The HPU must be removable from the SPAS without cutting the deck.

**4.17.2. DIESEL ENGINE**

- 4.17.2.1.** The diesel engine must be a commercial make and model currently supported in Canada.
- 4.17.2.2.** The diesel engine must use a forced oil lubrication system.
- 4.17.2.3.** The diesel engine must be liquid-cooled.
- 4.17.2.4.** The diesel engine must be fitted with a wet exhaust system, complete with water-lift silencer and integral drain valve.
- 4.17.2.5.** The diesel engine must be fitted with one or more aids to facilitate starting at low temperatures. Each cold starting aid should be automatically deactivated when the diesel engine is running.
- 4.17.2.6.** All equipment and accessories paired with the diesel engine must be approved by the engine manufacturer.

**4.17.3. HYDRAULIC PUMP**

- 4.17.3.1.** The hydraulic pump must be a fixed-displacement type. The Contractor may propose a variable displacement hydraulic pump for consideration by Canada.
- 4.17.3.2.** The hydraulic pump must be a commercial make and model currently supported in Canada.
- 4.17.3.3.** Each hydraulic pump must be self-lubricating, with no provision other than the circulating hydraulic oil.

**4.17.4. HYDRAULIC OIL RESERVOIR**

- 4.17.4.1.** The Contractor must install the hydraulic oil reservoir below deck in an easily accessible location near the HPU.
- 4.17.4.2.** The hydraulic oil reservoir must be non-integral to the vessel hull.
- 4.17.4.3.** The hydraulic oil reservoir must be fabricated from aluminum or stainless steel.

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- 4.17.4.4.** The hydraulic oil reservoir must be sized to meet the rated flow demands of the hydraulic pump.
- 4.17.4.5.** The hydraulic oil reservoir must be fitted with a replenishment port to facilitate filling, complete with tethered cap. The replenishment port must be accessible from the topside of the SPAS.
- 4.17.4.6.** The Contractor must integrate a graduated sounding rod into the hydraulic oil reservoir to manually determine the oil level.
- 4.17.4.7.** The hydraulic reservoir must be fitted with a suction strainer to remove sediment in the supply line.
- 4.17.4.8.** The return line of the hydraulic reservoir must be fitted with a replaceable, in-line filter.

**4.17.5. SEAWATER COOLING SYSTEM**

- 4.17.5.1.** The intake of the seawater cooling system must be connected to a seacock.
- 4.17.5.2.** The open area of the intake strainer must be sized to satisfy the debris tolerance of the circulation pump and heat exchanger.
- 4.17.5.3.** The intake strainer must be fabricated from aluminum or stainless steel.
- 4.17.5.4.** The discharge of the seawater cooling system must be connected to the wet exhaust system.

**4.17.6. CONTROL AND SYSTEM PROTECTION**

- 4.17.6.1.** The Contractor must supply and install all instrumentation and controls specified in 4.25.3.
- 4.17.6.2.** All fitted pressure relief valves must discharge to the hydraulic reservoir, or to the low pressure leg of the hydraulic run.
- 4.17.6.3.** All fitted pressure control valves must reseal after the excess fluid pressure is relieved.

**4.18. OIL RECOVERY SYSTEM**

**4.18.1. GENERAL CONSIDERATIONS**

- 4.18.1.1.** The Contractor must supply and install a proven, variable speed, oil recovery system. The Contractor is responsible for the plumbing and integration of all equipment to yield a fully operational, oil recovery system.
- 4.18.1.2.** The oil recovery system must be a commercial make and model that is currently supported in Canada, and will continue to be supported in Canada for the foreseeable future.
- 4.18.1.3.** The oil recovery system must be hydraulically driven by the HPU.

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- 4.18.1.4.** The oil recovery system must be hydraulically lowered into and raised from the water.
- 4.18.1.5.** The Contractor must supply a heavy-duty, fitted fabric cover to protect the oil recovery system during transit and storage, complete with a means for securing it in place.

**4.18.2. DESIGN AND CONFIGURATION**

- 4.18.2.1.** The oil recovery system must comprise one or more rotating, oleophilic surfaces to interface with the water and recover oil. Oil must readily adhere to and be retained by each oleophilic surface until it can be removed.
- 4.18.2.2.** The oil recovery system must be designed or readily adaptable on scene to recover the following oil types:
  - a) Very light oils and sheens;
  - b) Light oils, such as diesel or jet fuel;
  - c) Medium oils, such as lube or fresh crude oil; and
  - d) Heavy oils and emulsions.
- 4.18.2.3.** The oil recovery system must incorporate mechanical provisions to achieve the following outcomes:
  - a) Reduce the effect of the bow wave on recovery performance when the SPAS is making way; and
  - b) Allow for recovery operations when the SPAS is stationary.
- 4.18.2.4.** The oil recovery system must segregate and retain recovered, oiled debris without easily clogging.
- 4.18.2.5.** The oil recovery system must incorporate one or more synthetic rollers or scrapers to remove recovered oil from the oleophilic surface(s).
- 4.18.2.6.** The force applied by the synthetic rollers or scrapers onto the oleophilic surface(s) must be adjustable to optimize recovery operations.
- 4.18.2.7.** The synthetic rollers or scrapers must be easily changeable in the field.

**4.18.3. HULL INTEGRATION**

- 4.18.3.1.** The oil recovery system must be integrated on the centreline of the vessel.
- 4.18.3.2.** The oil recovery system must be located amidships to minimize the relative motion between its leading edge and the encountered oil layer.
- 4.18.3.3.** The oil recovery system must not obstruct forward visibility from the wheelhouse when in transit.

#### **4.18.4. CONTROL**

- 4.18.4.1.** The Contractor must supply and install the controls specified in 4.25.4 on the wheelhouse console.
- 4.18.4.2.** The Contractor must supply and install the controls specified in 4.25.4.2 at a dedicated control station on the foredeck.
- 4.18.4.3.** The foredeck control station must provide a clear view of the operation of the oil recovery system.
- 4.18.4.4.** The foredeck control station must provide a safe position for the operator to stand.

### **4.19. RECOVERED OIL STORAGE SYSTEM**

#### **4.19.1. DESIGN AND CONFIGURATION**

- 4.19.1.1.** The Contractor must incorporate three recovered oil storage tanks below deck. Topside access must be provided for each storage tank to facilitate decontamination.
- 4.19.1.2.** The recovered oil storage tanks must be integral to the hull.
- 4.19.1.3.** The recovered oil storage tanks must be arranged amidships, with a centre storage tank flanked by port and starboard wing storage tanks.
- 4.19.1.4.** The total combined volume of the three recovered oil storage tanks must be a minimum of 4.0 cubic metres (m<sup>3</sup>).
- 4.19.1.5.** The recovered oil storage tanks must be interconnected to redistribute oil amongst the tanks and equalize loading.
- 4.19.1.6.** The recovered oil storage tanks must be vented to prevent vapour lock during transfer operations. Each vent head must be fitted with a spark arrestor and backflow preventer.

### **4.20. OIL TRANSFER SYSTEM**

#### **4.20.1. GENERAL CONSIDERATIONS**

- 4.20.1.1.** The Contractor must supply a submersible, positive displacement, oil transfer pump.
- 4.20.1.2.** The oil transfer pump must be a commercial make and model currently supported in Canada, and will continue to be supported in Canada for the foreseeable future.
- 4.20.1.3.** The oil transfer pump must be hydraulically driven by the HPU.



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- 4.20.1.4.** The Contractor must install the oil transfer pump in the lowest point in the centre storage tank. The Contractor is responsible for the plumbing and integration of all equipment to yield a fully operational oil transfer system.

**4.20.2. DISCHARGE PORT**

- 4.20.2.1.** The discharge of the oil transfer pump must be piped above deck to a 3 inch, 90 degree, elbow fitting.
- 4.20.2.2.** The elbow fitting must be offset from the deck using a standpipe to facilitate the connection and disconnection of discharge hoses.
- 4.20.2.3.** The discharge elbow must terminate with a 3 inch, male, cam-locking coupling half (as specified in 4.7.6.1).
- 4.20.2.4.** The 3 inch, male, cam-locking coupling half must be fitted with a dust cap (as specified in 4.7.6.4), and a lanyard to prevent cap loss.

**4.21. SEAWATER WASHDOWN SYSTEM**

**4.21.1. GENERAL CONSIDERATIONS**

- 4.21.1.1.** The Contractor must supply and install a seawater washdown system. The Contractor is responsible for the plumbing and integration of all equipment to yield a fully operational, seawater washdown system.
- 4.21.1.2.** At a minimum, the seawater washdown system must comprise the following components:
- a) An intake strainer;
  - b) A reversible, washdown pump; and
  - c) A non-collapsible, deck hose and nozzle.
- 4.21.1.3.** The seawater washdown system must be configured to support the following operations:
- a) Suction seawater from the intake seacock and discharge through the deck hose; and
  - b) Suction oil from the deck hose and discharge into the recovered oil storage tanks.

**4.21.2. INTAKE STRAINER**

- 4.21.2.1.** The open area of the intake strainer must be sized to satisfy the debris tolerance of the washdown pump.
- 4.21.2.2.** The intake strainer must be fabricated from aluminum or stainless steel.
- 4.21.2.3.** The intake strainer must be easily removable to empty debris.

#### **4.21.3. WASHDOWN PUMP**

- 4.21.3.1.** The washdown pump must be a commercial make and model currently supported in Canada.
- 4.21.3.2.** The washdown pump must be hydraulically driven by the HPU.
- 4.21.3.3.** The washdown pump must be fitted below deck in the machinery space.
- 4.21.3.4.** The washdown pump must be self-priming.

#### **4.21.4. DECK HOSE AND NOZZLE**

- 4.21.4.1.** The Contractor must size the length of the deck hose (and nozzle spray) to easily reach the entire deck area.
- 4.21.4.2.** The nominal inner diameter of the deck hose must be 1.5 inches.
- 4.21.4.3.** The Contractor must fit a reel or rack to the exterior of the wheelhouse to stow the deck hose and nozzle when not in use.

### **4.22. ELECTRICAL SYSTEM**

#### **4.22.1. DESIGN AND LAYOUT**

- 4.22.1.1.** The SPAS must be fitted with a reliable and voltage-stabilized, 12 V<sub>DC</sub> electrical generation and distribution system. The design of this marine electrical system must comply with the following Standards (and all subject Standards referenced therein):
  - a) CSA C22.2 No. 183.2-M1983 (R2013), DC Electrical Installations on Boats; and
  - b) TP 1332, Construction Standards for Small Vessels (04/2010).
- 4.22.1.2.** The electrical system must be a two-wire, ungrounded type, with insulated feed and return paths.
- 4.22.1.3.** The electrical system must be sized to satisfy all SPAS electrical load requirements.
- 4.22.1.4.** The electrical system must allow for battery switching and isolation in the event of a battery or alternator failure.

**Requirements**

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- 4.22.1.5.** At a minimum, the Contractor must supply Canada with the following documentation to delineate the electrical system:
- a) Single-line drawings of the complete electrical installation, reflecting the actual loads of all equipment to be fitted;
  - b) Block diagrams, and wiring and connection diagrams for all systems or circuits requiring electrical power, including all pertinent operational and control logic;
  - c) Installation drawings for all major equipment, including main wireway routes and wireway penetration details;
  - d) Cable schedules, indicating the location, connection, size, and overall length of all required cables;
  - e) Electrical load analysis for the installed equipment, reflecting prospective loading under summer day, winter night, and emergency conditions;
  - f) A short-circuit analysis to estimate the prospective short-circuit current and main distribution points of the electrical system; and
  - g) A protective device discrimination analysis to determine the trip settings for effective load disconnection under short-circuit fault conditions.

- 4.22.1.6.** The electrical system must be approved by Canada prior to installation.

**4.22.2. INSTALLATION AND INTEGRATION**

- 4.22.2.1.** The Contractor must supply all electrical equipment, cable, hardware, fixtures, and fittings required to furnish a fully operational, electrical system.
- 4.22.2.2.** The Contractor must install all electrical equipment, cable, hardware, fixtures, and fittings in accordance with OEM requirements. The Contractor is fully responsible for the integration and testing of the complete electrical system.
- 4.22.2.3.** All fitted electrical equipment must be installed so that electromagnetic interference (EMI) has no consequence on the operation of the magnetic compass, navigational appliances, communications equipment, and the electrical system.
- 4.22.2.4.** The Contractor must supply Canada with updated versions of all previously submitted drawings to reflect the final, “as-fitted” condition of the electrical system.

**4.22.3. BATTERIES**

- 4.22.3.1.** The Contractor must supply and fit the SPAS with three (3), dual purpose (i.e., starting and cycling), marine batteries to start the following engines:
- a) Port side, outboard engine;
  - b) Starboard side, outboard engine; and
  - c) HPU diesel engine.

**Requirements**

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- 4.22.3.2. Each battery must be located as close as possible to their respective engine.
- 4.22.3.3. Each battery must employ a low maintenance and heavy-duty construction.
- 4.22.3.4. The nominal discharge voltage of each battery must be 12 V<sub>DC</sub>.
- 4.22.3.5. The nominal cold cranking amperage (CCA) rating of each battery must be at least 750.
- 4.22.3.6. The discharge capacity of each battery must be sized to meet the performance and endurance requirements specified herein. The results of the electrical load analysis must be used to confirm the adequacy of the selected batteries to supply the final load requirements.

**4.22.4. BATTERY BOXES AND CONNECTIONS**

- 4.22.4.1. The Contractor must supply and fit a dedicated battery box to house each battery.
- 4.22.4.2. Each battery box must be securely attached to the vessel structure.
- 4.22.4.3. The starting and charging cable connections to each battery terminal must be secured with self-locking hardware.

**4.22.5. ALTERNATORS**

- 4.22.5.1. Each engine on board the SPAS must be fitted with an alternator to recharge its respective battery.
- 4.22.5.2. The output voltage of each alternator must be consistent with the charging voltage recommended by the battery OEM.
- 4.22.5.3. The charging capacity of each alternator must be sized to meet the performance and endurance requirements specified herein. The results of the electrical load analysis must be used to confirm the adequacy of the selected alternator(s) to recharge the fitted batteries.
- 4.22.5.4. The Contractor must supply and install a means to isolate the fitted batteries from each other when they are not.

**4.22.6. DISTRIBUTION PANELS**

- 4.22.6.1. The Contractor must supply and install no more than three distribution panels to organize and power fitted equipment. The internal, main copper bus must be rated for the panel size.
- 4.22.6.2. Each circuit must be protected by an individual, waterproof breaker. The results of the electrical load analysis must be used to confirm the breaking capacity of each breaker.
- 4.22.6.3. All inline fuses furnished on an equipment power cable must be removed and replaced with an equivalent-sized breaker (excluding those fuses on engine wiring harnesses).

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- 4.22.6.4.** All breakers must be the combined power switching and circuit protection type.
- 4.22.6.5.** All breakers must be fitted with guards to prevent accidental tripping or activation.
- 4.22.6.6.** A circuit identification label must be fitted adjacent to each feeder circuit breaker to indicate the following information, at a minimum:
  - a) System voltage;
  - b) Circuit number;
  - c) Circuit breaker size;
  - d) Circuit function (or load information); and
  - e) OFF and ON positions.
- 4.22.6.7.** Each distribution panel must accommodate a minimum of three spare breakers.

**4.22.7. CABLES**

- 4.22.7.1.** Unless otherwise specified by Canada, the Contractor must use marine-grade, tinned boat cable in the provided electrical system.
- 4.22.7.2.** All cables must be appropriately sized to satisfy voltage drop requirements, and de-rated for the ambient temperature applicable to their installed location.
- 4.22.7.3.** The Contractor must use special cables, as specified by the equipment manufacturer, for all antenna leads, radio, and navigation systems. All coaxial transmission cables used in the SPAS must be Times LMR195 or equivalent (i.e., Draka or Suhner); RG58 and RG8X coaxial transmission cables are specifically prohibited.

**4.22.8. CABLE INSTALLATION**

- 4.22.8.1.** Cables must be routed as directly as possible on fore to aft running wireways. Branch lines must be routed at right angles (i.e., port to starboard) to the main runs.
- 4.22.8.2.** Cables must be installed point-to-point, without splices or joints.
- 4.22.8.3.** Cables must be neatly grouped and supported by racks, trays, hangers, or clamps. All cable support systems must be attached directly to the vessel structure, and withstand the dynamic forces and vibrations of the vessel.
- 4.22.8.4.** Cables must be secured with stainless steel straps at least every 0.5 m. Fire-resistant cable restraints must be used between the metal straps.
- 4.22.8.5.** Stud clips must be installed for all single cables that branch off of a cable support system to a specific piece of equipment.

**4.22.8.6.** All cable penetrations of a watertight boundary, deck, bulkhead, or other exposed surface must maintain the watertight integrity of the structure. An adaptable core, waterproof cable gland must be used at such transitions.

**4.22.8.7.** Smooth collars must be used at all other cable penetrations. Additional mechanical protection must be provided for all cable runs susceptible to chafing.

#### **4.22.9. CABLE TERMINATIONS AND IDENTIFICATION**

**4.22.9.1.** Cables must be terminated inside equipment enclosures. Termination connections must provide support and strain relief for each cable.

**4.22.9.2.** Cables must be permanently labelled at each end with a unique identifier that corresponds to the accompanying wiring diagram(s). For example, aluminum cable tags, ferrules, or shrink tubing with mechanically-applied lettering are appropriate means of labelling.

**4.22.9.3.** Unless otherwise specified by Canada, cables must terminate with solderless, crimped, compression-type cable lugs. Twist-on type connectors are specifically prohibited.

**4.22.9.4.** Coaxial cables must terminate with crimp-sleeve type connectors. PL259 solder-on connectors and Shakespeare Centre Pin no-solder connectors are specifically prohibited.

#### **4.22.10. RECEPTACLES**

**4.22.10.1.** The Contractor must supply and install the following marine-grade, accessory power outlets at the following locations:

- a) A minimum of one, 12V<sub>DC</sub> power outlet on the wheelhouse console;
- b) A minimum of two, universal serial bus (USB) power outlets on the wheelhouse console; and
- c) A minimum of two, watertight, 12 V<sub>DC</sub> power outlets on the front exterior of the wheelhouse, towards the port and starboard sides.

### **4.23. LIGHTING**

#### **4.23.1. INTERIOR LIGHTING**

**4.23.1.1.** The wheelhouse interior must be furnished with a light emitting diode (LED) dome light for general nighttime illumination.

**4.23.1.2.** The LED dome light must be installed in the centre of the wheelhouse deckhead or inside the roof pan.

**4.23.1.3.** The LED dome light must be switchable between white and red light.

#### **4.23.2. EXTERIOR LIGHTING**

- 4.23.2.1.** The Contractor must supply and install five, LED, marine-grade floodlights in the following locations:
- a) A single, LED floodlight on each corner of the wheelhouse roof pan (four total), situated to illuminate the fore and aft deck spaces; and
  - b) One, LED floodlight at the bow of the SPAS, situated to illuminate the forward operating area of the oil recovery subsystem.
- 4.23.2.2.** The forward facing, aft facing, and bow floodlights must be wired such that they can be illuminated separately (i.e., placed on dedicated circuits).
- 4.23.2.3.** Switches for the deck floodlights must be installed on the wheelhouse console.

#### **4.23.3. SEARCH LIGHTS**

- 4.23.3.1.** The Contractor must supply two handheld searchlights.
- 4.23.3.2.** Each searchlight must use a minimum 55 W, xenon high intensity discharge (HID) lamp.
- 4.23.3.3.** Each searchlight must be fitted with a minimum 3 m, coiled power cord.
- 4.23.3.4.** Each searchlight power cord must terminate with a marine plug compatible with the sockets specified in 4.22.10.

#### **4.23.4. NAVIGATIONAL LIGHTING**

- 4.23.4.1.** The Contractor must supply and install navigational lighting that satisfies all applicable requirements in C.R.C., c. 1416, Collision Regulations. The Contractor is responsible for testing the navigational lighting system to confirm that the arcs of visibility of the installed lights satisfy regulatory requirements.
- 4.23.4.2.** The navigational lights must be independent of all other circuits. Switches for the navigational lights must be installed on the wheelhouse console.
- 4.23.4.3.** The navigational lights must be permanently mounted.
- 4.23.4.4.** The navigational lights must be mounted so as not to interfere with the vision of the operator.

### **4.24. DOMESTIC SERVICES**

#### **4.24.1. WHEELHOUSE HEATING**

- 4.24.1.1.** The Contractor must supply and install a heater unit in the wheelhouse, complete with all piping, fittings, and wiring required for its operation.

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- 4.24.1.2. The heater unit must interface with the HPU coolant loop specified in 4.17.5.
- 4.24.1.3. The heater grill face or vent(s) must be fitted on the wheelhouse console in such a manner to encourage an even distribution of heat.
- 4.24.1.4. The heater unit must be equipped with a control on the wheelhouse console that allows for variable blower speed operation.

**4.24.2. WHEELHOUSE VENTILATION**

- 4.24.2.1. The Contractor must supply and install an electric fan in the wheelhouse.
- 4.24.2.2. The electric fan must pivot or rotate about a central point to allow the operator to alter the direction of its airflow.
- 4.24.2.3. The electric fan must be equipped with a control on either itself or the wheelhouse console that allows the operator to vary its speed.

**4.24.3. HULL COMPARTMENT VENTILATION**

- 4.24.3.1. The hull design must provide adequate ventilation to all hull compartments and voids.
- 4.24.3.2. Air intakes for the machinery and equipment compartment must be located to preclude down flooding. These intakes must be fitted with provisions to allow for the effective discharge of the fire suppression system.

**4.24.4. SCUPPERS AND DRAINS**

- 4.24.4.1. The deck must be fitted with drains that discharge freestanding water directly overboard.
- 4.24.4.2. The deck drains must be fitted with removable drain plugs (on stainless wire lanyards) to prevent water ingress.

**4.25. CONTROLS AND INSTRUMENTATION**

**4.25.1. GENERAL CONFIGURATION**

- 4.25.1.1. The Contractor must arrange and install an ergonomic console inside the wheelhouse to mount control, communication, and monitoring equipment. At a minimum, the Contractor must ensure:
  - a) Components are grouped logically and conveniently, according to function and operational priorities;
  - b) Components are easily removable for maintenance;
  - c) All fitted controls, switches, gauges, or displays are unambiguous, accessible, and easy to use from the operator position;



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- d) Controls are marked with an arrow that indicates the direction of movement that will result in an increased response;
- e) Toggle switches are fitted with a telltale or pilot light to indicate when the switch has been activated or moved to an ON position;
- f) Gauges are marked with the normal operating range, in addition to abnormal or dangerous conditions; and
- g) Adequate cooling air is provided for all electronic equipment to ensure its proper operation.

**4.25.1.2.** The Contractor may locate panels and controls on the deckhead of the wheelhouse, provided that such items are within easy reach of the operator.

**4.25.1.3.** The Contractor must provide progressive, dimming control for all illuminated instrumentation in the wheelhouse. Such dimming control must be independent from the compass illumination.

**4.25.1.4.** The proposed arrangement of the wheelhouse console must be approved by Canada prior to installation.

**4.25.2. OUTBOARD ENGINES**

**4.25.2.1.** The Contractor must rigidly mount the helm pump (specified in 4.14.1) on the starboard side of the wheelhouse console to eliminate all fore, aft, and lateral movement of the steering wheel.

**4.25.2.2.** The steering wheel fitted to the helm pump must be a stainless steel, destroyer-style construction.

**4.25.2.3.** The Contractor must supply and install a dual lever, engine control head on the starboard side of the wheelhouse.

**4.25.2.4.** Each lever must provide manual control of both the throttle and shifting of one of the mounted outboard engines. Throttle and shifting connections to each outboard engine must be made via push-pull cables.

**4.25.2.5.** The engine control head must allow for the independent trim and tilt of each mounted outboard engine.

**4.25.2.6.** At a minimum, the Contractor must supply and install a standard outboard engine instrumentation package that comprises the following components:

- a) A tachometer for each outboard;
- b) A running hour meter for each outboard;
- c) A voltmeter for each outboard;

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- d) An audible and visual outboard engine alarm for high coolant water temperature;
- e) An audible and visual outboard engine alarm for low lubricating oil pressure; and
- f) A gasoline fuel tank level indicator.

**4.25.2.7.** The Contractor must install a three position (OFF, ON, START) start switch to activate the outboard engines. The three position start switch should be keyless. If a keyless start switch is unavailable, the Contractor must permanently attach keys to the wheelhouse console such that they cannot be easily removed.

**4.25.2.8.** The outboard engine controls must be fitted with a dead-man (kill) switch and lanyard for the emergency shutdown of each outboard engine. The emergency shutdown feature must be located in the immediate vicinity of the operator.

### **4.25.3. HYDRAULIC POWER UNIT**

**4.25.3.1.** At a minimum, the Contractor must supply and install an HPU instrument package on the wheelhouse console that comprises the following components:

- a) A tachometer;
- b) A running hour meter;
- c) A voltmeter;
- d) An audible and visual diesel engine alarm for high coolant water temperature
- e) An audible and visual diesel engine alarm for low coolant water flow;
- f) An audible and visual diesel engine alarm for low lubricating oil pressure;
- g) A diesel fuel tank level indicator;
- h) An analog gauge to monitor the pressure of the HPU hydraulic oil; and
- i) An analog gauge to monitor the temperature of the HPU hydraulic oil.

**4.25.3.2.** The Contractor must install a keyless, three-position (OFF, ON, START) start switch on the wheelhouse console to activate the diesel engine.

**4.25.3.3.** The Contractor must install a throttling valve on the wheelhouse console to control the engine speed of the HPU.

### **4.25.4. OIL RECOVERY SYSTEM**

**4.25.4.1.** The Contractor must install hydraulic control valves (or a control manifold) to vary the operating speed of the oil recovery system, oil transfer system, and seawater washdown system.

**4.25.4.2.** The Contractor must install a toggle switch to raise and lower the oil recovery system.

#### **4.25.5. BILGE PUMPS**

- 4.25.5.1.** The electric bilge pumps must be equipped with controls on the wheelhouse console that allow for MOMENTARY ON-OFF-AUTOMATIC operation.
- 4.25.5.2.** The MOMENTARY ON operation of the electric bilge pumps must require direct intervention from the operator, with some provision to deactivate the bilge pumps if the operator steps away from the wheelhouse console.
- 4.25.5.3.** An indicator light must be fitted on the wheelhouse console that illuminates when any bilge pump has activated.
- 4.25.5.4.** An audible, high level bilge water alarm must be installed in the wheelhouse.
- 4.25.5.5.** The audible, high level bilge water alarm should be fitted with a provision that allows it to be temporarily silenced when annunciating.

#### **4.25.6. BATTERIES**

- 4.25.6.1.** The Contractor must supply and install a battery voltmeter on the wheelhouse console that can cycle between all fitted batteries.
- 4.25.6.2.** The battery voltmeter must be equipped with a low voltage alarm.
- 4.25.6.3.** The Contractor must supply and install a battery switch that allows the operator to connect (or disconnect) each fitted battery to (or from) the DC distribution system.
- 4.25.6.4.** The Contractor must supply and install battery switches that allow for emergency battery paralleling in the event of a single dead battery.

### **4.26. NAVIGATIONAL APPLIANCES AND EQUIPMENT**

#### **4.26.1. GENERAL CONSIDERATIONS**

- 4.26.1.1.** The Contractor must supply all navigational appliances, equipment, and associated hardware prescribed by Canadian Regulations and the requirements specified herein.
- 4.26.1.2.** The Contractor must install, integrate, and commission all navigational appliances, equipment, and associated hardware in accordance with the respective OEM requirements. The proposed arrangement of all electronics must be approved by Canada prior to installation.
- 4.26.1.3.** The Contractor must use an authorized representative of each navigational appliance or equipment manufacturer to inspect and verify the installation prior to conducting sea trial(s) and delivery.

**4.26.2. MAGNETIC COMPASS**

- 4.26.2.1. The SPAS must be fitted with one, illuminated, dimmable, magnetic compass.
- 4.26.2.2. The dial size of the magnetic compass must be at least 4.5 inches.
- 4.26.2.3. The magnetic compass must be mounted on the wheelhouse console, and in easy view of the operator.
- 4.26.2.4. The magnetic compass must be swung and properly compensated by a certified compass adjuster once SPAS fabrication and fitting is complete.

**4.26.3. DEPTH TRANSDUCER**

- 4.26.3.1. The SPAS must be fitted with one, Airmar P319 depth transducer.
- 4.26.3.2. The Airmar P319 depth transducer must provide the keel clearance of the SPAS to the Simrad NSS9 evo3 multi-function display.

**4.26.4. AUTOMATIC IDENTIFICATION SYSTEM**

- 4.26.4.1. The SPAS must be fitted with one, Simrad NAIS500 Class B automatic identification system (AIS) transceiver.
- 4.26.4.2. The Simrad NAIS500 Class B AIS transceiver must be installed in a protected location within the wheelhouse console.
- 4.26.4.3. The Simrad NAIS500 Class B AIS transceiver must provide navigational information to the Simrad NSS9 evo3 multi-function display through the NMEA 2000 bus.
- 4.26.4.4. The Simrad NAIS500 Class B AIS transceiver must be connected to the following antennas mounted on the wheelhouse roof:
  - a) Simrad GS25 global positioning system (GPS) antenna, using the manufacturer supplied cable; and
  - b) Shakespeare 5215 very high frequency (VHF) antenna, using the coaxial cable and connectors specified in 4.22.7.

**4.26.5. MULTI-FUNCTION DISPLAY**

- 4.26.5.1. The SPAS must be fitted with one, Simrad NSS9 evo3 multi-function display.
- 4.26.5.2. The Simrad NSS9 evo3 multi-function display must be mounted in (or on) the console, in a location that is both convenient for the operator and does not interfere with the operation, use, or sight of other controls or indicators.

**4.26.5.3.** The Simrad NSS9 evo3 multi-function display must interface with the navigation inputs from the Airmar P319 depth transducer and Simrad NAIS400, Class B AIS transceiver.

**4.26.5.4.** The Simrad NSS9 evo3 multi-function display must provide GPS information to the Standard Horizon GX5500 VHF digital selective calling (DSC) radio through the NMEA 0183 bus.

#### **4.26.6. HORN**

**4.26.6.1.** The SPAS must be fitted with one, electric horn.

**4.26.6.2.** The electric horn must be actuated by a spring-loaded switch on the wheelhouse console.

#### **4.26.7. RADAR REFLECTOR**

**4.26.7.1.** The wheelhouse roof must be fitted with a tube-style, cage mountable radar reflector.

**4.26.7.2.** The reflective area of the radar reflector must be at least 2 square metres (m<sup>2</sup>).

### **4.27. COMMUNICATIONS EQUIPMENT**

#### **4.27.1. GENERAL CONSIDERATIONS**

**4.27.1.1.** The Contractor must supply all communications equipment and associated hardware prescribed by Canadian Regulations and the requirements specified herein.

**4.27.1.2.** The Contractor must install, integrate, and commission all communications equipment and associated hardware in accordance with the respective OEM requirements. The proposed arrangement of all electronics must be approved by Canada prior to installation.

**4.27.1.3.** The Contractor must use an authorized representative of each equipment manufacturer to inspect and verify the installation prior to conducting sea trial(s) and delivery.

#### **4.27.2. VHF MARINE RADIO**

**4.27.2.1.** The SPAS must be fitted with one, Standard Horizon GX5500S VHF DSC radio. Canada will be responsible for the Marine Mobile Service Identity (MMSI) registration of this radio.

**4.27.2.2.** The Standard Horizon GX5500S VHF DSC radio must be mounted into (or on) an overhead bulkhead, or on the wheelhouse console.

**4.27.2.3.** The Standard Horizon GX5500S VHF DSC radio must be interfaced with the navigation input from the Simrad NSS9 evo3 multi-function display.

**4.27.2.4.** The Standard Horizon GX5500S VHF DSC radio must be connected to a Comrod AV60P8 antenna using the coaxial cable and connectors specified in 4.22.7.

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- 4.27.2.5.** The Comrod AV60P8 antenna must mounted on the wheelhouse roof, using a suitable antenna mount and 12 inch antenna extension to place it above the GPS antenna(s).
- 4.27.2.6.** The Standard Horizon GX5500S VHF DSC radio must be connected to the following speakers:
  - a) One, externally-powered speaker, mounted adjacent to the radio in the wheelhouse; and
  - b) One, external, marine public announcement (PA) speaker, centred and mounted on the front edge of the wheelhouse roof.
- 4.27.2.7.** Both speakers specified in 4.27.2.6 must be placed on the same breaker as the Standard Horizon GX5500S VHF DSC radio.

### **4.27.3. GOVERNMENT FURNISHED EQUIPMENT**

- 4.27.3.1.** The Contractor must reserve sufficient space to accommodate a Motorola APX8500 radio, complete with a 02 Control Head and Standard Horizon MLS 310B speaker. Space must be reserved in the following locations to allow Canada to install this government furnished equipment (GFE):
  - a) In the wheelhouse console to mount the transceiver;
  - b) In (or on) an overhead bulkhead, or on the wheelhouse console to mount the control head and speaker;
  - c) In the transit between the wheelhouse interior and the wheelhouse roof to run two coaxial feedlines;
  - d) On the wheelhouse roof to mount a VHF antenna; and
  - e) On the wheelhouse roof to mount an ultra-high frequency (UHF) antenna.
- 4.27.3.2.** The Contractor must provide a spare breaker to accommodate the equipment specified in 4.27.3.1.

## **4.28. SAFETY EQUIPMENT**

### **4.28.1. GENERAL CONSIDERATIONS**

- 4.28.1.1.** The Contractor must supply and fit all safety equipment for a vessel of this size prescribed by The Small Vessel Regulations and the requirements specified herein.
- 4.28.1.2.** All safety equipment must be Canadian approved or meet Canadian approval requirements (e.g., Transport Canada or the United States Coast Guard).

**4.28.2. FIRST AID KIT**

- 4.28.2.1. The Contractor must supply one, Type A first aid kit. The contents of a Type A first aid kits are defined in SOR/2010-120, Maritime Occupational Health and Safety Regulations.
- 4.28.2.2. The Contractor must locate the first aid kit within the wheelhouse where it is easily accessible.
- 4.28.2.3. The stowage location of the first aid kit must clearly identified by a conspicuous sign.

**4.28.3. PERSONAL LIFE SAVING APPLIANCES**

- 4.28.3.1. The Contractor must equip the SPAS with four, adult-sized lifejackets. The final mounting or stowage location(s) of the lifejackets are subject to the approval of Canada.
- 4.28.3.2. The Contractor must supply one buoyant heaving line that is at least 15 m in length. One end of the buoyant heaving line must be fitted with a soft, buoyant mass.
- 4.28.3.3. The Contractor must supply one lifebuoy attached to a buoyant heaving line.
- 4.28.3.4. The lifebuoy and attached heaving line must be mounted on the outside of the wheelhouse.

**4.28.4. FIRE SAFETY**

- 4.28.4.1. The Contractor must equip the SPAS with the following marine-certified, fire extinguishers:
  - a) One, Type 2A:10B:C portable fire extinguisher, that is certified for marine use, located inside the wheelhouse; and
  - b) One, Type 10B:C portable fire extinguisher, that is certified for marine use, located near the entrance to the below deck machinery space.
- 4.28.4.2. The Contractor must supply and install a fire suppression system for the below deck machinery space. The Contractor is responsible for the integration of all fire detection and alarming equipment to complement the fire suppression system.
- 4.28.4.3. The Contractor must fit the SPAS with all fire detection equipment and alarms, as prescribed by SOR/2010-91, Small Vessel Regulations.
- 4.28.4.4. The Contractor must equip the SPAS with one metal fire bucket, complete with a minimum of 3 m of line. The final mounting or stowage location of the fire bucket and line is subject to the approval of Canada.
- 4.28.4.5. The Contractor must equip the SPAS with one fire axe. The final mounting or stowage location of the fire axe is subject to the approval of Canada.

#### **4.28.5. VISUAL SIGNALS**

- 4.28.5.1.** The Contractor must equip the SPAS with two, heavy-duty, LED flashlights.
- 4.28.5.2.** Each flashlight must be watertight and designed specifically for marine use.
- 4.28.5.3.** Each flashlight must be powered by alkaline batteries. The Contractor must equip each flashlight with fresh alkaline batteries before delivery to Canada.
- 4.28.5.4.** The Contractor must equip the SPAS with the following minimum quantities of pyrotechnic distress signals:
  - a) Six, Type B signals (i.e., multi-star rocket); and
  - b) Six, Type C signals (i.e., hand-held).
- 4.28.5.5.** Each supplied pyrotechnic distress signal must be manufactured within three months of the date of delivery of the SPAS to Canada.

#### **4.28.6. EMERGENCY POSITION INDICATING RADIO BEACON**

- 4.28.6.1.** The SPAS must be equipped with a 406 megahertz (MHz) emergency position indicating radio beacon (EPIRB).
- 4.28.6.2.** The EPIRB must be located inside the wheelhouse near the operator position.
- 4.28.6.3.** The EPIRB must be easily released from its stowage mount.

### **4.29. LABEL PLATES, NAMEPLATES, AND NOTICES**

#### **4.29.1. GENERAL CONSIDERATIONS**

- 4.29.1.1.** The Contractor must supply and install label plates to identify all fitted equipment, tanks, vents, fill connections, valves, hoisting points, and towing points. These label plates must indicate all safe working limits or maximum capacities, as applicable. Label plates for oil recovery, storage, and transfer equipment must delineate safety precautions, as well as the appropriate start-up, operational, and emergency procedures.
- 4.29.1.2.** Unless otherwise specified by Canada, all label plates must be fabricated from aluminum. Label plates used inside the wheelhouse, on the wheelhouse console, and inside electrical closures may be fabricated from laminated plastic.
- 4.29.1.3.** All label plates must be machine engraved with bevelled edges.
- 4.29.1.4.** All label plates must be secured with reusable fasteners.
- 4.29.1.5.** All label plates must convey the necessary information in both Canadian English and French.



- 4.29.1.6.** The fabrication, content, and arrangement of all label plates must be approved by Canada prior to installation.

#### **4.29.2. BUILDER'S NAMEPLATE**

- 4.29.2.1.** The Contractor must supply and fit a Builder's Nameplate in the wheelhouse of the SPAS, on the trailer, and on the ship cradle. The Builder's Nameplate must be fitted in a conspicuous location wherever it is installed.
- 4.29.2.2.** The Builder's Nameplate must be made of a weather resistant material that is compatible with its adjoining surface.
- 4.29.2.3.** The following information must be permanently etched into the Builder's Nameplate:
- a) National Asset Code (to be assigned by Canada);
  - b) Naval architect or designer;
  - c) Builder;
  - d) Hull number;
  - e) Year of construction; and
  - f) Lightship displacement (in kilograms).
- 4.29.2.4.** The Builder's Nameplate must convey all required information in both Canadian English and French languages.

### **4.30. PAINTING AND COATINGS**

#### **4.30.1. GENERAL CONSIDERATIONS**

- 4.30.1.1.** Unless otherwise specified by Canada, the hull exterior, hull interior, deck, and wheelhouse must be left unpainted.
- 4.30.1.2.** The Contractor must apply a non-skid coating or texture to all exposed deck surfaces.

### **4.31. TRAILER**

#### **4.31.1. GENERAL CONSIDERATIONS**

- 4.31.1.1.** Unless otherwise specified by Canada, the Contractor must supply one, heavy-duty trailer to launch, recover, and transport each SPAS.
- 4.31.1.2.** The trailer must safely operate on paved, gravel, and dirt roadways under the environmental conditions specified herein. These roadways may contain severe washboard, potholes, rough terrain, or any combination thereof.

**Requirements**

- 4.31.1.3.** The trailer must comply with all provincial and territorial requirements for an unescorted, oversize load.
- 4.31.1.4.** The GVWR of the trailer must be less than 4,500 kg. The GVWR includes the complete, outfitted trailer, laden with the SPAS in the normal load (transit) condition.

**4.31.2. VEHICLE SAFETY REGULATIONS**

- 4.31.2.1.** Each trailer must comply with all applicable requirements in the following Regulations:
  - a) C.R.C., c. 1038, Motor Vehicle Safety Regulations; and
  - b) TP 14117, Trailers: Federal Lighting Equipment Location Requirements (2007).
- 4.31.2.2.** Each trailer must carry the National Safety Mark (NSM).

**4.31.3. FRAME AND OUTFITTING**

- 4.31.3.1.** The trailer must be an all-welded, reinforced, aluminum or galvanized steel construction.
- 4.31.3.2.** The trailer must be fitted with rollers and side guard rails that completely conform to the shape of the SPAS hull.
- 4.31.3.3.** The trailer must support the centered mass of the SPAS such that the tongue weight is between 8 to 15% of the total load.
- 4.31.3.4.** The trailer must be fitted with enclosed fenders that can support a minimum mass of 100 kg from the topside. The rear of each fender must be fitted with a mud flap to protect the SPAS from road damage.

**4.31.4. SUSPENSION AND AXLES**

- 4.31.4.1.** The trailer must be fitted with a tandem axle configuration. The Contractor may propose other axle configurations for consideration by Canada.
- 4.31.4.2.** The trailer must be fitted with an underslung, leaf-type suspension system.
- 4.31.4.3.** Each axle and the suspension system must be rated at the trailer GVWR plus 15%.
- 4.31.4.4.** One axle of the trailer must be fitted with a commercial hubometer to facilitate vehicle usage tracking.
- 4.31.4.5.** Each wheel bearing must be fitted with stainless steel, grease nipples.

**4.31.5. BRAKE SYSTEM**

- 4.31.5.1.** The trailer must be fitted with an operator-controlled, electric-over-hydraulic disc brake system. The brake system must comprise stainless steel rotors, calipers, and mounting brackets, in addition to ceramic brake pads.

- 4.31.5.2.** The brake system must be fitted with provisions that allow for fresh water flushing.

#### **4.31.6. WHEEL ASSEMBLY**

- 4.31.6.1.** The trailer must be fitted with radial tires that are mounted on six-bolt, galvanized steel rims. The tires must be approved for trailer use, and appropriately sized for the trailer GVWR and towing speed.
- 4.31.6.2.** The Contractor must supply and fit a matching, full-size, spare tire (on rim) at the front of the trailer.
- 4.31.6.3.** The Contractor must supply two commercial wheel chocks to prevent accidental movement.

#### **4.31.7. LIGHTING SYSTEM**

- 4.31.7.1.** The trailer must be equipped with a submersible, LED, brake and turn signal lighting system. The Contractor must recess or otherwise protect lights from damage on the trailer frame.
- 4.31.7.2.** The trailer lighting system must interface with the tow vehicle electrical system using a 7-way, recreational vehicle-style, round connector.
- 4.31.7.3.** The 7-way, round connector must extend a minimum of 1 m beyond the trailer tongue.

#### **4.31.8. CARGO ANCHOR POINTS**

- 4.31.8.1.** The trailer must be fitted with a manual, two-speed, bow winch assembly.
- 4.31.8.2.** The Contractor must supply one, heavy-duty, nylon winch strap, complete with safety hook. The nylon strap and safety hook must be rated for the intended load.
- 4.31.8.3.** The trailer must be fitted with sufficient and appropriately arranged, cargo anchoring points to prevent the forward, lateral, and rearward movement of the SPAS during transport.
- 4.31.8.4.** Unless otherwise specified by Canada, the Contractor must supply ratchet tie down straps, with hooks, for each cargo anchoring point. The ratchet tie down straps must be rated for the intended load.
- 4.31.8.5.** The front of the trailer must be fitted with a provision to secure a turnbuckle to the bow of the SPAS. The Contractor must supply a rated, turn buckle for this purpose.

#### **4.31.9. TOW VEHICLE ATTACHMENTS**

- 4.31.9.1.** The Contractor must bolt a 2-5/16 inch, Class III compliant, ball coupler to the trailer frame. The Contractor may propose an appropriate pintle hitch for consideration by Canada.

**Requirements**

- 4.31.9.2.** The trailer must be fitted with two, galvanized safety chains and shackles. The free ends of each safety chain must be fitted with a clevis hook connector, complete with integral latch.
- 4.31.9.3.** All safety chains, shackles, and clevis hook connectors must be sized and rated for the anticipated trailer load.
- 4.31.9.4.** The trailer must be fitted with sway control equipment that is rated for the trailer GVWR.

**4.31.10. ACCESSORIES**

- 4.31.10.1.** The trailer must be equipped with a heavy-duty tongue jack, complete with an integral swivel wheel.
- 4.31.10.2.** The lifting capacity of the tongue jack must be at least 20% of the trailer GVWR.
- 4.31.10.3.** The tongue jack must pivot about its connection point to the trailer frame to allow for stowage, parallel to the trailer tongue, during transport.
- 4.31.10.4.** The trailer must be fitted with an integral bunk or tool box to house the following road hazard related equipment:
  - a) A lug wrench and bottle jack;
  - b) A spare winch strap; and
  - c) A spare wheel hub, complete with bearings and grease.
- 4.31.10.5.** The trailer must be fitted with a rear-mounted, license plate holder.

**4.32. SHIP CRADLE**

**4.32.1. GENERAL CONSIDERATIONS**

- 4.32.1.1.** Unless otherwise specified by Canada, the Contractor must supply one, heavy-duty ship cradle for each SPAS.
- 4.32.1.2.** The ship cradle must be a reinforced, aluminum construction.
- 4.32.1.3.** The ship cradle must be fitted with cargo anchoring devices that are arranged in such a manner to prevent forward, lateral, and rearward movement of the SPAS.
- 4.32.1.4.** The Contractor must supply a ratchet tie down strap (with hooks) for each cargo anchoring device.
- 4.32.1.5.** The ship cradle frame must be fitted with a minimum of eight, heavy-duty, load-rated eyes for mounting chain and binders.

## **4.33. SHIPPING AND DELIVERY**

### **4.33.1. GENERAL CONSIDERATIONS**

- 4.33.1.1.** Prior to shipping, the SPAS must be secured on its respective trailer, cleaned, preserved, and covered as per the requirements defined herein.
- 4.33.1.2.** All bilges must be dry, and free of oil and debris.
- 4.33.1.3.** All fuel tanks must be full and treated with fuel stabilizers.
- 4.33.1.4.** The outboard engines must be preserved (in accordance with manufacturer recommendations) for storage up to one year in an environment that will be subjected to temperatures below 0°C.
- 4.33.1.5.** All batteries must be disconnected.
- 4.33.1.6.** A warning plate must be tied to the steering wheel, indicating that the vessel has been protected for shipping and storage and must not be started until the outboard engines have been reactivated.
- 4.33.1.7.** All contact points with the SPAS must be padded.
- 4.33.1.8.** The SPAS must be shrink-wrapped to offer protection during shipping and storage.

## **4.34. TECHNICAL MAINTENANCE MANUAL**

### **4.34.1. GENERAL CONSIDERATIONS**

- 4.34.1.1.** Following acceptance of CDRL item DID-TM-02 (as described in SOW Section 6.2) by Canada, the Technical Maintenance Manual for the SPAS must be stored in a dedicated, conspicuous location to be agreed upon by Canada.
- 4.34.1.2.** The Technical Maintenance Manual for the SPAS must be waterproof to withstand a marine environment (for example, laminated pages or specialized paper). The Contractor may propose various waterproofing solutions for consideration by Canada.

## **4.35. OPERATIONS MANUAL**

### **4.35.1. GENERAL CONSIDERATIONS**

- 4.35.1.1.** Following acceptance of CDRL item DID-TM-03 (as described in SOW Section 6.2) by Canada, the Operations Manual for the SPAS must be stored in a dedicated, conspicuous location to be agreed upon by Canada.

**Requirements**

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- 4.35.1.2.** The Operations Manual for the SPAS must be waterproof to withstand a marine environment (for example, laminated pages or specialized paper). The Contractor may propose various waterproofing solutions for consideration by Canada.

## Task Authorization Autorisation de tâche

**Instruction for completing the form PWGSC - TPSGC 572 - Task Authorization**  
*(Use form DND 626 for contracts for the Department of National Defence)*

**Instruction pour compléter le formulaire PWGSC - TPSGC 572 - Autorisation de tâche**  
*(Utiliser le formulaire DND 626 pour les contrats pour le ministère de la Défense)*

**Contract Number**

Enter the PWGSC contract number.

**Numéro du contrat**

Inscrire le numéro du contrat de TPSGC.

**Contractor's Name and Address**

Enter the applicable information

**Nom et adresse de l'entrepreneur**

Inscrire les informations pertinentes

**Security Requirements**

Enter the applicable requirements

**Exigences relatives à la sécurité**

Inscrire les exigences pertinentes

**Total estimated cost of Task (Applicable taxes extra)**

Enter the amount

**Coût total estimatif de la tâche (Taxes applicables en sus)**

Inscrire le montant

**For revision only**

**Aux fins de révision seulement**

**TA Revision Number**

Enter the revision number to the task, if applicable.

**Numéro de la révision de l'AT**

Inscrire le numéro de révision de la tâche, s'il y a lieu.

**Total Estimated Cost of Task (Applicable taxes extra) before the revision**

Enter the amount of the task indicated in the authorized TA or, if the task was previously revised, in the last TA revision.

**Coût total estimatif de la tâche (Taxes applicables en sus) avant la révision**

Inscrire le montant de la tâche indiquée dans l'AT autorisée ou, si la tâche a été révisée précédemment, dans la dernière révision de l'AT.

**Increase or Decrease (Applicable taxes extra), as applicable**

As applicable, enter the amount of the increase or decrease to the Total Estimated Cost of Task (Applicable taxes extra) before the revision.

**Augmentation ou réduction (Taxes applicables en sus), s'il y a lieu**

S'il y a lieu, inscrire le montant de l'augmentation ou de la réduction du Coût total estimatif de la tâche (Taxes applicables en sus) avant la révision.

**1. Required Work: Complete sections A, B, C, and D, as required.**

**1. Travaux requis : Remplir les sections A, B, C et D, au besoin.**

**A. Task Description of the Work required:**

Complete the following paragraphs, if applicable.

Paragraph (a) applies only if there is a revision to an authorized task.

(a) Reason for revision of TA, if applicable: Include the reason for the revision; i.e. revised activities; delivery/completion dates; revised costs. Revisions to TAs must be in accordance with the conditions of the contract. See Supply Manual 3.35.1.50 or paragraph 6 of the Guide to Preparing and Administering Task Authorizations.

(b) Details of the activities to be performed (include as an attachment, if applicable)

(c) Description of the deliverables to be submitted (include as an attachment, if applicable).

(d) Completion dates for the major activities and/or submission dates for the deliverables (include as an attachment, if applicable).

**A. Description de tâche des travaux requis :**

Remplir les alinéas suivants, s'il y a lieu : L'alinéa (a) s'applique seulement s'il y a révision à une tâche autorisée.

(a) Motif de la révision de l'AT, s'il y a lieu : Inclure le motif de la révision c.-à.-d., les activités révisées, les dates de livraison ou d'achèvement, les coûts révisés. Les révisions apportées aux AT doivent respecter les conditions du contrat. Voir l'article 3.35.1.50 du Guide des approvisionnements ou l'alinéa 6 du Guide sur la préparation et l'administration des autorisations de tâches.

(b) Détails des activités à exécuter (joindre comme annexe, s'il y a lieu).

(c) Description des produits à livrer (joindre comme annexe, s'il y a lieu).

(d) Les dates d'achèvement des activités principales et (ou) les dates de livraison des produits (joindre comme annexe, s'il y a lieu).

---

**B. Basis of Payment:**

Insert the basis of payment or bases of payment that form part of the contract that are applicable to the task description of the work; e.g. firm lot price, limitation of expenditure, firm unit price

**C. Cost of Task:****Insert Option 1 or 2:****Option 1:**

Total estimated cost of Task (Applicable taxes extra): Insert the applicable cost elements for the task determined in accordance with the contract basis of payment; e.g. Labour categories and rates, level of effort, Travel and living expenses, and other direct costs.

**Option 2:**

Total cost of Task (Applicable taxes extra): Insert the firm unit price in accordance with the contract basis of payment and the total estimated cost of the task.

**D. Method of Payment**

Insert the method(s) of payment determined in accordance with the contract that are applicable to the task; i.e. single payment, multiple payments, progress payments or milestone payments. For milestone payments, include a schedule of milestones.

**B. Base de paiement :**

Insérer la base ou les bases de paiement qui font partie du contrat qui sont applicables à la description du travail à exécuter : p. ex., prix de lot ferme, limitation des dépenses et prix unitaire ferme.

**C. Coût de la tâche :****Insérer l'option 1 ou 2****Option 1 :**

Coût total estimatif de la tâche (Taxes applicables en sus) Insérer les éléments applicables du coût de la tâche établies conformément à la base de paiement du contrat. p. ex., les catégories de main d'œuvre, le niveau d'effort, les frais de déplacement et de séjour et autres coûts directs.

**Option 2 :**

Coût total de la tâche (Taxes applicables en sus) : Insérer le prix unitaire ferme conformément à la base de paiement du contrat et le coût estimatif de la tâche.

**D. Méthode de paiement**

Insérer la ou les méthode(s) de paiement établit conformément au contrat et qui sont applicable(s) à la tâche; c.-à.-d., paiement unique, paiements multiples, paiements progressifs ou paiements d'étape. Pour ces derniers, joindre un calendrier des étapes.

---

**2. Authorization(s):**

The client and/or PWGSC must authorize the task by signing the Task Authorization in accordance with the conditions of the contract. The applicable signatures and the date of the signatures is subject to the TA limits set in the contract. When the estimate of cost exceeds the client Task Authorization's limits, the task must be referred to PWGSC.

**3. Contractor's Signature**

The individual authorized to sign on behalf of the Contractor must sign and date the TA authorized by the client and/or PWGSC and provide the signed original and a copy as detailed in the contract.

**2. Autorisation(s) :**

Le client et (ou) TPSGC doivent autoriser la tâche en signant l'autorisation de tâche conformément aux conditions du contrat. Les signatures et la date des signatures appropriées sont assujetties aux limites d'autorisation de tâche établies dans le contrat. Lorsque l'estimation du coût dépasse les limites d'autorisation de tâches du client, la tâche doit être renvoyée à TPSGC.

**3. Signature de l'entrepreneur**

La personne autorisée à signer au nom de l'entrepreneur doit signer et dater l'AT, autorisée par le client et (ou) TPSGC et soumettre l'original signé de l'autorisation et une copie tel que décrit au contrat.

---





## Task Authorization Autorisation de tâche

Contract Number - Numéro du contrat

Contractor's Name and Address - Nom et l'adresse de l'entrepreneur	Task Authorization (TA) No. - N° de l'autorisation de tâche (AT)
	Title of the task, if applicable - Titre de la tâche, s'il y a lieu
	Total Estimated Cost of Task (Applicable taxes extra) Coût total estimatif de la tâche (Taxes applicables en sus) \$

Security Requirements: This task includes security requirements  
Exigences relatives à la sécurité : Cette tâche comprend des exigences relatives à la sécurité

☐

No - Non

☐

Yes - Oui

If YES, refer to the Security Requirements Checklist (SRCL) included in the Contract  
Si OUI, voir la Liste de vérification des exigences relative à la sécurité (LVERS) dans le contrat



### For Revision only - Aux fins de révision seulement

TA Revision Number, if applicable Numéro de révision de l'AT, s'il y a lieu	Total Estimated Cost of Task (Applicable taxes extra) before the revision Coût total estimatif de la tâche (Taxes applicables en sus) avant la révision \$	Increase or Decrease (Applicable taxes extra), as applicable Augmentation ou réduction (Taxes applicables en sus), s'il y a lieu \$
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**Start of the Work for a TA : Work cannot commence until a TA has been authorized in accordance with the conditions of the contract.**

**Début des travaux pour l'AT : Les travaux ne peuvent pas commencer avant que l'AT soit autorisée conformément au contrat.**

### 1. Required Work: - Travaux requis :

A. Task Description of the Work required - Description de tâche des travaux requis	See Attached - Ci-joint <input type="checkbox"/>
B. Basis of Payment - Base de paiement	See Attached - Ci-joint <input type="checkbox"/>
C. Cost of Task - Coût de la tâche	See Attached - Ci-joint <input type="checkbox"/>
D. Method of Payment - Méthode de paiement	See Attached - Ci-joint <input type="checkbox"/>

Contract Number - Numéro du contrat

## 2. Authorization(s) - Autorisation(s)

By signing this TA, the authorized client and (or) the PWGSC Contracting Authority certify(ies) that the content of this TA is in accordance with the conditions of the contract.

The client's authorization limit is identified in the contract. When the value of a TA and its revisions is in excess of this limit, the TA must be forwarded to the PWGSC Contracting Authority for authorization.

En apposant sa signature sur l'AT, le client autorisé et (ou) l'autorité contractante de TPSGC atteste(nt) que le contenu de cette AT respecte les conditions du contrat.

La limite d'autorisation du client est précisée dans le contrat. Lorsque la valeur de l'AT et ses révisions dépasse cette limite, l'AT doit être transmise à l'autorité contractante de TPSGC pour autorisation.

\_\_\_\_\_  
Name and title of authorized client - Nom et titre du client autorisé à signer

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
PWGSC Contracting Authority - Autorité contractante de TPSGC

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

## 3. Contractor's Signature - Signature de l'entrepreneur

\_\_\_\_\_  
Name and title of individual authorized - to sign for the Contractor  
Nom et titre de la personne autorisée à signer au nom de l'entrepreneur

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

Solicitation No. - N° de l'invitation  
F7047-160032/D  
Client Ref. No. - N° de réf. du client  
F7047-160032

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

Buyer ID - Id de l'acheteur  
005erd  
CCC No./N° CCC - FMS No./N° VME

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## **ANNEX 1 to PART 3 OF THE BID SOLICITATION**

### **ELECTRONIC PAYMENT INSTRUMENTS**

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

- ☐ ( ) VISA Acquisition Card;
- ☐ ( ) MasterCard Acquisition Card;
- ☐ ( ) Direct Deposit (Domestic and International);
- ☐ ( ) Electronic Data Interchange (EDI);
- ☐ ( ) Wire Transfer (International Only);
- ☐ ( ) Large Value Transfer System (LVTS) (Over \$25M)

## ANNEX 2 to PART 3 OF THE BID SOLICITATION

### BIDDER'S CHECKLIST

This checklist is included in the bid solicitation to assist Bidders in the preparation of their bid. Before submitting their bid, Bidders should use this checklist to help ensure all mandatory documentation and/or information are provided prior to bid closing.

Bidders must note that the checklist is a tool and does not remove any obligation on the Bidder to complete the requirements of the bid solicitation, including those which may not be listed in this checklist. The onus is on the Bidder to provide any of the mandatory documentation and/or information indicated in the bid solicitation as failure to do so will render the bid non-responsive without any further consideration.

Bidders are not required to provide this checklist with their bid.

	<b>Bid Solicitation Reference</b>	<b>Documentation / Information to be provided with the Bid</b>	<b>Comments</b>	<b>Included with the Bid</b>
1	2003 Standard Instructions - Goods or Services - Competitive Requirements	Cover Page of the Request For Proposals and all Amendments are signed and included with the Bid.	Best practice	
2	Article 2.4 Applicable Laws	Indicate substitution request of applicable laws of another province or Canadian territory, if desired.	Best practice	
3	Article 3.1.1 Bid Structure	Canada requests that Bidders provide their bid in separately bound sections; Technical Bid, Financial Bid, Certifications	Best practice	
4	Article 3.1.4.1 Substantial Information	Bidders should provide with their technical bid, a document indicating clearly where the substantial information can be found for each of the mandatory criterion identified in the Technical Bid Evaluation Plan (Annex 1 to Part 4 of the Bid Solicitation).	Best practice	
5	Article 3.1.5.1 Pricing Submission	Bidders must submit their financial bid in accordance with Schedule A and address each of the cost elements in Schedule A	Mandatory with the bid.	
6	Article 3.1.5.2 Electronic Payment of Invoices	Indication of which payment method is preferred, if desired.	Best practice	
7	Article 3.1.5.3 Delivery Dates	Bidders must submit their delivery dates in accordance with Schedule B.	Mandatory with the bid	
8	Article 4.1.1.2 Phase I: Financial Bid	Bid must include all information required by the solicitation.	Mandatory with the bid	
9	Article 4.1.1.3 Phase II: Technical Bid	Bid must include all information required by the solicitation.	Mandatory with the bid	

Solicitation No. - N° de l'invitation  
**F7047-160032/D**  
 Client Ref. No. - N° de réf. du client  
**F7047-160032**

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

Buyer ID - Id de l'acheteur  
**005erd**  
 CCC No./N° CCC - FMS No./N° VME

10	Article 5.1.1 Integrity Provisions - Declaration of Convicted Offences	Bidder must provide with its bid, if applicable, the Integrity declaration form.	Mandatory with the bid, if applicable.	
11	Article 5.1.2 Certification of Compliance	Bidder must submit a signed and completed Certification of Compliance (Annex 2 to Part 4 of the Bid Solicitation)	Mandatory with the bid.	
12.	Article 5.2.1 Integrity Provisions - Required Documentation	Bidder must provide required information, as applicable.	Not mandatory by bid closing. Must be provided prior to contract award.	
13.	Article 5.2.2 Federal Contractors Program for Employment Equity	Submit a completed Annex 1 to Part 5 of the Bid Solicitation.	Not mandatory by bid closing. Must be provided prior to contract award.	
14.	Article 5.2.3.1 Welding Certification	Bidder must submit valid Certification to CSA W47.2- 11 (R2015) and CSA W59.2-18 or ISO 3834-2:2005 Certification	Not mandatory by bid closing. Must be provided prior to contract award.	
15.	Article 5.2.3.2 Workers Compensation Certification- Letter of Good Standing	Bidder must provide, within 5 calendar days following a request from the Contracting Authority, a certificate or letter from the applicable Workers' Compensation Board	Best practice.	
16.	Article 6.3 Insurance Requirements - Proof of Availability Prior to Contract Award	The Bidder must provide a letter from an insurance broker or an insurance company licensed to operate in Canada stating that the Bidder, if awarded a contract as a result of the bid solicitation, can be insured in accordance with the Insurance Requirements specified in Part 7 - Resulting Contract Clause 7.14.	Mandatory with the bid.	
17.	Article 7.5.4 Contractor's Representative	Bidders should include Contractor Representative contact information`.	Best practice.	

**Annex 1 to Part 4 of the Bid Solicitation**  
**Technical Bid Evaluation Plan**

**Environmental Response Equipment Modernization/  
Mobile Incident Command Equipment Project**

*Self-Propelled Advancing Skimmer*

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## **SECTION 1                      INTRODUCTION**

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### **1.1.    PURPOSE**

- 1.1.1.**        This document defines the methodology that will be used to evaluate the technical portion of each Bid submitted in response to the Solicitation for the Self-Propelled Advancing Skimmer (hereinafter referred to as the “SPAS”).



## SECTION 2 EVALUATION METHODOLOGY

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### 2.1. GENERAL CONSIDERATIONS

- 2.1.1. By submitting a Bid, the Bidder certifies that it meets all of the requirements of the Solicitation including those identified in the Statement of Work (SOW) and Technical Statement of Requirements (TSOR).
- 2.1.2. The technical portion of the Bid will be evaluated against the following mandatory criteria (M) specified in:
- a) Appendix A – Mandatory Criteria – **Part 1 of 2, M1 to M2**, inclusive;
  - b) Appendix B – Mandatory Criteria – **Part 2 of 2, M3 to M6**, inclusive; and
- 2.1.3. Mandatory criteria will only be evaluated on a Compliant or Non-Compliant basis.
- 2.1.4. Any Bid that fails to meet **ALL** mandatory criteria will be deemed unresponsive and given no further consideration. Bids that satisfy all mandatory criteria will undergo financial evaluation by the Contracting Authority.
- 2.1.5. Canada will not make any assumptions regarding unclear or incomplete responses. Canada will only evaluate documentation provided as part of the Bid submission. Canada will not evaluate information such as references to Web site addresses where additional information can be found, or technical manuals or brochures not submitted with the Bid.

### 2.2. GUIDELINES FOR APPENDIX A – MANDATORY CRITERIA – PART 1 OF 2

- 2.2.1. The method of compliance for all mandatory criteria found in Appendix A – Mandatory Criteria – Part 1 of 2 is a **Certificate of Compliance (Annex 2 to Part 4 of the Bid Solicitation)**. The Certification of Compliance is an attestation from the Bidder that the goods and services being proposed satisfy the requirements and subsequently the goods and services to be delivered against the contract will comply with these same requirements. The Bidder must provide the signed Certification of Compliance (Annex 2 to Part 4 of the Bid Solicitation) as part of the Bid submission.
- 2.2.2. The Bidder's authorized representative must initial in the 'Initials' column.
- 2.2.3. The Bidder must respond with a 'YES' or 'NO' in the 'Compliant (Y/N)?' column.
- 2.2.4. Failure to provide a certification of compliance and initial any given criterion will render that criterion Non-Compliant.
- 2.2.5. The following line item example is provided to demonstrate how to populate Appendix A – Mandatory Criteria – Part 1 of 2.

TECHNICAL BID EVALUATION PLAN  
Evaluation Methodology

Item no.	Mandatory requirement	Contract reference	Method of compliance	Initials	Compliant (Yes/No)?
<i>M1</i>	All requirements stipulated in Annex A (Statement of Work) will be met.	<i>Annex A SOW</i>	<i>The Bid must include a signed Certificate of Compliance.</i>	<i>JD</i>	<i>Yes</i>

## 2.3. GUIDELINES FOR APPENDIX A – MANDATORY CRITERIA – PART 2 OF 2

- 2.3.1.** Various methods of compliance are listed in Appendix A – Mandatory Criteria – Part 2 of 2. The Bidder must carefully read the requested method(s) of compliance, as each method of compliance may differ between the mandatory criteria.
- 2.3.2.** For a given criterion, the Bidder must provide **ALL** requested information to sufficiently demonstrate compliance, and cross-reference the appropriate location(s) within the Bid where such information can be found.
- 2.3.3.** The Bidder’s authorized representative must initial in the ‘Initials’ column for each mandatory requirement found in Appendix B – Mandatory Criteria – Part 2 of 2.
- 2.3.4.** The Bidder must respond with a ‘YES’ or ‘NO’ in the ‘Compliant (Y/N)?’ column for each mandatory requirement found in Appendix B – Mandatory Criteria – Part 2 of 2.
- 2.3.5.** Failure to provide the requested information as per the defined method(s) of compliance and initial any given criterion will render that criterion Non-Compliant.
- 2.3.6.** The following fictitious line item example is provided to demonstrate how to populate Appendix B – Mandatory Criteria – Part 2 of 2.

Item	Mandatory Requirements	Contract reference	Method of compliance	Initials	Compliant (Y/N)?	Bid cross reference
<i>M12</i>	<i>The Compact Skimmer Package must satisfy the defined operational conditions.</i>	<i>Annex B Section 5.1</i>	<i>The Bidder must provide a narrative in the Bidder’s own words (approximately 500 words in length) and any supporting illustrations that clearly describe how the Compact Skimmer Package will function in required operational environmental conditions.</i>	<i>JD</i>	<i>Yes</i>	<i>Section 4 – p.88-90 of the Bid</i>

In this particular example, the Bidder has defined that the required narrative and illustrations to demonstrate compliance with the requirement, as per the defined method of compliance, is found in Section 4 – p.88-90 of the Bid.

TECHNICAL BID EVALUATION PLAN  
Mandatory Criteria – Part 1 of 2

APPENDIX A MANDATORY CRITERIA – PART 1 OF 2

Item No.	Mandatory Requirement	Contract Reference	Method of Compliance	Initials	Compliant (Y/N)? – Phase 1	Comments – Phase 1	Compliant (Y/N)? – Phase 2	Comments – Phase 2	Bid Cross-Reference
M1	All requirements stipulated in Annex A (Statement of Work) will be met.	Annex A (SOW)	The Bid must include a signed Certificate of Compliance (Annex 2 to Part 4 of the Bid Solicitation) by its authorized representative.						
M2	All requirements stipulated in Annex B (Technical Statement of Requirements) will be met.	Annex B (TSOR)	The Bid must include a signed Certificate of Compliance (Annex 2 to Part 4 of the Bid Solicitation) by its authorized representative.						

TECHNICAL BID EVALUATION PLAN  
Mandatory Criteria – Part 2 of 2

**APPENDIX B MANDATORY CRITERIA – PART 2 OF 2**

Item No.	Mandatory Requirement	Contract Reference	Item No.	Method of Compliance	Initials	Compliant (Y/N)? Phase 1	Comments- Phase 1	Compliant (Y/N)? Phase 2	Comments – Phase 2	Bid Cross-Reference
M3	The proposed Self Propelled Advancing Skimmer must comply with the defined design and construction requirements.	Annex B 4.1.1.1. 4.1.1.2. 4.1.1.3. 4.1.1.4. 4.19.1.4. 4.3.1.1.3.		The Bid must include a concept design drawing package for the proposed Self Propelled Advancing Skimmer that demonstrates compliance with the requirements detailed under 'Contract Reference'. At a minimum, <b>the concept design drawing package must include all measurements and components of the proposed SPAS including at a minimum overall length, overall beam, overall draft, trailer dimensions, and total volume of recovered oil tank.</b>						
				Each drawing must: i. Be submitted as a high-resolution PDF ii. Include dimensions and layout requirements as detailed in Annex B (sections listed); and; iii. Include units of measure.						

TECHNICAL BID EVALUATION PLAN  
Mandatory Criteria – Part 2 of 2

Item No.	Mandatory Requirement	Contract Reference	Item No.	Method of Compliance	Initials	Compliant (Y/N)? Phase 1	Comments- Phase 1	Compliant (Y/N)? Phase 2	Comments – Phase 2	Bid Cross-Reference
M 4	The Bidder must have delivered at least 2 Self-Propelled Advancing Skimmers* within a period of one (1) year in the last five (5) years, with an integrated oil recovery system capable of operating in an advancing mode.  * A purpose-built vessel, whose integrated design allows the independent recovery, temporary storage, and offloading of spilled oil	Proven Experience and Capacity	M4 (i)	The Bid must include copies of invoices that indicate the quantity and the date of delivery of the Self-Propelled Advancing Skimmers.						
			M4 (ii)	For at least one of the skimmers indicated as per M3(i), The Bid must include schematic drawings which include the <b>integrated oil recovery system, overall length, and recovered oil tank.</b>						

TECHNICAL BID EVALUATION PLAN  
Mandatory Criteria – Part 2 of 2

Item No.	Mandatory Requirement	Contract Reference	Item No.	Method of Compliance	Initials	Compliant (Y/N)? Phase 1	Comments- Phase 1	Compliant (Y/N)? Phase 2	Comments – Phase 2	Bid Cross-Reference
M5	The Bidder must identify an experienced Project Manager who will manage the Project should the Bid be successful.	Annex A 2.1 2.2 RFP Schedules A and B	M5 (i)	The Bid must include a curriculum vitae (CV) for the proposed Project Manager that includes timeframes in date and total months (ex. Jan 2016 to Jan 2012 – 12 months) for each project/experience cited in order to substantiate that the <b>Project Manager has had at least 36 months of experience managing projects in the last 60 months.</b>						
			M5 (ii)	The Bid must include a CV for the proposed Project Manager including project descriptions that demonstrate that demonstrate size, scope, and complexity of the work performed in order to substantiate that the <b>Project Manager has had experience providing schedule management, change management, risk management, and resource management for projects involving:</b> a. Manufacturing b. Documentation deliverables; and c. Training deliverables						
			M5 (iii)	The Bid must include a CV for the proposed Project Manager that demonstrates that the <b>Project Manager has managed at least one project which had a contracted value of not less than \$500,000.</b>						

TECHNICAL BID EVALUATION PLAN  
Mandatory Criteria – Part 2 of 2

Item No.	Mandatory Requirement	Contract Reference	Item No.	Method of Compliance	Initials	Compliant (Y/N)? Phase 1	Comments- Phase 1	Compliant (Y/N)? Phase 2	Comments – Phase 2	Bid Cross-Reference
M6	<p>The Bid must demonstrate that the entity or entities performing manufacturing and/or integration* have a Quality Management System in place.</p> <p><i>* Assembly of manufactured components in order to create the complete system.</i></p>	<p>Annex A SOW 3.2</p>	M6 (i)	The Bid must clearly identify each entity that will be performing any manufacturing, integration, and/or testing of the Self-Propelled Advancing Skimmer.						
			M6 (ii)	For each entity identified in M6 (i), the Bid must include a description of the Quality Management System in place for <b>design and development</b> .						
			M6 (iii)	For each entity identified in M6 (i), the Bid must include a description of the Quality Management System in place for <b>equipment calibration</b> .						
			M6 (iv)	For each entity identified in M6 (i), the Bid must include a description of the Quality Management System in place for <b>material certification</b> .						
			M6 (v)	For each entity identified in M6 (i), the Bid must include a description of the Quality Management System in place for <b>testing and inspection</b> .						
			M6 (vi)	For each entity identified in M6 (i), the Bid must include a description of the Quality Management System in place for <b>nonconformity and corrective action</b> .						

Solicitation No. - N° de l'invitation  
F7047-160032/D  
Client Ref. No. - N° de réf. du client  
F7047-160032

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

Buyer ID - Id de l'acheteur  
005erd  
CCC No./N° CCC - FMS No./N° VME

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**ANNEX 2 to PART 4 OF THE BID SOLICITATION**  
**CERTIFICATION OF COMPLIANCE**

As a Bidder, we have been given the opportunity to provide feedback on the content of the technical requirements for the Self-Propelled Advancing Skimmer (SPAS) procurement (Solicitation F7047-160032/D).

We have also thoroughly reviewed and understood the requirements of the complete Solicitation.

By signing this "Certification of Compliance", we certify that we will satisfy the requirements for which this certificate was required as proof of compliance during the Request for Proposals stage, and that our products and services to be delivered against the resulting contract will comply with these same requirements.

Company Name of the Bidder:

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Name of Bidder's Authorized Representative:

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Signature of Bidder's Designated Authority:

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Date:

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Solicitation No. - N° de l'invitation  
F7047-160032/D  
Client Ref. No. - N° de réf. du client  
F7047-160032

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File No. - N° du dossier

Buyer ID - Id de l'acheteur  
005erd  
CCC No./N° CCC - FMS No./N° VME

## ANNEX 1 to PART 5 OF THE BID SOLICITATION

### FEDERAL CONTRACTORS PROGRAM FOR EMPLOYMENT EQUITY – CERTIFICATION

I, the Bidder, by submitting the present information to the Contracting Authority, certify that the information provided is true as of the date indicated below. The certifications provided to Canada are subject to verification at all times. I understand that Canada will declare a bid non-responsive, or will declare a contractor in default, if a certification is found to be untrue, whether during the bid evaluation period or during the contract period. Canada will have the right to ask for additional information to verify the Bidder's certifications. Failure to comply with any request or requirement imposed by Canada may render the bid non-responsive or constitute a default under the Contract.

For further information on the Federal Contractors Program for Employment Equity visit [Employment and Social Development Canada \(ESDC\) – Labour's](#) website.

Date: \_\_\_\_\_ (YYYY/MM/DD) (If left blank, the date will be deemed to be the bid solicitation closing date.)

Complete both A and B.

A. Check only one of the following:

- ☐ A1. The Bidder certifies having no work force in Canada.
- ☐ A2. The Bidder certifies being a public sector employer.
- ☐ A3. The Bidder certifies being a [federally regulated employer](#) being subject to the [Employment Equity Act](#).
- ☐ A4. The Bidder certifies having a combined work force in Canada of less than 100 permanent full-time and/or permanent part-time employees.

A5. The Bidder has a combined workforce in Canada of 100 or more employees; and

- ☐ A5.1. The Bidder certifies already having a valid and current [Agreement to Implement Employment Equity](#) (AIEE) in place with ESDC-Labour.

OR

- ☐ A5.2. The Bidder certifies having submitted the [Agreement to Implement Employment Equity \(LAB1168\)](#) to ESDC-Labour. As this is a condition to contract award, proceed to completing the form Agreement to Implement Employment Equity (LAB1168), duly signing it, and transmit it to ESDC-Labour.

B. Check only one of the following:

- ☐ B1. The Bidder is not a Joint Venture.

OR

- ☐ B2. The Bidder is a Joint venture and each member of the Joint Venture must provide the Contracting Authority with a completed annex Federal Contractors Program for Employment Equity - Certification. (Refer to the Joint Venture section of the Standard Instructions)